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Influence Maximization in Trajectory Database

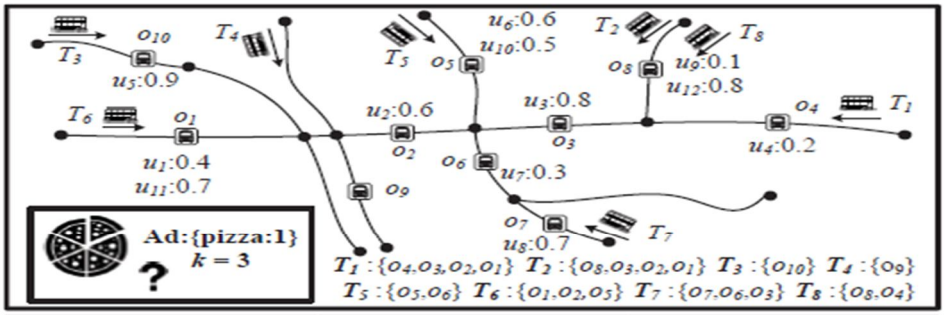
Rakshanda R

Abstract: ***In this project, we study a novel problem of influence maximization in trajectory databases that is very useful in precise location-aware advertising. It finds k best trajectories to be attached with a given advertisement and maximizes the expected influence among a large group of audience. We show that the problem is NP-hard and propose both exact and approximate solutions to find the best set of trajectories. In the exact solution, we devise an expansion-based framework that enumerates trajectory combinations in a best-first manner and propose three types of upper bound estimation techniques to facilitate early termination. In addition, we propose a novel trajectory index to reduce the influence calculation cost. To support large k, we propose a greedy solution with an approximation ratio of (1-1/e), whose performance is further optimized by a new proposed cluster-based method. We also propose a threshold method that can support any approximation ratio ∈ (0, 1]. In addition, we extend our problem to support the scenario when there are a group of advertisements. In our experiments, we use real datasets to construct user profiles, motion patterns and trajectory databases. The experimental results verified the efficiency of our proposed methods.***

Keywords: Trajectory database, NP-hard problem, influence maximization, K-best trajectories

I. INTRODUCTION

INFLUENCE maximization in a social network is a key algorithmic problem behind online viral marketing. By word-of-mouth propagation effect among friends, it finds a set of k seeds to maximize the expected influence among all the users. It has attracted significant attention from both academic and industry communities due to its potential commercial value, such as viral marketing rumor control and information monitoring. In this project, we make the first attempt to transplant the concept of influence maximization from social-aware advertising to location-aware advertising. To facilitate a better comprehension of our new problem, we start with a toy example depicted in Figure 1. Each user or audience ui in this scenario is associated with an interest profile as well as motion patterns which we assume are available. For instance, we know that u2 likes pizza and will wait at bus stop o2 daily with probability 0:6 in a certain time period. On the other hand, we are aware of the trajectory information of all the buses from their schedules. Since an ad is painted on the surface of a bus, we say an audience is influenced by a bus if they occur at a bus stop at the same time and the interest profile matches the ad. Given an advertisement for “pizza”, our goal is to find top-k buses carrying this ad and generating the maximum influence among a huge audience group. Besides the buses, the ads can also be carried by a taxi or an election campaign vehicle. This problem can also be used to support route recommendation where k best routes with the maximum advertising effect are returned. Our assumptions are reasonable because the opening of government big data to facilitate research purpose has shed light to studying motion patterns and interest profiles of millions of users in a city.



u_1: {NBA 0.8, pizza 0.3}	u_2: {pizza 0.9, NBA 0.4}	u_3: {pizza 0.6, NBA 0.8}
u_4: {pizza 0.5, swim 0.5}	u_5: {pizza 0.9, gym 0.2}	u_6: {pizza 0.3, swim 0.9}
u_7: {pizza 0.9, gym 0.1}	u_8: {pizza 0.5, gym 0.5}	u_9: {pizza 0.1, NBA 0.9}
u_{10}: {NBA 0.9, gym 0.1}	u_{11}: {gym 0.9, swim 0.4}	u_{12}:{gym 0.9, swim 0.4}

Fig. 1. A working scenario

EZ Link dataset which contains months of bus transactions for all the card holders. In other words, the dataset provides all historical outdoor activities of all the Singaporeans, from which we can infer personal interest and travel patterns.

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We will formulate the trajectory influence maximization problem and prove it to be NP-hard. To find the exact top-k trajectories, we propose an expansion-based framework that enumerates the trajectory combinations in a best-first manner. The algorithm starts by calculating the influence score of each trajectory w.r.t. to the advertisement. The trajectories are then sorted by the influence and accessed accordingly. In each iteration, combinations with the new trajectory are enumerated. If a combination contains fewer than k trajectories, it is considered incomplete and we estimate its upper bound influence from the unvisited trajectories. If a combination is complete, we calculate its exact influence. The algorithm terminates when the upper bound influence score of all the incomplete combinations are smaller than the best result ever found. We propose three types of upper bound estimation to facilitate early termination. However, the expansion-based method is not scalable when k is large. This is because the number of candidates grows exponentially with k, resulting in high computation cost and memory consumption. To address the issue, we propose a greedy algorithm which finds the trajectory with the maximum incremental influence at each iteration until k trajectories are found and achieves a (1 □ 1=e) approximation ratio. To further improve its efficiency, we propose a cluster-based algorithm that guarantees the same approximation ratio. It partitions the trajectory database into clusters and allows us to access the clusters in an order such that promising trajectories will be found earlier. Our third approximate solution, named threshold-based method, provides a flexible means to adjust the tradeoff between efficiency and accuracy. It guarantees a approximation ratio for any 2 (0; 1]. In addition, we propose a group greedy method to support the influence maximization for a group of advertisements, which selects the trajectories by considering all the advertisements simultaneously and can guarantee a (1 □ 1=e) approximation ratio.

To sum up, our contributions of the paper are as follows.

1) We are the first to study and formulate the influence maximization problem in trajectory databases.
2) We devise an expansion-based framework with three effective upper bound estimation techniques and a novel trajectory index.
3) We propose three approximate methods with performance guarantees to solve the problem when k is large. In addition, we extend the influence maximization problem to find k best trajectories for a group of advertisements.
4) We use real datasets to construct user profiles, motion patterns and trajectory databases. Experimental results show that our proposed methods can solve the trajectory influence maximization problem efficiently.

II. LITERATURE SURVEY

A. *Existing System*

As mobile devices with positioning capabilities continue to proliferate, data management for so-called trajectory databases that capture the historical movements of populations of moving objects becomes important. This project considers the querying of such databases for convoys, a convoy being a group of objects that have traveled together for some time. More specifically, this paper formalizes the concept of a convoy query using density-based notions, in order to capture groups of arbitrary extents and shapes. Convoy discovery is relevant for real life applications in throughput planning of trucks and carpooling of vehicles. Although there has been extensive research on trajectories in the literature, none of this can be applied to retrieve correctly exact convoy result sets. Motivated by this, we develop three efficient algorithms for convoy discovery that adopt the well known filter-refinement framework. In the filter step, we apply line simplification techniques on the trajectories and establish distance bounds between the simplified trajectories. This permits efficient convoy discovery over the simplified trajectories without missing any actual convoys. In the refinement step, the candidate convoys are further processed to obtain the actual convoys. Our comprehensive empirical study offers insight into the properties of the project's proposals and demonstrates that the proposals are effective and ef- ficient on real-world trajectory data.

B. *Proposed System*

In this project, we consider a novel influence maximization problem in trajectory databases to exhibit its usefulness in location-aware advertising. The core difference with existing IM work is that we don't have influence propagation in our model, but propagation is a fundamental assumption in existing IM problems in social network and leads to performance bottleneck because a seed user can influence a huge number of other users. The existing work on IM focuses on how to efficiently and effectively estimate the influence propagation, i.e., the number of users influenced by a set of seed users in the social network while most of the existing work use greedy algorithm to select seed user one by one. In contrast, our problem does not have such a social network, and thus our research focus in totally different from those studies on the traditional IM problem. In our work, users are directly influenced by trajectories, but not by other users, and calculating the individual influence for each trajectory can be done in polynomial time (rather than a #P-hard problem in the traditional IM). Thus, current techniques on IM focus on the optimization of processing the influence propagation and thus cannot be applied to our problem.

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III. SYSTEM REQURIMENTS

The system design basically consists of two things:

A. Software Requirements

The system designing requires following softwares

Operating System	: Windows
Technology	: Java and J2EE
Web Technologies	: Html, JavaScript, CSS
IDE	: My Eclipse(mars 2.0)
Web Server	: Tomcat 8.0
Database	: My SQL
Java Version	: jdk 1.8

1) Windows

Microsoft Windows is a group of several graphical operating system families, all of which are developed, marketed, and sold by Microsoft. Each family caters to a certain sector of the computing industry. Active Windows families include Windows NT and Windows Embedded; these may encompass subfamilies, e.g. Windows Embedded Compact (Windows CE) or Windows Server. Defunct Windows families include Windows 9x, Windows Mobile and Windows Phone. Microsoft introduced an operating environment named Windows on November 20, 1985, as a graphical operating system shellfor MS-DOS in response to the growing interest in graphical user interfaces (GUIs).[3] Microsoft Windows came to dominate the world's personal computer (PC) market with over 90% market share, overtaking Mac OS, which had been introduced in 1984. Apple came to see Windows as an unfair encroachment on their innovation in GUI development as implemented on products such as the Lisa and Macintosh (eventually settled in court in Microsoft's favor in 1993). On PCs, Windows is still the most popular operating system. However, in 2014, Microsoft admitted losing the majority of the overall operating system market to Android,[4] because of the massive growth in sales of Android smartphones. In 2014, the number of Windows devices sold was less than 25% that of Android devices sold. This comparison however may not be fully relevant, as the two operating systems traditionally target different platforms. Still, numbers for server use of Windows (that are comparable to competitors) show one third market share, similar to for end user use.

2) JAVA AND J2EE

JAVA Initially the language was called as “oak” but it was renamed as “Java” in 1995. The primary motivation of this language was the need for a platform-independent (i.e., architecture neutral) language that could be used to create software to be embedded in various consumer electronic devices.

a) Java is a programmer’s language.
b) Java is cohesive and consistent.
c) Except for those constraints imposed by the Internet environment, Java gives the programmer, full control.

Finally, Java is to Internet programming where C was to system programming.Java has had a profound effect on the Internet. This is because; Java expands the Universe of objects that can move about freely in Cyberspace. In a network, two categories of objects are transmitted between the Server and the Personal computer. They are: Passive information and Dynamic active programs. The Dynamic, Self-executing programs cause serious problems in the areas of Security and probability. But, Java addresses those concerns and by doing so, has opened the door to an exciting new form of program called the Applet.

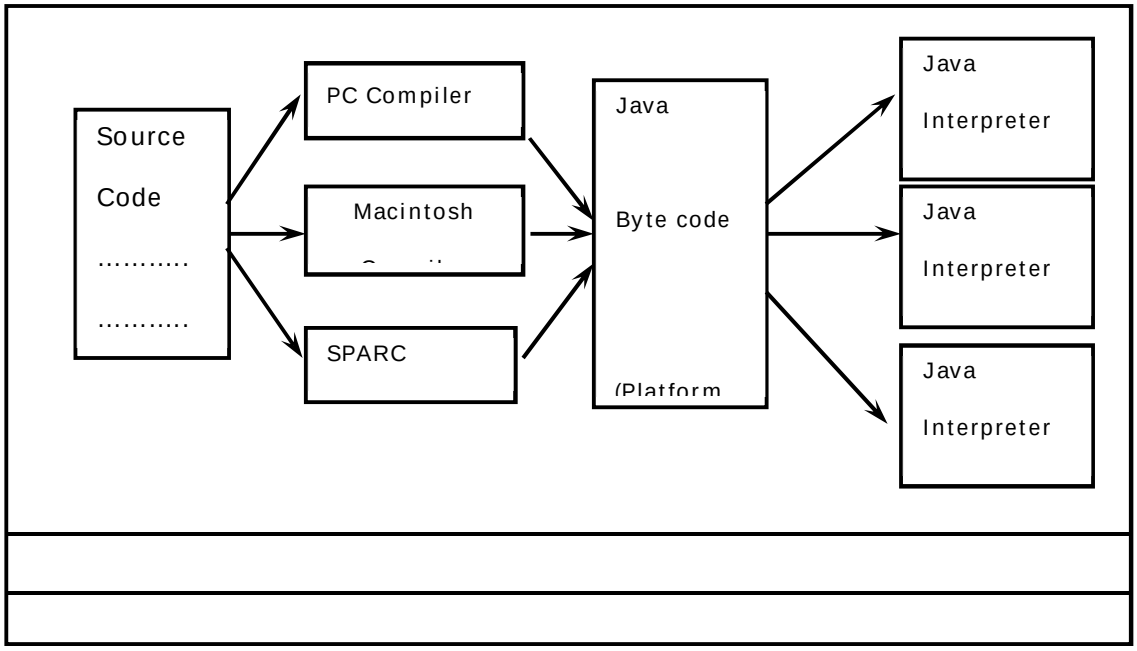
Features Of Java

- *Security:* Every time you that you download a “normal” program, you are risking a viral infection. Prior to Java, most users did not download executable programs frequently, and those who did scanned them for viruses prior to execution. Most users still worried about the possibility of infecting their systems with a virus. In addition, another type of malicious program exists that must be guarded against. This type of program can gather private information, such as credit card numbers, bank account balances, and passwords. Java answers both these concerns by providing a “firewall” between a network application and your computer.

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When you use a Java-compatible Web browser, you can safely download Java applets without fear of virus infection or malicious intent.

