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Intelligent Tourist Guide System

N. Kumaran[1], B. Aakash[2], M. Vidhyaharini[3]
[1]*Assistant Professor, Department of Computer Science and Engineering, SCSVMV, Kanchipuram*
[2, 3]*B.E Graduate (IV year), Department of Computer Science and Engineering, SCSVMV, Kanchipuram*

Abstract: ***The Project is entitled as "Intelligent Tourist Guide System". Smartphones are inevitable nowadays; this project is mainly for tourist who faces many difficulties in their journey. This project will help to improve the existing navigation system in smartphone by solving the tourist confusions while travelling many new places also this project benefits in many aspects. This mobile application project is very beneficial, user friendly, quicker and flexible with many future oriented ideas. This mobile application is built using advanced Software that can work in many platforms not only in android OS.***
Keywords: Location, GPS, Destinations, Distances, Route

I. INTRODUCTION

The speedy development of information and communique era makes tourist easily knowledgeable. Over the years, tourism has continued to gain massive interest on a global scale. it's miles a prime foreign exchange for a very good quantity of superior and emerging economies. it's also genuine that information explosion makes it bulky instances to access applicable information to enhance selection making. This has given rise to the emergence of intelligent systems