- *Portability:* For programs to be dynamically downloaded to all the various types of platforms connected to the Internet, some means of generating portable executable code is needed .As you will see, the same mechanism that helps ensure security also helps create portability. Indeed, Java's solution to these two problems is both elegant and efficient.
- *The Byte code:* The key that allows the Java to solve the security and portability problems is that the output of Java compiler is Byte code. Byte code is a highly optimized set of instructions designed to be executed by the Java run-time system, which is called the Java Virtual Machine (JVM). That is, in its standard form, the JVM is an interpreter for byte code. Translating a Java program into byte code helps makes it much easier to run a program in a wide variety of environments. The reason is, once the run-time package exists for a given system, any Java program can run on it. Although Java was designed for interpretation, there is technically nothing about Java that prevents on-the-fly compilation of byte code into native code. Sun has just completed its Just In Time (JIT) compiler for byte code. When the JIT compiler is a part of JVM, it compiles byte code into executable code in real time, on a piece-by-piece, demand basis. It is not possible to compile an entire Java program into executable code all at once, because Java performs various run-time checks that can be done only at run time. The JIT compiles code, as it is needed, during execution.
- *Compilation of code:* When you compile the code, the Java compiler creates machine code (called byte code) for a hypothetical machine called Java Virtual Machine (JVM). The JVM is supposed to execute the byte code. The JVM is created for overcoming the issue of portability. The code is written and compiled for one machine and interpreted on all machines. This machine is called Java Virtual Machine.
- *Compiling and interpreting Java Source Code*



Java 2 Platform Enterprise Edition. J2EE is a platform -independent, java -centric environment from Sun for developing, building and deploying Web-based enterprise applications online. The J2EE platform consists of a set of services, APIs, and protocolsthat provide the functionality for developing multitiered, Web-based applications.

Some of the key features and services of J2EE:

- At the client tier, J2EE supports pure HTML, as well as Java applets or applications. It relies on Java Server Pages and servlet code to create HTML or other formatted data for the client.
- Enterprise JavaBeans (EJBs) provide another layer where the platform's logic is stored. An EJB server provides functions such as threading, concurrency, security and memory management. These services are transparent to the author.
- Java Database Connectivity (JDBC), which is the Java equivalent to ODBC, is the standard interface for Java databases.
- The Java servlet API enhances consistency for developers without requiring a graphical user interface.

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3) HTML,JAVASCRIPT AND CSS

a) HTML: Hypertext Markup Language (HTML), the languages of the World Wide Web (WWW), allows users to produces Web pages that include text, graphics and pointer to other Web pages (Hyperlinks).

HTML is not a programming language but it is an application of ISO Standard 8879, SGML (Standard Generalized Markup Language), but specialized to hypertext and adapted to the Web. The idea behind Hypertext is that instead of reading text in rigid linear structure, we can easily jump from one point to another point. We can navigate through the information based on our interest and preference. A markup language is simply a series of elements, each delimited with special characters that define how text or other items enclosed within the elements should be displayed. Hyperlinks are underlined or emphasized works that load to other documents or some portions of the same document.

HTML can be used to display any type of document on the host computer, which can be geographically at a different location. It is a versatile language and can be used on any platform or desktop.

HTML provides tags (special codes) to make the document look attractive. HTML tags are not case-sensitive. Using graphics, fonts, different sizes, color, etc., can enhance the presentation of the document. Anything that is not a tag is part of the document itself.

ADVANTAGES

- A HTML document is small and hence easy to send over the net. It is small because it does not include formatted information.
- HTML is platform independent.
- HTML tags are not case-sensitive.

b) JAVASCRIPT: JavaScript is a script-based programming language that was developed by Netscape Communication Corporation. JavaScript was originally called Live Script and renamed as JavaScript to indicate its relationship with Java. JavaScript supports the development of both client and server components of Web-based applications. On the client side, it can be used to write programs that are executed by a Web browser within the context of a Web page. On the server side, it can be used to write Web server programs that can process information submitted by a Web browser and then updates the browser's display accordingly.

Even though JavaScript supports both client and server Web programming, we prefer JavaScript at Client side programming since most of the browsers supports it. JavaScript is almost as easy to learn as HTML, and JavaScript statements can be included in HTML documents by enclosing the statements between a pair of scripting tags.

<SCRIPTS>..</SCRIPT>.

<SCRIPT LANGUAGE = "JavaScript">

JavaScript statements

</SCRIPT>

Here are a few things we can do with JavaScript :

- Validate the contents of a form and make calculations.
- Add scrolling or changing messages to the Browser's status line.
- Animate images or rotate images that change when we move the mouse over them.
- Detect the browser in use and display different content for different browsers.
- Detect installed plug-ins and notify the user if a plug-in is required.

c) CSS: Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language.[1] Although most often used to set the visual style of web pages and user interfaces written in HTML and XHTML, the language can be applied to any XML document, including plain XML, SVG and XUL, and is applicable to rendering in speech, or on other media. Along with HTML and JavaScript, CSS is a cornerstone technology used by most websites to create visually engaging webpages, user interfaces for web applications, and user interfaces for many mobile applications.[2]

CSS is designed primarily to enable the separation of presentation and content, including aspects such as the layout, colors, and fonts.[3]

This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple HTML pages to share formatting by specifying the relevant CSS in a separate .css file, and reduce complexity and repetition in the structural content.

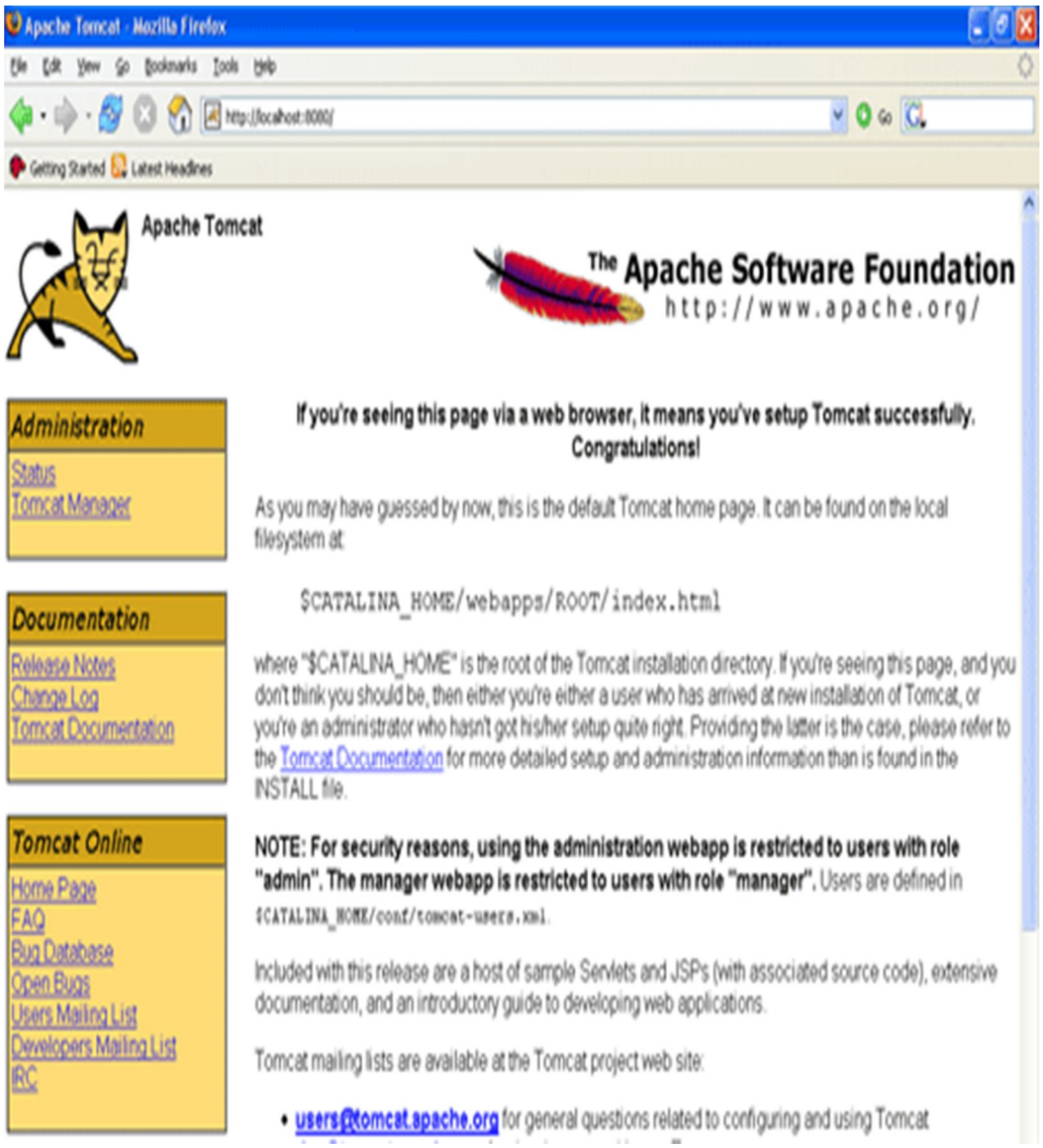
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Separation of formatting and content makes it possible to present the same markup page in different styles for different rendering methods, such as on-screen, in print, by voice (via speech-based browser or screen reader), and on Braille-based tactile devices. It can also display the web page differently depending on the screen size or viewing device. Readers can also specify a different style sheet, such as a CSS file stored on their own computer, to override the one the author specified.

Changes to the graphic design of a document (or hundreds of documents) can be applied quickly and easily, by editing a few lines in the CSS file they use, rather than by changing markup in the documents.

The CSS specification describes a priority scheme to determine which style rules apply if more than one rule matches against a particular element. In this so-called *cascade*, priorities (or *weights*) are calculated and assigned to rules, so that the results are predictable.

4) *TOMCAT:* Tomcat is an open source web server developed by Apache Group. Apache Tomcat is the servlet container that is used in the official Reference Implementation for the Java Servlet and Java Server Pages technologies. The Java Servlet and Java Server Pages specifications are developed by Sun under the Java Community Process. Web Servers like Apache Tomcat support only web components while an application server supports web components as well as business components (BEAs Weblogic, is one of the popular application server).To develop a web application with jsp/servlet install any web server like JRun, Tomcat etc to run your application.



5) *MYSQL:* MySQL is an open-source relational database management system(RDBMS). Its name is a combination of "My", the name of co-founder Michael Widenius's daughter and "SQL", the abbreviation for Structured Query Language. The MySQL development project has made its source code available under the terms of the GNU General Public License, as well as under a variety of proprietary agreements. MySQL was owned and sponsored by a single for-profit firm, the Swedish company MySQL AB, now owned by Oracle Corporation.[8] For proprietary use, several paid editions are available, and offer additional functionality.
MySQL is a central component of the LAMP open-source web application software stack (and other "AMP" stacks). LAMP is an acronym for "Linux, Apache, MySQL, Perl/PHP/Python". Applications that use the MySQL database include: TYPO3, MODx, Joomla, WordPress, Simple Machines Forum, phpBB, MyBB, and Drupal. MySQL is also used in many high-profile, large-scale websites.

6) *JDK:* The Java Development Kit (JDK) is an implementation of either one of the Java Platform, Standard Edition, Java Platform, Enterprise Edition, or Java Platform, Micro Edition platforms released by Oracle Corporation in the form of a binary product aimed at Javadevelopers on Solaris, Linux, macOS or Windows. The JDK includes a private JVM and a few other resources to finish the development of a Java Application. Since the introduction of the Java platform, it has been by far the most widely used Software Development Kit (SDK). On 17 November 2006, Sun announced that they would release it under the GNU General Public License (GPL), thus making it free software. This happened in large part on 8 May 2007, when Sun contributed the source code to the OpenJDK.

B. Hardware Requirements

Hardware	-	Pentium
Speed	-	1.1 GHz
RAM	-	1GB
Hard Disk	-	20 GB
Floppy Drive	-	1.44 MB
Key Board	-	Standard Windows Keyboard

IV. SYSTEM DESIGN

A. INPUT DESIGN

Input Design plays a vital role in the life cycle of software development, it requires very careful attention of developers. The input design is to feed data to the application as accurate as possible. So inputs are supposed to be designed effectively so that the errors occurring while feeding are minimized. According to Software Engineering Concepts, the input forms or screens are designed to provide to have a validation control over the input limit, range and other related validations.

This system has input screens in almost all the modules. Error messages are developed to alert the user whenever he commits some mistakes and guides him in the right way so that invalid entries are not made. Let us see deeply about this under module design.

Input design is the process of converting the user created input into a computer-based format. The goal of the input design is to make the data entry logical and free from errors. The error is in the input are controlled by the input design. The application has been developed in user-friendly manner. The forms have been designed in such a way during the processing the cursor is placed in the position where must be entered. The user is also provided with in an option to select an appropriate input from various alternatives related to the field in certain cases.

Validations are required for each data entered.

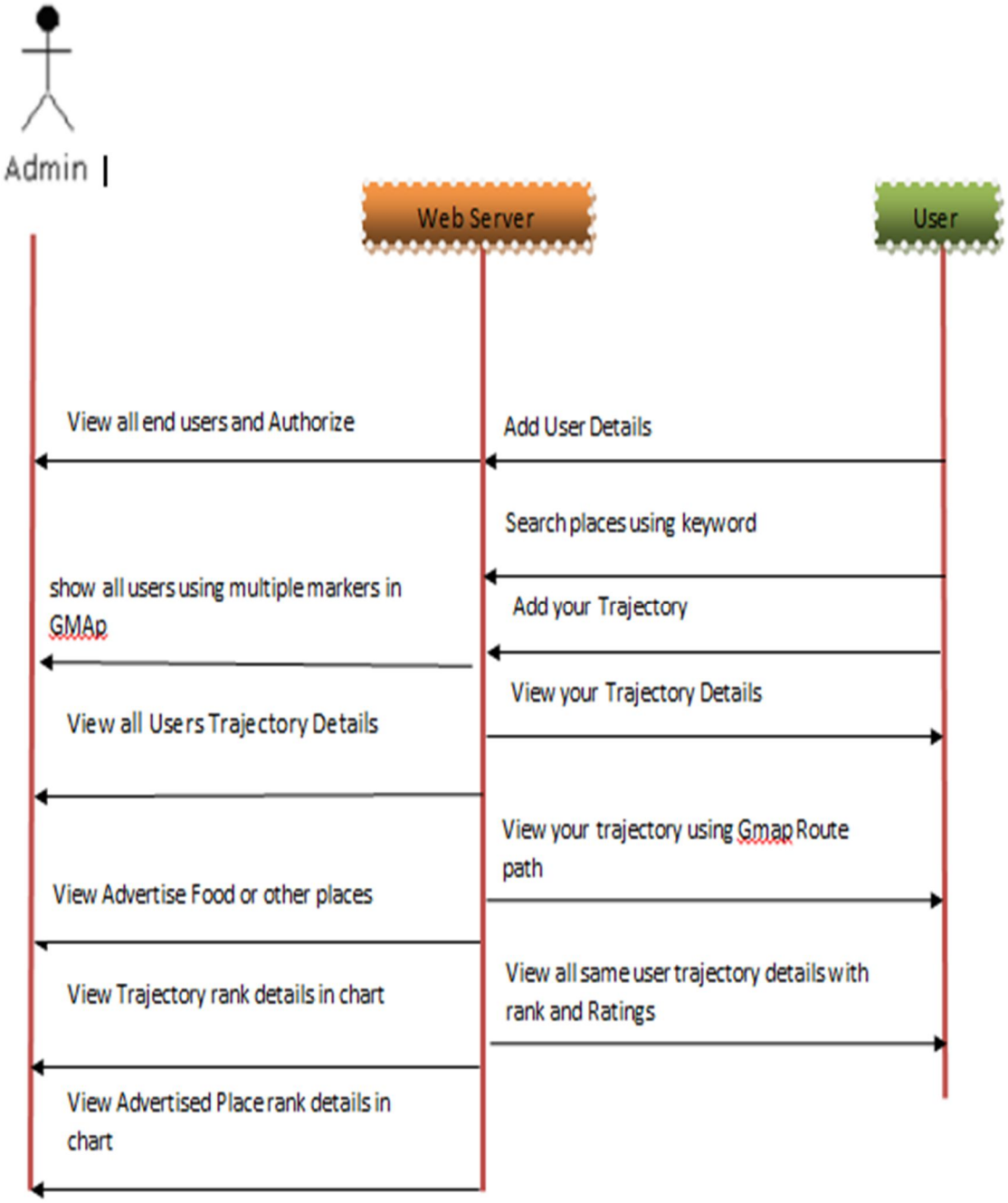
Whenever a user enters an erroneous data, error message is displayed and the user can move on to the subsequent pages after completing all the entries in the current page.

The Output from the computer is required to mainly create an efficient method of communication within the company primarily among the project leader and his team members, in other words, the administrator and the clients.

The output of VPN is the system which allows the project leader to manage his clients in terms of creating new clients and assigning new projects to them, maintaining a record of the project validity and providing folder level access to each client on the user side depending on the projects allotted to him.

After completion of a project, a new project may be assigned to the client. User authentication procedures are maintained at the initial stages itself. A new user may be created by the administrator himself or a user can himself register as a new user but the task of assigning projects and validating a new user rests with the administrator only.

B. Sequence Diagram



C. System Modules

Modules in this process:

1) *User Likes Module:* User can view additionally just opinion for Administration group .user can choose any one.
2) *Influence Status Module:* In this project main focus for influence trajectory so influence status module main things topics and location find influence through algorithm. topic influence is search user opinion maximum influence. Location influence for user like opinion status which location and which is high that find out for add advertisement.
3) *Add Advertisement:* Admin can add advertisement for user and admin upload advertisement with status (name, location, messages) with map details in latitude and longitude .

V. IMPLEMENTATION

A. System Implementation

Client Server With the varied topic in existence in the fields of computers, Client Server is one, which has generated more heat than light, and also more hype than reality.

This technology has acquired a certain critical mass attention with its dedication conferences and magazines. Major computer vendors such as IBM and DEC, have declared that Client Servers is their main future market. A survey of DBMS magazine reveled that 76% of its readers were actively looking at the client server solution. The growth in the client server development tools from $200 million in 1992 to more than $1.2 billion in 1996.

Client server implementations are complex but the underlying concept is simple and powerful. A client is an application running with local resources but able to request the database and relate the services from separate remote server. The software mediating this client server interaction is often referred to as MIDDLEWARE.

The typical client either a PC or a Work Station connected through a network to a more powerful PC, Workstation, Midrange or Main Frames server usually capable of handling request from more than one client. However, with some configuration server may also act as client.

A server may need to access other server in order to process the original client request.

The key client server idea is that client as user is essentially insulated from the physical location and formats of the data needs for their application.

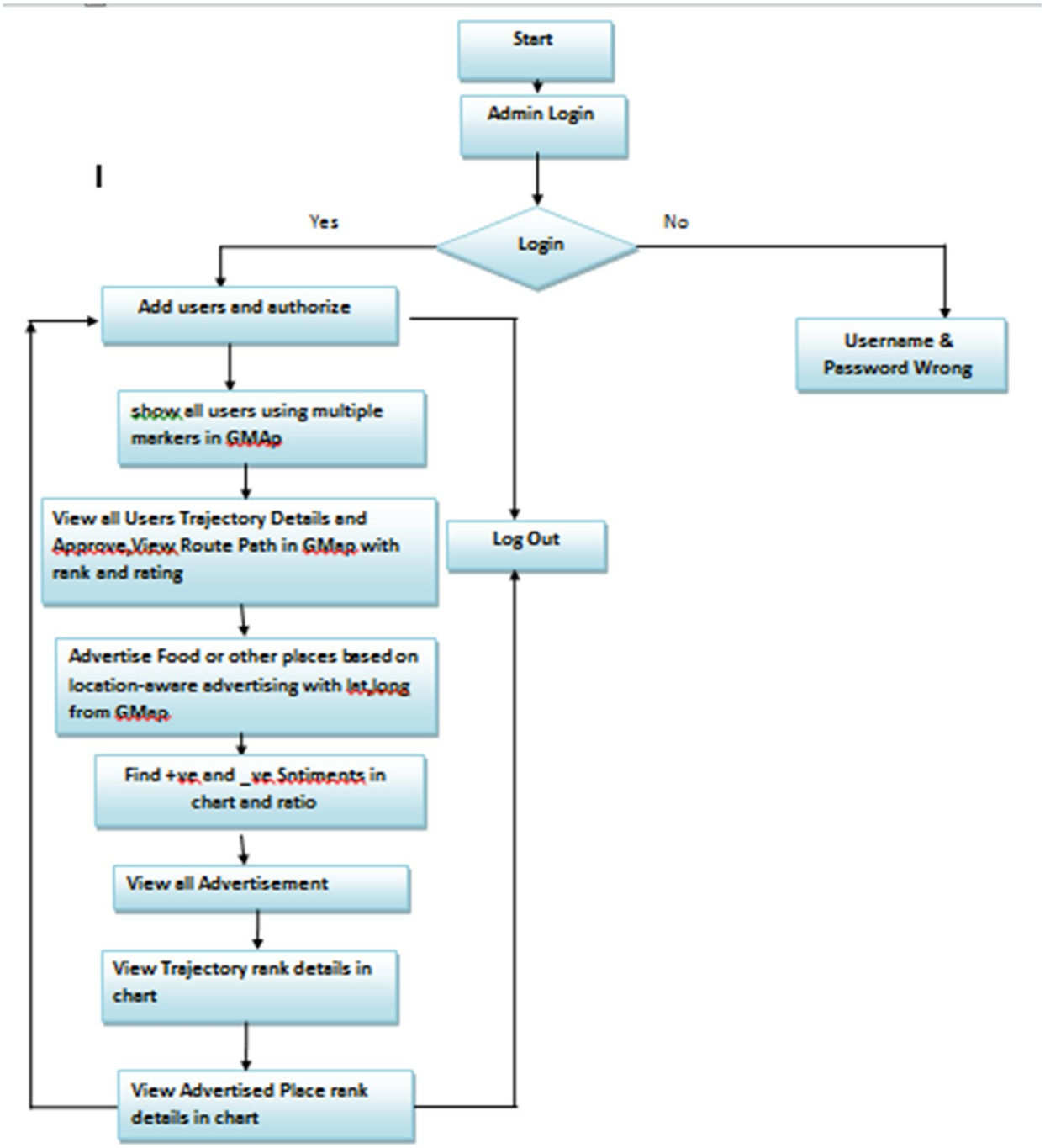
With the proper middleware, a client input from or report can transparently access and manipulate both local database on the client machine and remote databases on one or more servers. An added bonus is the client server opens the door to multi-vendor database access indulging heterogeneous table joins.

1) *What is a Client Server:* Two prominent systems in existence are client server and file server systems. It is essential to distinguish between client servers and file server systems. Both provide shared network access to data but the comparison dens there! The file server simply provides a remote disk drive that can be accessed by LAN applications on a file by file basis. The client server offers full relational database services such as SQL-Access, Record modifying, Insert, Delete with full relational integrity backup/ restore performance for high volume of transactions, etc. the client server middleware provides a flexible interface between client and server, who does what, when and to whom.
2) *Why Client Server:* Client server has evolved to solve a problem that has been around since the earliest days of computing: how best to distribute your computing, data generation and data storage resources in order to obtain efficient, cost effective departmental an enterprise wide data processing. During mainframe era choices were quite limited. A central machine housed both the CPU and DATA (cards, tapes, drums and later disks). Access to these resources was initially confined to batched runs that produced departmental reports at the appropriate intervals. A strong central information service department ruled the corporation. The role of the rest of the corporation limited to requesting new or more frequent reports and to provide hand written forms from which the central data banks were created and updated. The earliest client server solutions therefore could best be characterized as “SLAVE-MASTER”.

B. ADMIN

1) Login
2) View all users and authorize and View Location in GMap
3) show all users using multiple markers in GMap
4) View all Users Trajectory Details and Approve,View Route Path in GMap with rank and rating and give link to find Influence Maximization(show highest count Trajectory path)
5) Advertise Food or other places based on location-aware advertising with lat,long from GMap
6) View all Advertisement(hotel,gym,coffee shop,Hopitals,Movies with theatre) with rank and rating and give link to find Influence Maximization(show highest count place details)
7) View Trajectory rank details in chart
8) View Advertised Place rank details in chart.

Flow Chart For Admin



Admin Code

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<title>Admin Insert Advertisement</title>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<link href="css/style.css" rel="stylesheet" type="text/css" />
```

```
<link rel="stylesheet" type="text/css" href="css/coin-slider.css" />
<script type="text/javascript" src="js/cufon-yui.js"></script>
<script type="text/javascript" src="js/cufon-chunkfive.js"></script>
<script type="text/javascript" src="js/jquery-1.4.2.min.js"></script>
<script type="text/javascript" src="js/script.js"></script>
<script type="text/javascript" src="js/coin-slider.min.js"></script>
<style type="text/css">
<!--
.style1 {font-size: 36px}
.style2 {color: #FF00FF}
.style3 {color: #FF0000}
.style4 {color: #006600}
-->
</style>
</head>
<body>
<div class="main">
  <div class="header">
    <div class="header_resize">
      <div class="menu_nav">
        <ul>
          <li><a href="index.html"><span>Home Page</span></a></li>
          <li class="active"><a href="A_Login.jsp"><span>Admin</span></a></li>
          <li><a href="U_Login.jsp"><span>User</span></a></li>
        </ul>
      </div>
      <div class="clr"></div>
      <div class="logo">
        <h1><a href="index.html" class="style1">Influence Maximization in Trajectory Databases</span></a></h1>
      </div>
      <div class="searchform"></div>
      <div class="clr"></div>
      <div class="slider">
        <div id="coin-slider"> <a href="#"><img src="images/slide1.jpg" width="960" height="360" alt="" /><span><big>Influence Maximization in Trajectory Databases</big></span></a> <a href="#"><img src="images/slide2.jpg" width="960" height="360" alt="" /><span><big>Influence Maximization in Trajectory Databases</big></span></a> <a href="#"><img src="images/slide3.jpg" width="960" height="360" alt="" /><span><big>Influence Maximization in Trajectory Databases</big></span></a> </div>
        <div class="clr"></div>
      </div>
      <div class="clr"></div>
    </div>
  </div>
  <div class="content">
    <div class="content_resize">
      <div class="mainbar">
            <h2><span class="style3">Advertisement Insert Status</span></h2>
        <%@page
import="com.oreilly.servlet.*,java.sql.*,java.lang.*,java.text.SimpleDateFormat,java.util.*,java.io.*,javax.servlet.*,
javax.servlet.http.*" %>
```

```
<%@ page import="java.util.Date" %>
<%@ include file="connect.jsp" %>
<%@ page import ="java.security.Key" %>
<%@ page import ="javax.crypto.Cipher" %>
<%@ page import ="java.math.BigInteger" %>
<%@ page import ="javax.crypto.spec.SecretKeySpec" %>
<%@ page import ="org.bouncycastle.util.encoders.Base64" %>
<%@ page import ="java.security.MessageDigest,java.security.DigestInputStream" %>
<%@ page import ="java.io.PrintStream,java.io.FileOutputStream,java.io.FileInputStream,java.io.BufferedInputStream" %>


<%

 try
 {
                        /*      String advname=request.getParameter("aname");
                                String name=request.getParameter("name");
                                String iteams=request.getParameter("iteams");
                                String date1=request.getParameter("d1");
                                String date2=request.getParameter("d2");
                                String addr=request.getParameter("add");
                                String loc=request.getParameter("loc");
                                String lat=request.getParameter("lat");
                                String lon=request.getParameter("lon");
                        */

                                ServletContext context = getServletContext();
                                String dirName =context.getRealPath("Gallery/");
                                String paramname=null;
                                String image=null;
                        String advname=null;
                                String name=null;
                                String iteams=null;
                                String addr=null;
                                String date1=null;
                                String date2=null;
                                String loc=null;
                                String lat=null;
                                String lon=null;
                                FileInputStream fs=null;
                                File file1 = null;

                                        MultipartRequest multi = new MultipartRequest(request, dirName,      10    *
1024 * 1024); // 10MB

                                        Enumeration params = multi.getParameterNames();

                                        while (params.hasMoreElements())
                                        {
                                                paramname = (String) params.nextElement();
```

```
                if(paramname.equalsIgnoreCase("aname"))
                {
                        advname=multi.getParameter(paramname);
                }
                if(paramname.equalsIgnoreCase("name"))
                {
                        name=multi.getParameter(paramname);
                }
                if(paramname.equalsIgnoreCase("iteams"))
                {
                        iteams=multi.getParameter(paramname);
                }
                if(paramname.equalsIgnoreCase("add"))
                {
                        addr=multi.getParameter(paramname);
                }
                if(paramname.equalsIgnoreCase("loc"))
                {
                        loc=multi.getParameter(paramname);
                }
                if(paramname.equalsIgnoreCase("lat"))
                {
                        lat=multi.getParameter(paramname);
                }
                if(paramname.equalsIgnoreCase("lon"))
                {
                        lon=multi.getParameter(paramname);
                }
                if(paramname.equalsIgnoreCase("d1"))
                {
                        date1=multi.getParameter(paramname);
                }
                if(paramname.equalsIgnoreCase("d2"))
                {
                        date2=multi.getParameter(paramname);
                }


        }

        int f = 0;
        Enumeration files = multi.getFileNames();

        while (files.hasMoreElements())
        {
                paramname = (String) files.nextElement();

                if(paramname != null)
                {
                        f = 1;
```

```
                                        image = multi.getFilesystemName(paramname);
                                        String fPath = context.getRealPath("Gallery\\"+image);
                                        file1 = new File(fPath);
                                        fs = new FileInputStream(file1);
                                }
                        }


                        String str = "select * from advertise where advtype='"+advname+"' and advname='"+name+"' ";
                                Statement st = connection.createStatement();
                                ResultSet rs = st.executeQuery(str);
                                if(rs.next())
                                {

                                %>
                        <h3 class="style2">Advertisement Already exists...</h3>
                        <p align="right"><a href="A_Advertise.jsp">Back</a></p><%

                        }
                        else
                        {
                        String name1=advname+"_"+name;

                                int num=0,rank=0,rate=0;
                        PreparedStatement ps=connection.prepareStatement("insert into advertise(advtype,advname,address,location,date1,date2,iteams,latitued,longitued,rank,rate,image) values(?,?,?,?,?,?,?,?,?,?,?,?)");
                                ps.setString(1,name1);
                                ps.setString(2,name);
                                ps.setString(3,addr);
                                ps.setString(4,loc);
                                ps.setString(5,date1);
                                ps.setString(6,date2);
                                ps.setString(7,iteams);
                                ps.setString(8,lat);
                                ps.setString(9,lon);
                                ps.setInt(10,rank);
                                ps.setInt(11,rate);
                                ps.setBinaryStream(12, (InputStream)fs, (int)(file1.length()));

                                ps.executeUpdate();

                        %>
                        <h3 class="style4">Advertisement Added Successfully...</h3>
                        <p align="right"><a href="A_Advertise.jsp">Back</a></p><%
                        }
                                connection.close();
                                }
                        catch (Exception e)
                        {
```

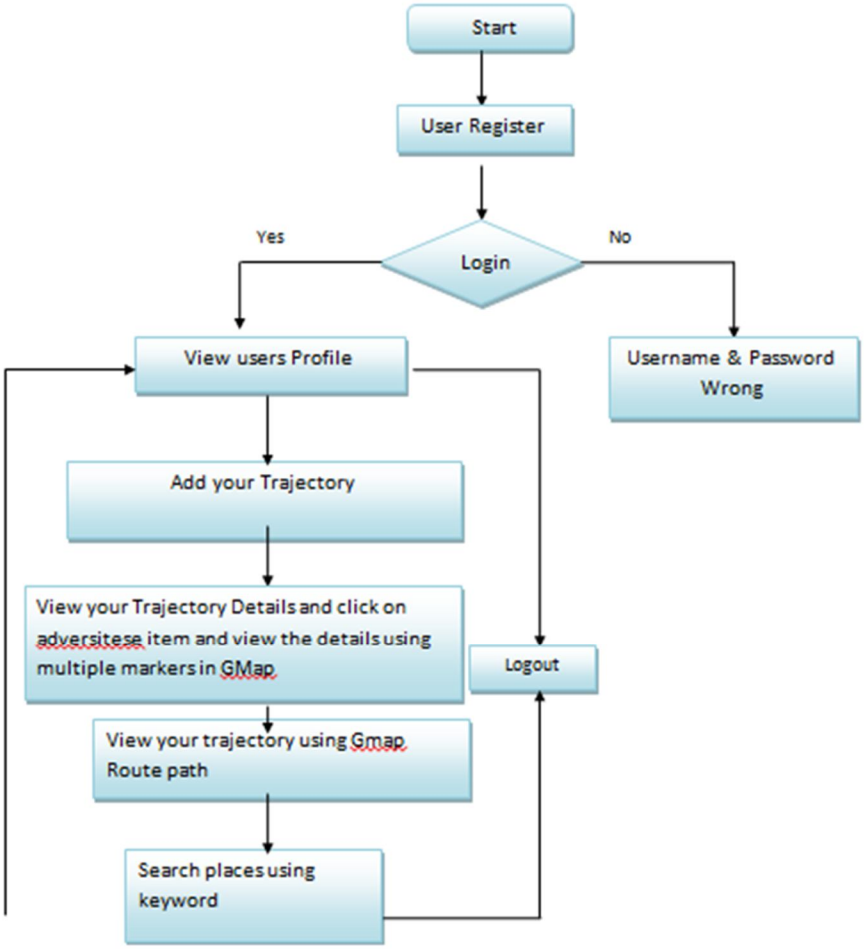
```
                                        out.println(e.getMessage());
                                    }
                                %>
      <p class="pages"> </p>
    </div>
    <div class="sidebar">
     <div class="gadget">
      <h2 class="star"><span>Sidebar</span> Menu</h2>
      <div class="clr"></div>
      <ul class="sb_menu">
       <li><a href="A_Main.jsp">Admin Home</a></li>
       <li><a href="A_Login.jsp">LogOut</a></li>
      </ul>
     </div>
    </div>
    <div class="clr"></div>
   </div>
  </div>
  <div class="fbg">
   <div class="fbg_resize">
    <div class="col c1">
     <h2><span>Image</span> Gallery</h2>
     <a href="#"><img src="images/gal1.jpg" width="75" height="75" alt="" class="gal" /></a> <a href="#"><img src="images/gal2.jpg" width="75" height="75" alt="" class="gal" /></a> <a href="#"><img src="images/gal3.jpg" width="75" height="75" alt="" class="gal" /></a> <a href="#"><img src="images/gal4.jpg" width="75" height="75" alt="" class="gal" /></a> <a href="#"><img src="images/gal5.jpg" width="75" height="75" alt="" class="gal" /></a> <a href="#"><img src="images/gal6.jpg" width="75" height="75" alt="" class="gal" /></a> </div>
    <div class="clr"></div>
   </div>
  </div>
  <div class="footer">
   <div class="footer_resize">
    <div style="clear:both;"></div>
   </div>
  </div>
</div>
<div align=center></div>
</body>
</html>
```

C. USER

1) Register with Location and Login
2) View your profiles
3) Add your Trajectory (Initially Enter your name and Display all register details in text field in next page and add from location,to location with lat.long From GMap,select advertised item from combo box)
4) View your Trajectory Details and click on adversitese item and view the details using multiple markers in GMap(Display advertised item based on location)
5) View your trajectory using Gmap Route path
6) View all same user trajectory details with rank and Ratings
7) Search places using keyword and view details and diplay all related places like hotels,gyms,etc in multiple markers using GMap

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Flow Chart For User



USER CODE:

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<title>User</title>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<link href="css/style.css" rel="stylesheet" type="text/css" />
<link rel="stylesheet" type="text/css" href="css/coin-slider.css" />
<script type="text/javascript" src="js/cufon-yui.js"></script>
<script type="text/javascript" src="js/cufon-chunkfive.js"></script>
<script type="text/javascript" src="js/jquery-1.4.2.min.js"></script>
<script type="text/javascript" src="js/script.js"></script>
<script type="text/javascript" src="js/coin-slider.min.js"></script>
<style type="text/css">
<!--
.style1 {font-size: 36px}
.style2 {color: #FF00FF}
-->
```

```
</style>
</head>
<body>
<div class="main">
 <div class="header">
  <div class="header_resize">
   <div class="menu_nav">
    <ul>
     <li><a href="index.html"><span>Home Page</span></a></li>
     <li><a href="A_Login.jsp"><span>Admin</span></a></li>
     <li class="active"><a href="U_Login.jsp"><span>User</span></a></li>
    </ul>
   </div>
   <div class="clr"></div>
   <div class="logo">
    <h1><a href="index.html" class="style1">Influence Maximization in Trajectory Databases</span></a></h1>
   </div>
   <div class="searchform"></div>
   <div class="clr"></div>
   <div class="slider">
    <div id="coin-slider"> <a href="#"><img src="images/slide1.jpg" width="960" height="360" alt="" /><span><big>Influence Maximization in Trajectory Databases</big></span></a> <a href="#"><img src="images/slide2.jpg" width="960" height="360" alt="" /><span><big>Influence Maximization in Trajectory Databases</big></span></a> <a href="#"><img src="images/slide3.jpg" width="960" height="360" alt="" /><span><big>Influence Maximization in Trajectory Databases</big></span></a> </div>
    <div class="clr"></div>
   </div>
   <div class="clr"></div>
  </div>
 </div>
 <div class="content">
  <div class="content_resize">
   <div class="mainbar">
    <h2><span class="style2">User <%=request.getParameter("type1")%>'s Profile</span></h2>
        <table width="600" border="3" cellpadding="0" cellspacing="0" style="border-collapse: collapse;margin:10px 10px 10px 10px; font-family:Verdana, Arial, Helvetica, sans-serif; font-size:14px;">
            <%@ include file="connect.jsp" %>
            <%
                String user1=request.getParameter("type1");
                String s1,s2,s3,s4,s5,s6;
                int i=0;
                try
                {
                    String query="select * from user where username='"+user1+"' ";
                    Statement st=connection.createStatement();
                    ResultSet rs=st.executeQuery(query);
                    if ( rs.next() )
                    {
                        i=rs.getInt(1);
```

```
s1=rs.getString(4);
s2=rs.getString(5);
s3=rs.getString(6);
s4=rs.getString(7);
s5=rs.getString("location");
s6=rs.getString(9);

%>
<tr>
<td width="226" rowspan="6" ><div class="style7 style26" style="margin:10px 13px 10px 13px;" ><strong><a class="#" id="img1" href="#" >
<input name="image" type="image" src="images.jsp?value=<%="user"%>&id=<%=i%>" style="width:200px; height:200px;" />
</a></strong></div></td>
</tr>
<tr>
<td width="141" height="37" valign="middle" style="color: #2c83b0;"><div align="left" class="style15 style42 style60 style61" style="margin-left:10px;"><strong>E-Mail</strong></div></td>
<td width="158" valign="middle" style="color:#000000;"><div align="left" class="style40 style10 style62 style2" style="margin-left:10px;"><strong>
<%out.println(s1);%>
</strong></div></td>
</tr>
<tr>
<td width="141" height="40" valign="middle" style="color: #2c83b0;"><div align="left" class="style15 style42 style60 style61" style="margin-left:10px;"><strong>Mobile</strong></div></td>
<td width="158" valign="middle" ><div align="left" class="style40 style10 style62 style2" style="margin-left:10px;"><strong>
<%out.println(s2);%>
</strong></div></td>
</tr>
<tr>
<td height="43" align="left" valign="middle" style="color: #2c83b0;"><div align="left" class="style15 style42 style60 style61" style="margin-left:10px;"><strong>Location</strong></div></td>
<td align="left" valign="middle"><div align="left" class="style40 style10 style62 style2" style="margin-left:10px;"><strong>
<%out.println(s5);%>
</strong></div></td>
</tr>
<tr>
<td width="141" height="43" align="left" valign="middle" style="color: #2c83b0;"><div align="left" class="style15 style42 style60 style61" style="margin-left:10px;"><strong>Date of Birth</strong></div></td>
<td width="158" align="left" valign="middle"><div align="left" class="style40 style10 style62 style2" style="margin-left:10px;"><strong>
<%out.println(s3);%>
</strong></div></td>
</tr>
<tr>
<td width="141" height="47" align="left" valign="middle" style="color: #2c83b0;"><div align="left" class="style15 style42 style60 style61" style="margin-left:10px;"><strong>Gender</strong></div></td>
```

```
<td  width="158" align="left" valign="middle" ><div align="left" class="style40 style10 style62 style2" style="margin-left:10px;"><strong>
<%out.println(s4);%>
</strong></div></td>
</tr>

<%
                                        }
                                        connection.close();
                                }
                                catch(Exception e)
                                {
                                        out.println(e);
                                }
                                %>
</table>
<h2> </h2>
<% String type=request.getParameter("type");
if(type.equalsIgnoreCase("sametraj")){%>
<h2 align="right"><a href="U_SameUserTraject.jsp" class="style4">Back</a></h2>
<%}


%>
<p class="pages"> </p>
</div>
<div class="sidebar">
<div class="gadget">
<h2 class="star"><span>Sidebar</span> Menu</h2>
<div class="clr"></div>
<ul class="sb_menu">
<li><a href="U_Main.jsp">User Home</a></li>
<li><a href="U_Login.jsp">LogOut</a></li>
</ul>
</div>
</div>
<div class="clr"></div>
</div>
</div>
<div class="fbg">
<div class="fbg_resize">
<div class="col c1">
<h2><span>Image</span> Gallery</h2>
<a href="#"><img src="images/gal1.jpg" width="75" height="75" alt="" class="gal" /></a> <a href="#"><img src="images/gal2.jpg" width="75" height="75" alt="" class="gal" /></a> <a href="#"><img src="images/gal3.jpg" width="75" height="75" alt="" class="gal" /></a> <a href="#"><img src="images/gal4.jpg" width="75" height="75" alt="" class="gal" /></a> <a href="#"><img src="images/gal5.jpg" width="75" height="75" alt="" class="gal" /></a> <a href="#"><img src="images/gal6.jpg" width="75" height="75" alt="" class="gal" /></a> </div>
<div class="clr"></div>
</div>
```

```
 </div>
 <div class="footer">
  <div class="footer_resize">
   <div style="clear:both;"></div>
  </div>
 </div>
</div>
<div align=center></div>
</body>
</html>
```

D. User Registration Form

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<title>User Registration Page</title>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<link href="css/style.css" rel="stylesheet" type="text/css" />
<link rel="stylesheet" type="text/css" href="css/coin-slider.css" />
<script type="text/javascript" src="js/cufon-yui.js"></script>
<script type="text/javascript" src="js/cufon-chunkfive.js"></script>
<script type="text/javascript" src="js/jquery-1.4.2.min.js"></script>
<script type="text/javascript" src="js/script.js"></script>
<script type="text/javascript" src="js/coin-slider.min.js"></script>
<script src="https://maps.googleapis.com/maps/api/js?v=3.exp&sensor=false&key=AIzaSyD0X4v7eqMFcWCR-VZAJwEMfb47id9IZao"></script>
    <script>
      var map;

      function initialize() {
        var mapOptions = {
          zoom: 12,
          center: new google.maps.LatLng(12.9716, 77.5946),
          mapTypeId: google.maps.MapTypeId.ROADMAP
        };
        map = new google.maps.Map(document.getElementById('map_canvas'),
          mapOptions
        );
        google.maps.event.addListener(map, 'click', function(event) {
          document.getElementById('latMap').value = event.latLng.lat();
          document.getElementById('lngMap').value = event.latLng.lng();
        });
      }
      function mapDivClicked (event) {
        var target = document.getElementById('map_canvas'),
          posx = event.pageX - target.offsetLeft,
          posy = event.pageY - target.offsetTop,
          bounds = map.getBounds(),
          neLatlng = bounds.getNorthEast(),
```

```
            swLatlng = bounds.getSouthWest(),
            startLat = neLatlng.lat(),
            endLng = neLatlng.lng(),
            endLat = swLatlng.lat(),
            startLng = swLatlng.lng();

          document.getElementById('posX').value = posx;
          document.getElementById('posY').value = posy;
          document.getElementById('lat').value = startLat + ((posy/350) * (endLat - startLat));
          document.getElementById('lng').value = startLng + ((posx/500) * (endLng - startLng));
        }
        google.maps.event.addDomListener(window, 'load', initialize);
    </script>


<script language="javascript" type="text/javascript">      <!--Start Reg Validation Jai Siddalinga-->
function valid()
{
var na3=document.s.name.value;
if(na3=="")

{
alert("Please Enter User Name");
document.s.name.focus();
return false;
}
else
{

}
var na4=document.s.pwd.value;
if(na4=="")

{
alert("Please Enter Password");
document.s.pwd.focus();
return false;
}



var na6=document.s.email.value;
if(na6=="")

{
alert("Please Enter the Email");
document.s.email.focus();
return false;
}
```

```
var na7=document.s.mob.value;
if(na7=="")

{
alert("Please Enter the Mobile");
document.s.mob.focus();
return false;
}
var na5=document.s.dob.value;
if(na5=="")

{
alert("Please Enter the DOB");
document.s.dob.focus();
return false;
}

var na11=document.s.gen.value;
if(na11=="--Select--")

{
alert("please choose Gender");
document.s.gen.focus();
return false;
}
var na8=document.s.add.value;
if(na8=="")

{
alert("Please Enter the Address ");
document.s.add.focus();
return false;
}

var na9=document.s.loc.value;
if(na9=="")

{
alert("Please Enter the Location");
document.s.loc.focus();
return false;
}

var na12=document.s.lat.value;
if(na12=="")

{
alert("Please Enter the Latitued");
document.s.lat.focus();
return false;
```

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```
}

var na13=document.s.lon.value;
if(na13=="")

{
alert("Please Enter the Longitued");
document.s.lon.focus();
return false;
}

var na10=document.s.photo.value;
if(na10=="")

{
alert("please choose image");
document.s.photo.focus();
return false;
}
var na11=document.s.cont.value;
if(na11=="")

{
alert("please choose Your Country");
document.s.cont.focus();
return false;
}
var na12=document.s.state.value;
if(na12=="")

{
alert("please choose Your State");
document.s.state.focus();
return false;
}



}
</script>
<style type="text/css">
<!--
.style1 {color: #FF00FF}
.style2 {color: #FF0000}
.style3 {font-size: 36px}
.style4 {font-size: 14px}
-->
</style>
</head>
<body>
```

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```
<div class="main">
 <div class="header">
  <div class="header_resize">
   <div class="menu_nav">
    <ul>
     <li><a href="index.html"><span>Home Page</span></a></li>
     <li><a href="A_Login.jsp"><span>Admin</span></a></li>
     <li class="active"><a href="U_Login.jsp"><span>User</span></a></li>
    </ul>
   </div>
   <div class="clr"></div>
   <div class="logo">
    <h1><a href="index.html" class="style3">Influence Maximization in Trajectory Databases</span></a></h1>
   </div>
   <div class="searchform"></div>
   <div class="clr"></div>
   <div class="slider">
    <div id="coin-slider"> <a href="#"><img src="images/slide1.jpg" width="960" height="360" alt="" /><span><big>Influence Maximization in Trajectory Databases</big></span></a> <a href="#"><img src="images/slide2.jpg" width="960" height="360" alt="" /><span><big>Influence Maximization in Trajectory Databases</big></span></a> <a href="#"><img src="images/slide3.jpg" width="960" height="360" alt="" /><span><big>Influence Maximization in Trajectory Databases</big></span></a> </div>
    <div class="clr"></div>
   </div>
   <div class="clr"></div>
  </div>
 </div>
 <div class="content">
  <div class="content_resize">
   <div class="mainbar">
    <div class="article">
     <h2><span class="style1">User Registration Form</span></h2>

          <form name="s" method="post" enctype="multipart/form-data" action="U_RegIns.jsp" onSubmit="return valid()" ons>
          <table height="351" align="center" cellspacing="5">
          <tr>
          <td><table cellpadding="10">
          <tr>
          <td>
           <div align="right" class="style4 style2"><span class="style11"><font size="+1">User Name : </font> </span></div></td>
          <td><input type="text" id="name" name="name" style="width:100%"></td>
          </tr>
          <tr>
          <td>
           <div align="right" class="style4 style2"><span class="style11"><font size="+1">Password :</font> </span></div></td>
          <td><label>
           <input type="password" id="pwd" name="pwd" style="width:100%">
          </label></td>
```

```
</tr>
<tr>
<td><div align="right" class="style4 style2"><span class="style13"><font size="+1">Email :</font></span></div></td>
<td><input type="text" id="email" name="email" style="width:100%" placeholder="abc@gmail.com"></td>
</tr>
<tr>
<td>
  <div align="right" class="style4 style2"><span class="style13"><font size="+1">Mobile :</font> </span></div></td>
<td><label>
  <input type="text" id="mob" name="mob" style="width:100%">
</label>
  </p></td>
</tr>
<tr>
<td>
  <div align="right" class="style4 style2"><span class="style13"><font size="+1">DOB :</font></span></div></td>
<td><label>
  <input type="text" id="dob" name="dob" style="width:100%" placeholder="DD/MM/YYYY">
</label></td>
</tr>
<tr>
<td>
  <div align="right" class="style4 style2"><span class="style13"><font size="+1">Gender :</font></span></div></td>
<td><label>
  <select id="gen" name="gen">
  <option>--Select--</option>
  <option>Male</option>
  <option>Female</option>
  </select>
</label></td>
</tr>
<tr>
<td><div align="right" class="style4 style2"><span class="style13"><font size="+1">Address :</font>
</span></div></td>
<td>
<label>

 <textarea name="add" id="add" style="width:100%"></textarea>
</label>
  </p></td>
</tr>
<tr>
<td><div align="right" class="style4 style2"><span class="style13"><font size="+1">Location :</font>
</span></div></td>
<td>
  <input type="text" id="loc" name="loc" style="width:100%" placeholder="LOCATION"></td></tr>
  <tr>
<td></td>
<td>
<input type="text" id="lat" name="lat" style="width:40%" placeholder="LATTITUDE">
```

```
<input type="text" id="lon" name="lon" style="width:40%" placeholder="LONGITUDE ">
</td>
</tr>
<tr>
<td>
<div align="right" class="style4 style2"><span class="style13"><font size="+1">Choose Photo :</font></span></div></td>
<td>
<input type="file" id="photo" name="photo" style="width:100%" > </td>
</tr>

<td> </td>
<td> </td>
</tr>
<tr>
<td> </td>
<td><input type="submit" value="Register" id="button1"><input type="reset" value="clear"></td>
</tr>
</table> </td>
</tr>
</table>
</form>


<p> </p>
<div id="map_canvas" onClick="mapDivClicked(event);" style="height: 550px; width: 550px;"></div>

<div />

<br>
<span class="style3 style1"><span class="style4">VIEW LATTITUDE AND LONGITUDE FROM MOUSE POSITION</span></br>
</span><br>

<span class="style4">lat from map:
<input id="latMap" />
lng from map:</span>
<input id="lngMap" />
<p align="right"><a href="U_Login.jsp" class="style3">Back</a></p>
<div class="clr"></div>
</div>
<p class="pages"> </p>
</div>
<div class="fbg">
<div class="fbg_resize">
<div class="col c1">
<h2><span>Image</span> Gallery</h2>
<a href="#"><img src="images/gal1.jpg" width="75" height="75" alt="" class="gal" /></a> <a href="#"><img src="images/gal2.jpg" width="75" height="75" alt="" class="gal" /></a> <a href="#"><img src="images/gal3.jpg" width="75" height="75" alt="" class="gal" /></a> <a href="#"><img src="images/gal4.jpg" width="75" height="75" alt="" class="gal" /></a>
```

```
<a href="#"><img src="images/gal5.jpg" width="75" height="75" alt="" class="gal" /></a> <a href="#"><img src="images/gal6.jpg" width="75" height="75" alt="" class="gal" /></a> </div>
    <div class="clr"></div>
  </div>
 </div>
 </div>
  <div class="sidebar">
    <div class="gadget">
      <h2 class="star"><span>Sidebar</span> Menu</h2>
      <div class="clr"></div>
      <ul class="sb_menu">
        <li><a href="index.html">Home</a></li>
        <li><a href="A_Login.jsp">Admin</a></li>
        <li><a href="U_Login.jsp">User</a></li>
      </ul>
    </div>
  </div>

 <div class="footer">
  <div class="footer_resize">
   <div style="clear:both;"></div>
  </div>
 </div>
</div>
<div align=center></div>
</body>
</html>
```

E. Route Map Code

```
<!DOCTYPE html>
<html>
<title>Route Map</title>
 <head>
  <meta name="viewport" content="initial-scale=1.0, user-scalable=no" />
  <link rel="stylesheet" type="text/css" href="style.css" />
        <script type="text/javascript" src="http://ajax.googleapis.com/ajax/libs/jquery/1.7.2/jquery.min.js"></script>
  <script type="text/javascript" src="http://maps.googleapis.com/maps/api/js?sensor=false&key=AIzaSyD0X4v7eqMFcWCR-VZAJwEMfb47id9IZao">
  </script>
        <style>
        body {
                color: black;
                font-family: arial,sans-serif;
                font-size: 13px;
        }
        </style>
  <script type="text/javascript">
        var map;
        var rendererOptions = {draggable: true};
        var directionsDisplay = new google.maps.DirectionsRenderer(rendererOptions);
```

```
var directionsService = new google.maps.DirectionsService();

$(document).ready(function () {

                //draw a map centered at Empire State Building Newyork
            var latlng = new google.maps.LatLng(12.972442, 77.580643);
        var myOptions = {
           zoom: 15,
           center: latlng,
           mapTypeId: google.maps.MapTypeId.ROADMAP
        };
        map = new google.maps.Map(document.getElementById("map_canvas"), myOptions);

                directionsDisplay.setMap(map);
                directionsDisplay.setPanel(document.getElementById("divDirections"));

                $("#btnGetDirections").click(function(){
                        calcRoute($("#txtAddress1").val(),$("#txtAddress2").val());
                });


});

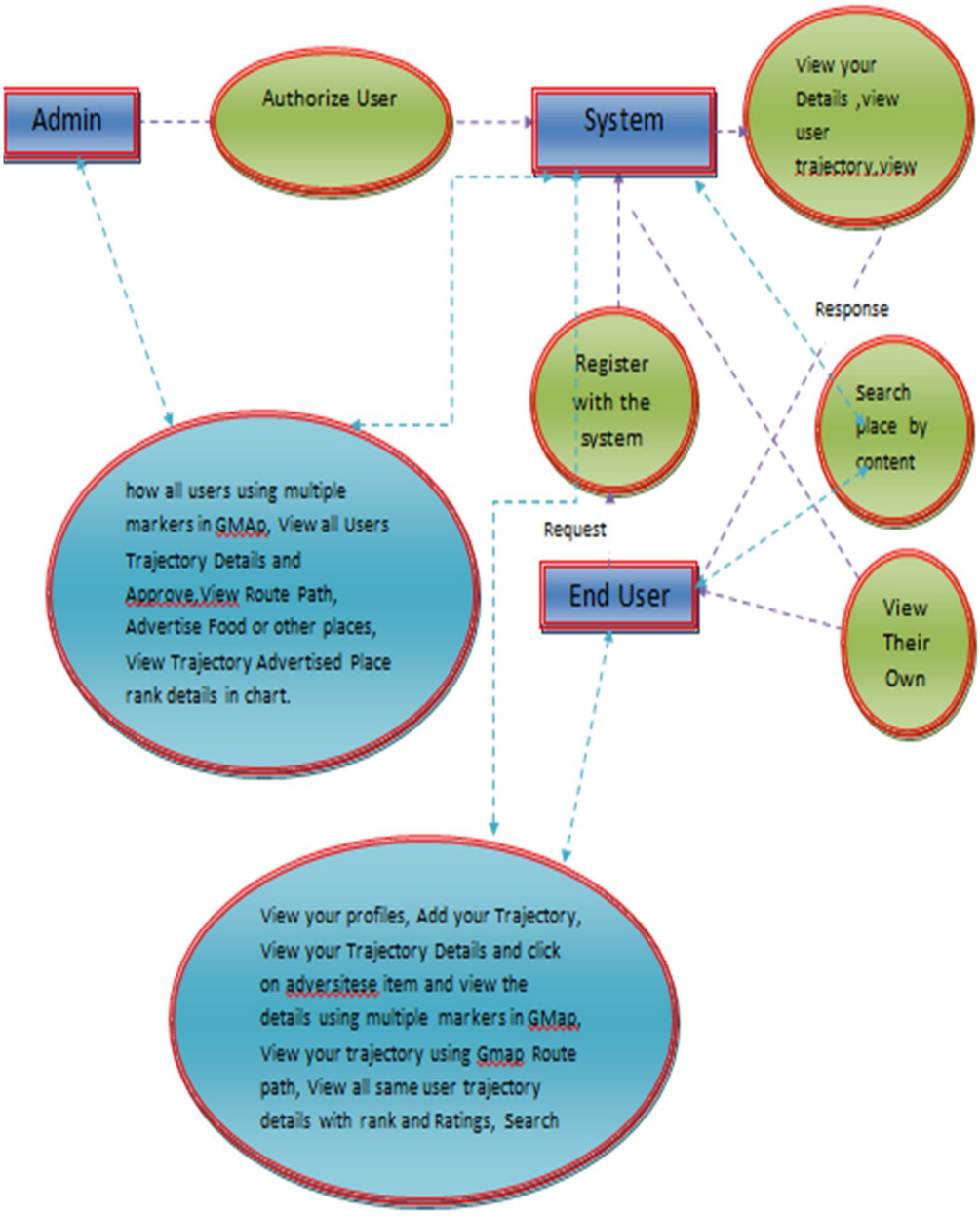
function calcRoute(start,end) {
  var request = {
            origin:start,
            destination:end,
            travelMode: google.maps.TravelMode.DRIVING,
            provideRouteAlternatives : false
  };
  directionsService.route(request, function(result, status) {
            if (status == google.maps.DirectionsStatus.OK) {
              directionsDisplay.setDirections(result);
            }
  });
}

  </script>
</head>
<body>
<%@ include file="connect.jsp" %>
<% String fromlocation=request.getParameter("loc"); %>
 <% String tolocation=request.getParameter("loc1");%>
  <div id="container" class="shadow">
     <div id="map_canvas"></div>
     <div id="sidebar">
        <div class="row" style="background:#E3EDFA">
          <label> Enter Address</label>
                                <input type="text" id="txtAddress1" class="text" value="<%=fromlocation%> " />
          <input type="text" id="txtAddress2" class="text" value="<%=tolocation%> " />
```

```
<img src="images/search.png" id="btnGetDirections" border="0" width="24" height="24" style="vertical-align:middle;"
/>

        </div>
        <div class="separator"></div>
                        <div id="divDirections">
                        </div>
    </div>
  </div>
 </body>
</html>
```

F. Data flow Diagram



VI. TESTING METHODOLOGIES AND STRATERGIES

The following are the Testing Methodologies:

A. Unit Testing

Unit testing focuses verification effort on the smallest unit of Software design that is the module. Unit testing exercises specific paths in a module's control structure to
ensure complete coverage and maximum error detection. This test focuses on each module individually, ensuring that it functions properly as a unit. Hence, the naming is Unit Testing.
During this testing, each module is tested individually and the module interfaces are verified for the consistency with design specification. All important processing path are tested for the expected results. All error handling paths are also tested.

B. Integration Testing

Integration testing addresses the issues associated with the dual problems of verification and program construction. After the software has been integrated a set of high order tests are conducted. The main objective in this testing process is to take unit tested modules and builds a program structure that has been dictated by design.
The following are the types of Integration Testing:

1) *Top Down Integration:* This method is an incremental approach to the construction of program structure. Modules are integrated by moving downward through the control hierarchy, beginning with the main program module. The module subordinates to the main program module are incorporated into the structure in either a depth first or breadth first manner.
In this method, the software is tested from main module and individual stubs are replaced when the test proceeds downwards.

2) *Bottom-up Integration:* This method begins the construction and testing with the modules at the lowest level in the program structure. Since the modules are integrated from the bottom up, processing required for modules subordinate to a given level is always available and the need for stubs is eliminated. The bottom up integration strategy may be implemented with the following steps:

a) The low-level modules are combined into clusters into clusters that perform a specific Software sub-function.
b) A driver (i.e.) the control program for testing is written to coordinate test case input and output.
c) The cluster is tested.
d) Drivers are removed and clusters are combined moving upward in the program structure

The bottom up approaches tests each module individually and then each module is module is integrated with a main module and tested for functionality.

C. User Acceptance Testing

User Acceptance of a system is the key factor for the success of any system. The system under consideration is tested for user acceptance by constantly keeping in touch with the prospective system users at the time of developing and making changes wherever required. The system developed provides a friendly user interface that can easily be understood even by a person who is new to the system.

D. Output Testing

After performing the validation testing, the next step is output testing of the proposed system, since no system could be useful if it does not produce the required output in the specified format. Asking the users about the format required by them tests the outputs generated or displayed by the system under consideration. Hence the output format is considered in 2 ways – one is on screen and another in printed format.

E. Validation Checking

Validation checks are performed on the following fields.

1) *Text Field:* The text field can contain only the number of characters lesser than or equal to its size. The text fields are alphanumeric in some tables and alphabetic in other tables. Incorrect entry always flashes and error message.
2) *Numeric Field:* The numeric field can contain only numbers from 0 to 9. An entry of any character flashes an error messages. The individual modules are checked for accuracy and what it has to perform.

Each module is subjected to test run along with sample data. The individually tested modules are integrated into a single system. Testing involves executing the real data information is used in the program the existence of any program defect is inferred from the output. The testing should be planned so that all the requirements are individually tested.A successful test is one that gives out the defects for the inappropriate data and produces and output revealing the errors in the system.

3) *Preparation of Test Data:* Taking various kinds of test data does the above testing. Preparation of test data plays a vital role in the system testing. After preparing the test data the system under study is tested using that test data. While testing the system by using test data errors are again uncovered and corrected by using above testing steps and corrections are also noted for future use.

4) *Using Live Test Data:* Live test data are those that are actually extracted from organization files. After a system is partially constructed, programmers or analysts often ask users to key in a set of data from their normal activities. Then, the systems person uses this data as a way to partially test the system. In other instances, programmers or analysts extract a set of live data from the files and have them entered themselves.
It is difficult to obtain live data in sufficient amounts to conduct extensive testing. And, although it is realistic data that will show how the system will perform for the typical processing requirement, assuming that the live data entered are in fact typical, such data generally will not test all combinations or formats that can enter the system. This bias toward typical values then does not provide a true systems test and in fact ignores the cases most likely to cause system failure.

5) *Using Artificial Test Data:* Artificial test data are created solely for test purposes, since they can be generated to test all combinations of formats and values. In other words, the artificial data, which can quickly be prepared by a data generating utility program in the information systems department, make possible the testing of all login and control paths through the program.

6) *Maintainence:* This covers a wide range of activities including correcting code and design errors. To reduce the need for maintenance in the long run, we have more accurately defined the user's requirements during the process of system development. Depending on the requirements, this system has been developed to satisfy the needs to the largest possible extent. With development in technology, it may be possible to add many more features based on the requirements in future. The coding and designing is simple and easy to understand which will make maintenance easier.

a) *Testing Strategy:* A strategy for system testing integrates system test cases and design techniques into a well planned series of steps that results in the successful construction of software. The testing strategy must co-operate test planning, test case design, test execution, and the resultant data collection and evaluation .A strategy for software testing must accommodate low-level tests that are necessary to verify that a small source code segment has been correctly implemented as well as high level tests that validate major system functions against user requirements.
Software testing is a critical element of software quality assurance and represents the ultimate review of specification design and coding. Testing represents an interesting anomaly for the software. Thus, a series of testing are performed for the proposed system before the system is ready for user acceptance testing.

b) *System Testing:* Software once validated must be combined with other system elements (e.g. Hardware, people, database). System testing verifies that all the elements are proper and that overall system function performance is achieved. It also tests to find discrepancies between the system and its original objective, current specifications and system documentation.

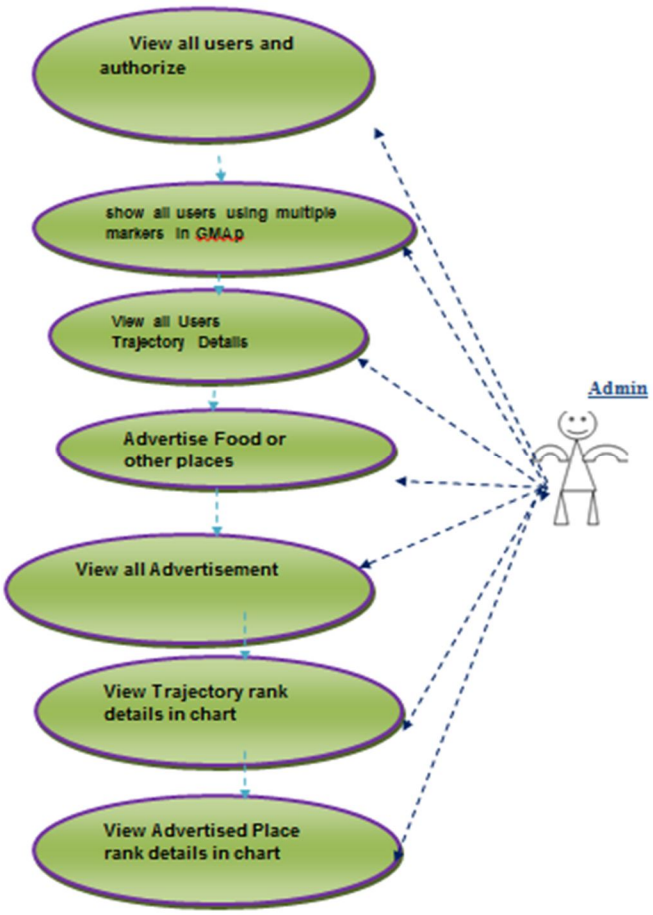
c) *Unit Testing***:** In unit testing different are modules are tested against the specifications produced during the design for the modules. Unit testing is essential for verification of the code produced during the coding phase, and hence the goals to test the internal logic of the modules.
Using the detailed design description as a guide, important Conrail paths are tested to uncover errors within the boundary of the modules. This testing is carried out during the programming stage itself. In this type of testing step, each module was found to be working satisfactorily as regards to the expected output from the module.

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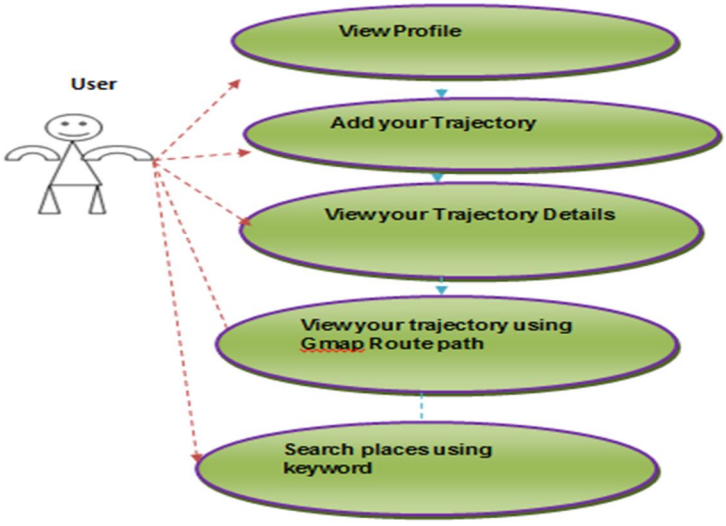
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 10 Issue VIII August 2022- Available at www.ijraset.com

VII. USE CASE DIAGRAM

A. *Admin*

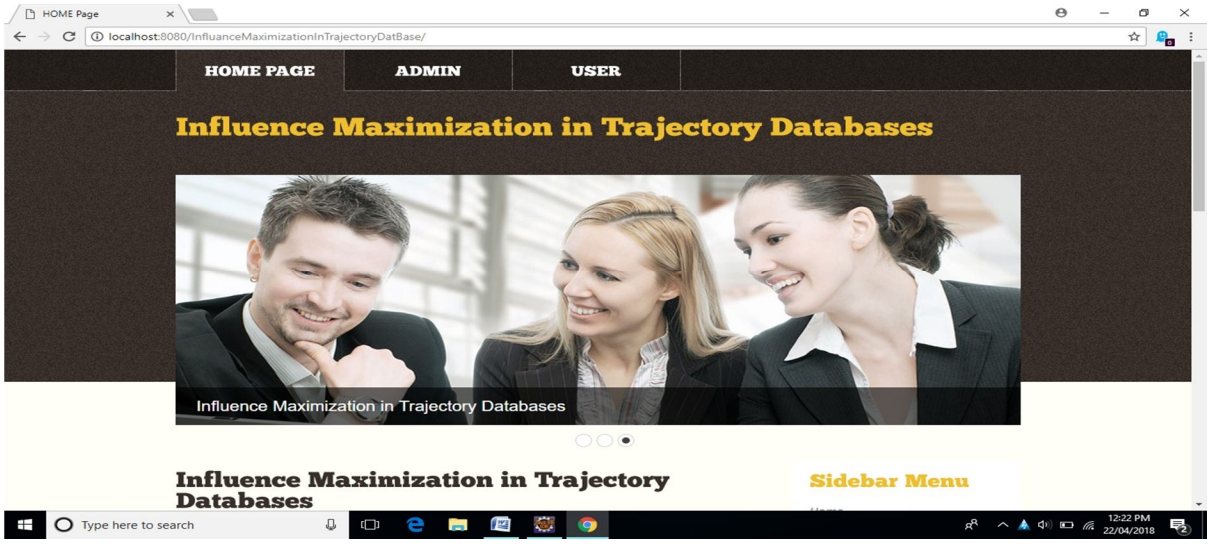


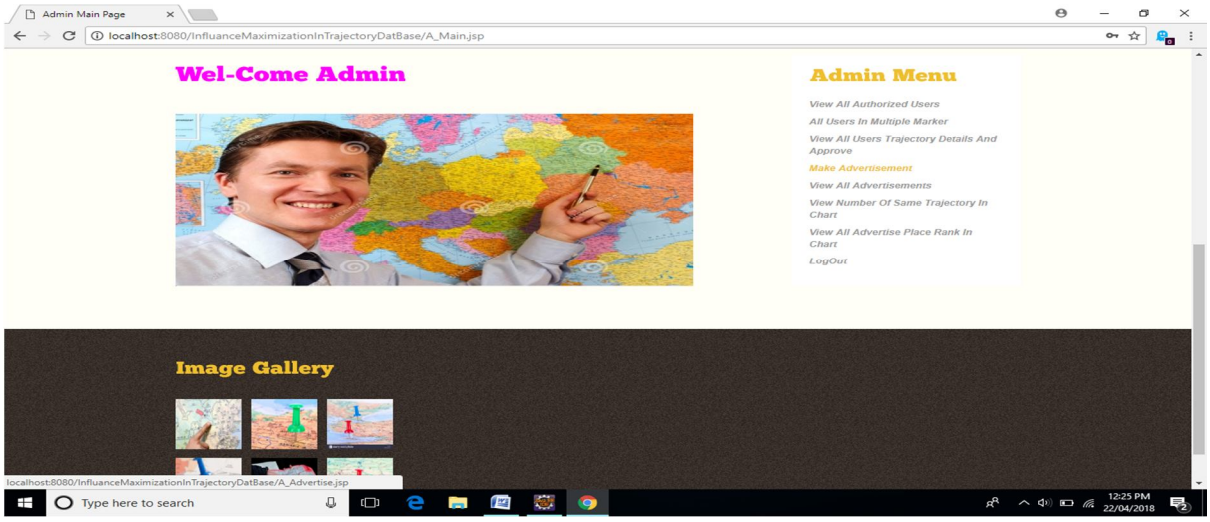
B. *User*

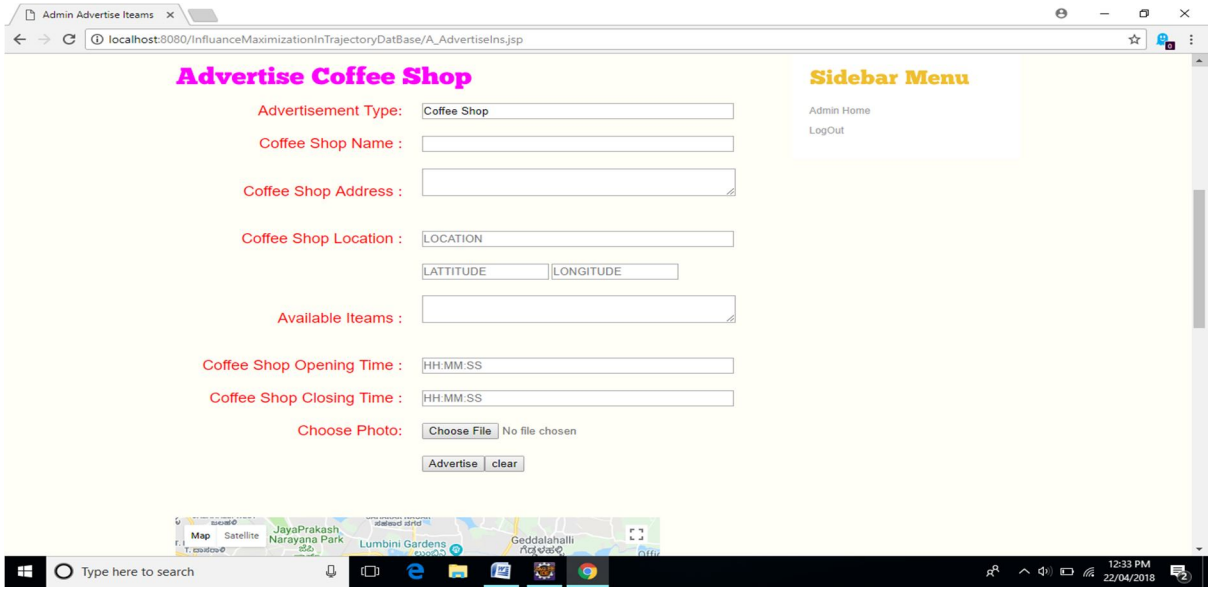


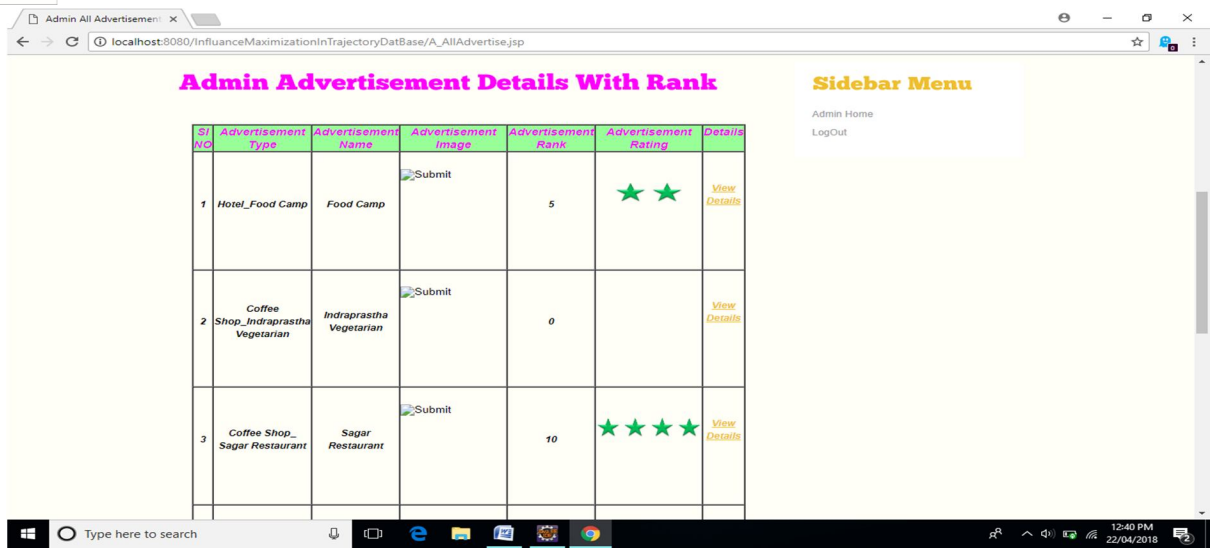
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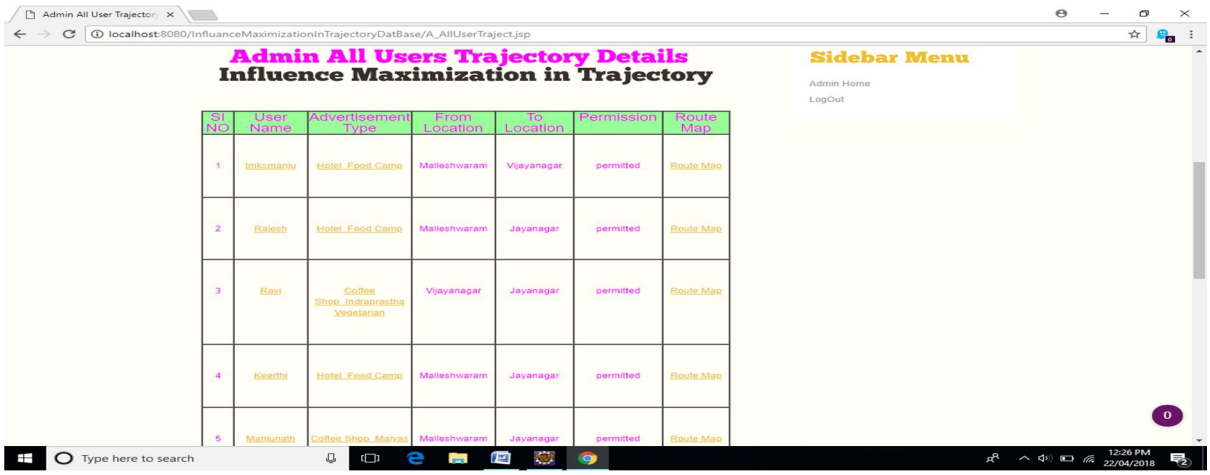
VIII. RESULTS

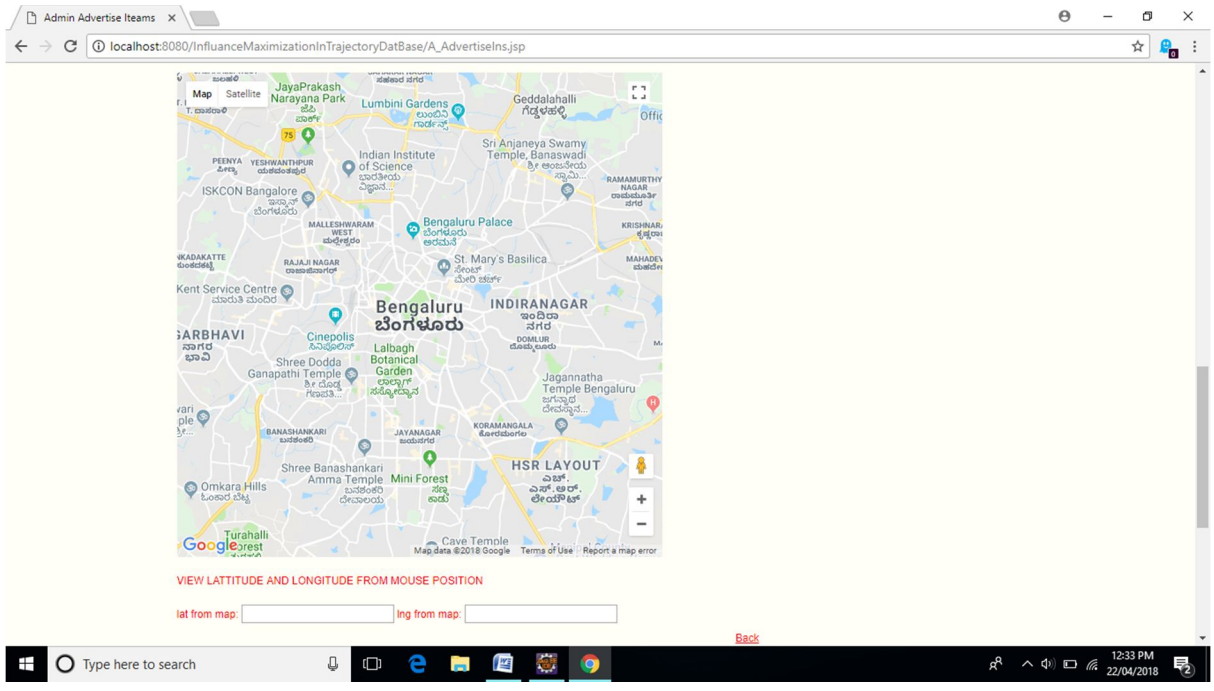


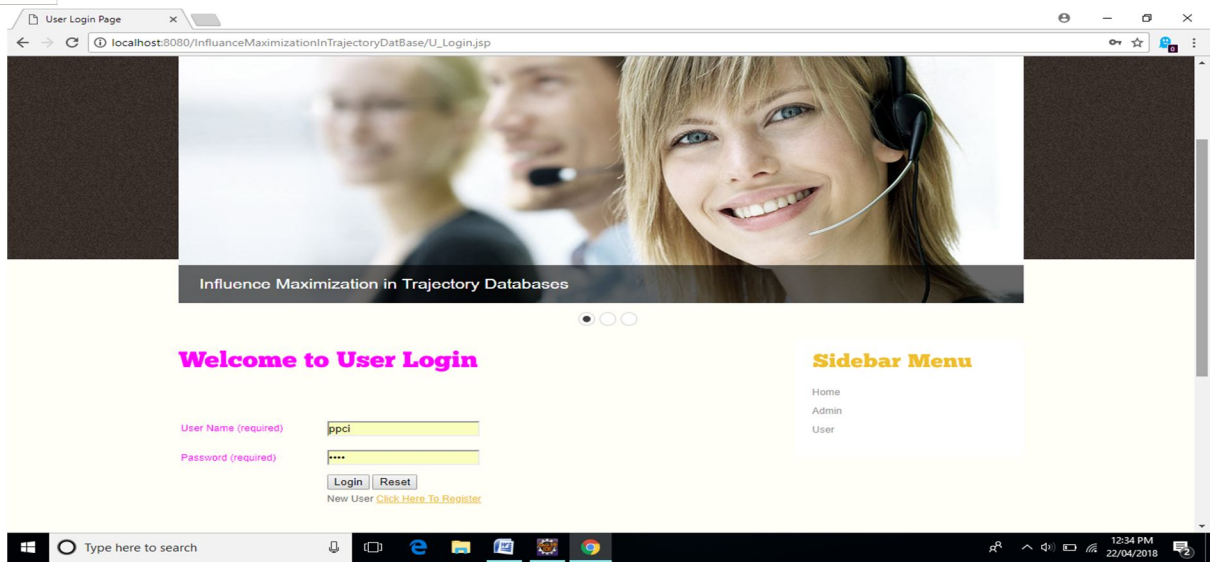


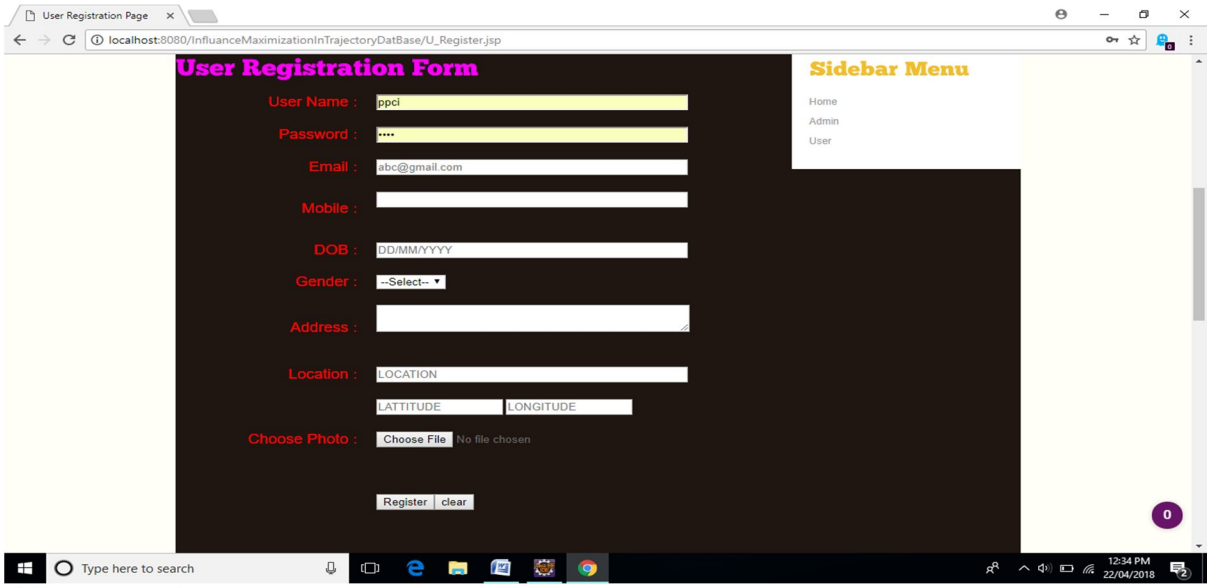


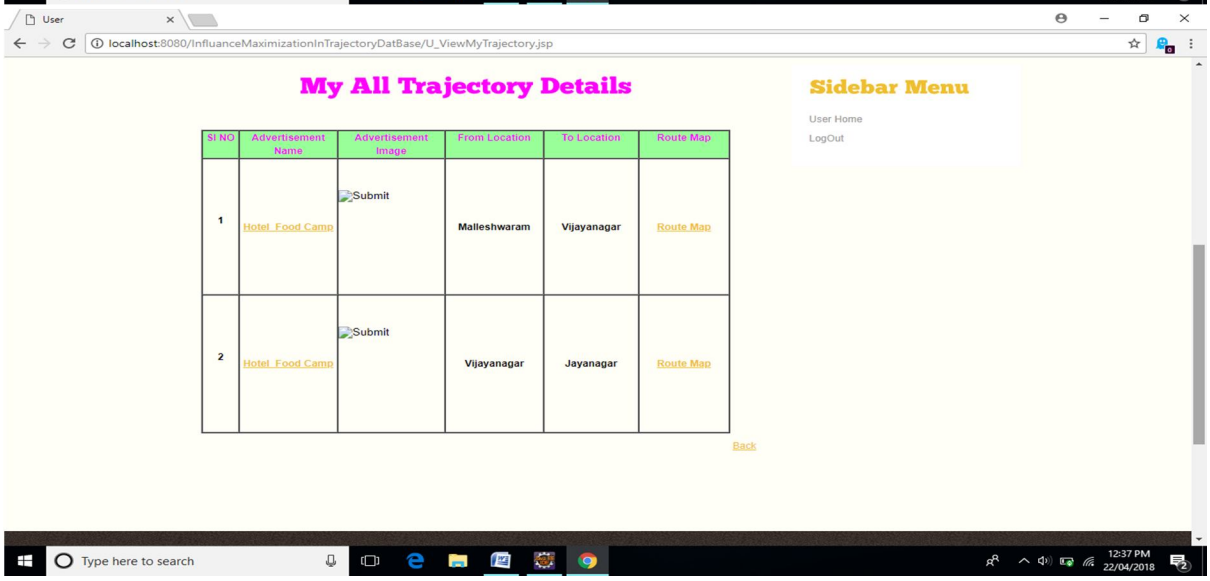

Admin All Advertisement
localhost:8080/InfluanceMaximizationInTrajectoryDatBase/A_AllAdvertise.jsp
Admin Advertisement Details With Rank
Sidebar Menu
Admin Home
LogOut
Sl NO
Advertisement Type
Advertisement Name
Advertisement Image
Advertisement Rank
Advertisement Rating
Details
1
Hotel_Food Camp
Food Camp
Submit
5
View Details
2
Coffee Shop_Indraprastha Vegetarian
Indraprastha Vegetarian
Submit
0
View Details
3
Coffee Shop_ Sagar Restaurant
Sagar Restaurant
Submit
10
View Details
Type here to search
12:40 PM
22/04/2018

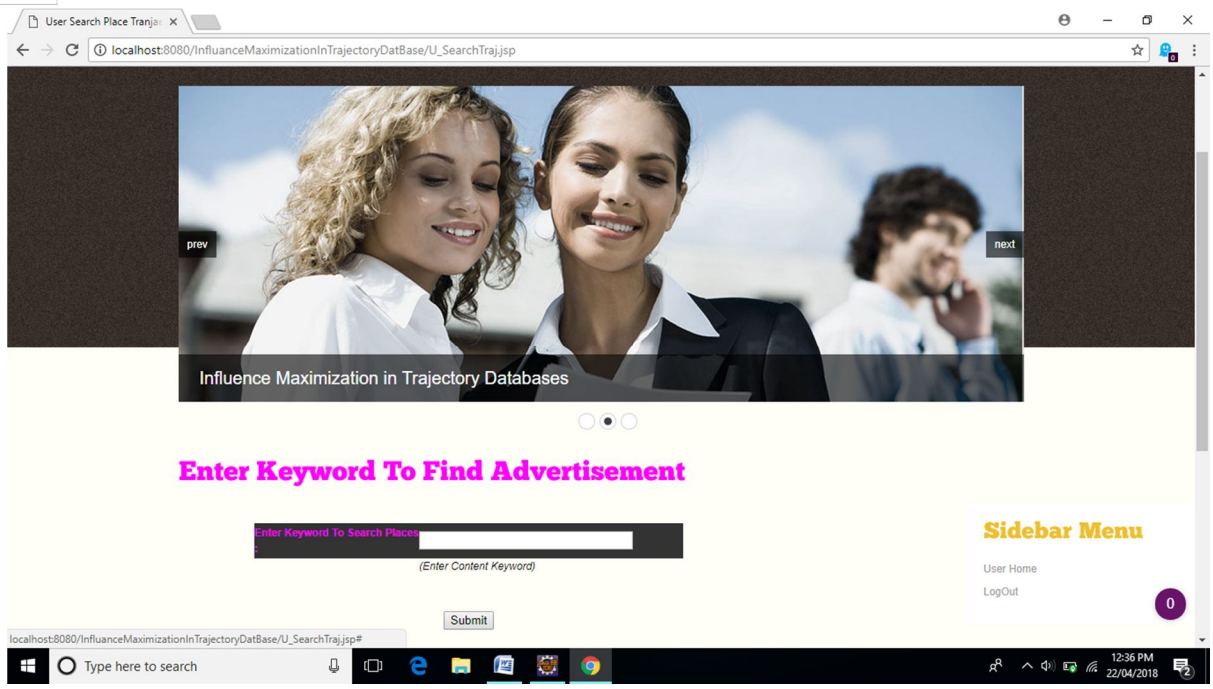

Admin All User Trajector
localhost:8080/InfluanceMaximizationInTrajectoryDatBase/A_AllUserTraject.jsp
Admin All Users Trajectory Details
Influence Maximization in Trajectory
Sidebar Menu
Admin Home
LogOut
Sl NO
User Name
Advertisement Type
From Location
To Location
Permission
Route Map
1
tmksmanju
Hotel_Food Camp
Malleshwaram
Vijayanagar
permitted
Route Map
2
Rajesh
Hotel_Food Camp
Malleshwaram
Jayanagar
permitted
Route Map
3
Ravi
Coffee Shop_Indraprastha Vegetarian
Vijayanagar
Jayanagar
permitted
Route Map
4
Keerthi
Hotel_Food Camp
Malleshwaram
Jayanagar
permitted
Route Map
5
Manjunath
Coffee Shop_Malyas
Malleshwaram
Jayanagar
permitted
Route Map
Type here to search
12:26 PM
22/04/2018


Admin Advertise Iteams
localhost:8080/InfluanceMaximizationInTrajectoryDatBase/A_AdvertiseIns.jsp
Map
Satellite
JayaPrakash Narayana Park
Lumbini Gardens
Geddalahalli
Sri Anjaneya Swamy Temple, Banaswadi
Indian Institute of Science
ISKCON Bangalore
Bengaluru Palace
St. Mary's Basilica
Kent Service Centre
Bengaluru
INDIRANAGAR
Cinepolis
Lalbagh Botanical Garden
Shree Dodda Ganapathi Temple
Jagannatha Temple Bengaluru
HSR LAYOUT
Shree Banashankari Amma Temple
Mini Forest
Omkara Hills
Turahalli Forest
Cave Temple
Map data ©2018 Google
Terms of Use
Report a map error
VIEW LATTITUDE AND LONGITUDE FROM MOUSE POSITION
lat from map:
lng from map:
Back
Type here to search
12:33 PM
22/04/2018


User Login Page
localhost:8080/InfluanceMaximizationInTrajectoryDatBase/U_Login.jsp
Influence Maximization in Trajectory Databases
Welcome to User Login
User Name (required)
ppci
Password (required)
Login
Reset
New User Click Here To Register
Sidebar Menu
Home
Admin
User
Type here to search
12:34 PM
22/04/2018


User Registration Page
localhost:8080/InfluanceMaximizationInTrajectoryDatBase/U_Register.jsp
User Registration Form
User Name :
ppci
Password :
Email :
abc@gmail.com
Mobile :
DOB :
DD/MM/YYYY
Gender :
--Select--
Address :
Location :
LOCATION
LATTITUDE
LONGITUDE
Choose Photo :
Choose File
No file chosen
Register
clear
Sidebar Menu
Home
Admin
User
Type here to search
12:34 PM
22/04/2018


User
localhost:8080/InfluanceMaximizationInTrajectoryDatBase/U_ViewMyTrajectory.jsp
My All Trajectory Details
Sl NO
Advertisement Name
Advertisement Image
From Location
To Location
Route Map
1
Hotel_Food Camp
Submit
Malleshwaram
Vijayanagar
Route Map
2
Hotel_Food Camp
Submit
Vijayanagar
Jayanagar
Route Map
Back
Sidebar Menu
User Home
LogOut
Type here to search
12:37 PM
22/04/2018



IX. ADVANTAGES

1) This project used to add advertisement or user in social networking . some option for using new logic for user and propose advertisement easy.
2) This project terminates when the upper bound influence score of all the incomplete combinations are smaller than the best result ever found.
3) We propose three approximation methods with performance guarantees to solve the problem when K is large.
4) We extend the influence maximization problem to find K best trajectories for a group of advertisements.
5) We formulate the influence maximization problem in trajectory databases.

X. CONCLUSION

In this project, we formulated the influence maximization problem in trajectory databases and proved it is NP-hard. To calculate the accurate results efficiently, we devised an expansion-based framework that enumerates the trajectory in a best-first manner and proposed three effective upper bounds. To support the problem with large k, we proposed three approximate methods with performance guarantees. In addition, we extended the problem to find k best trajectories for a group of advertisements. Experimental results on real datasets showed that our methods can solve the trajectory influence maximization problem efficiently. We study a novel problem of influence maximization in trajectory databases ie very useful in precise location aware advertising.Here we use real data sets to construct user profile, motion patterns and trajectory databases. The experimental results, of verified the efficiency of proposed methods.

XI. FUTURE SCOPE

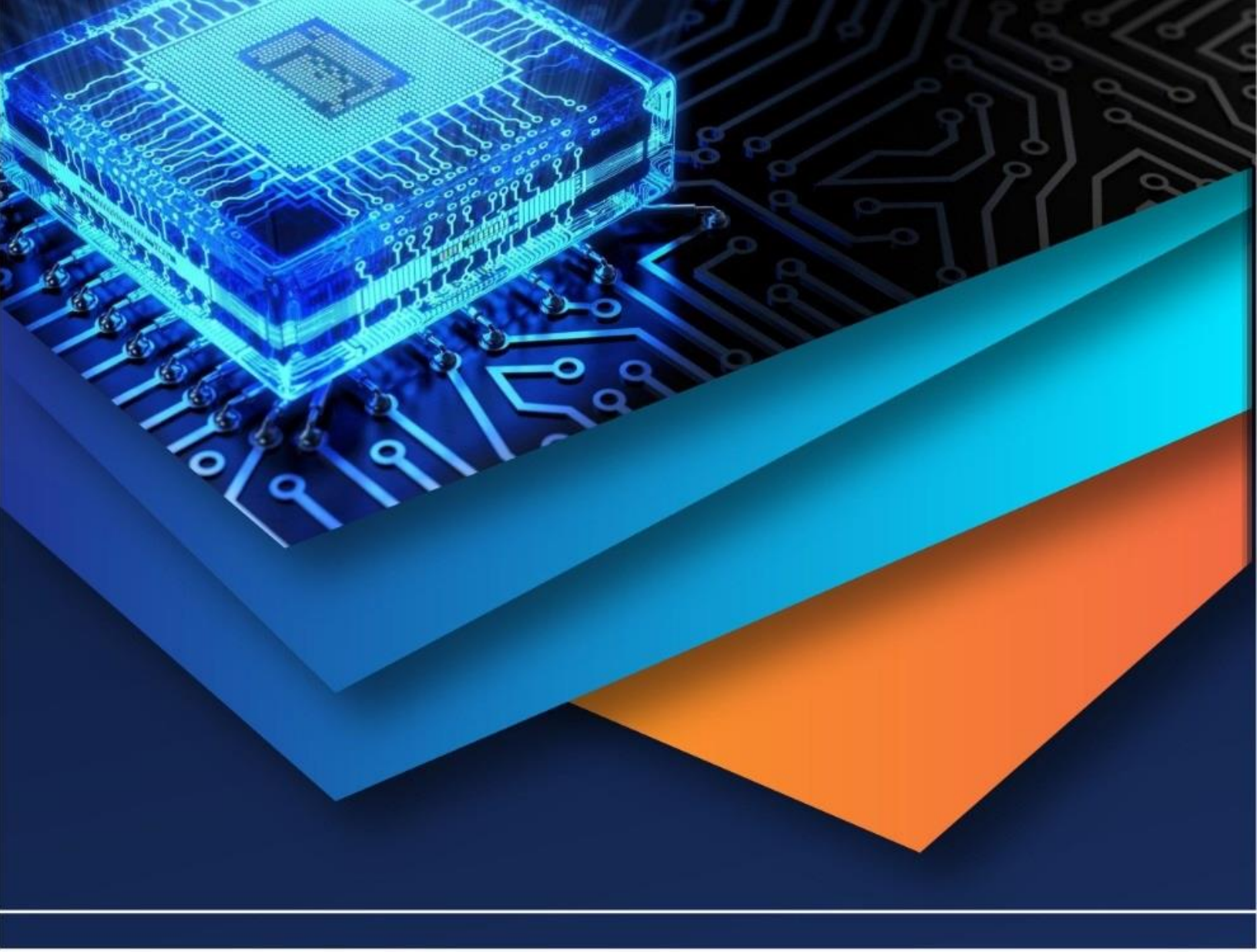
We proposed three approximate methods with performance gurantees.In addition we extended the problem to find k best trajectories for a group of advertisements ,so in future work we can use any better algorithm which will give better results to solve the trajectory influence maximization problem efficiently.

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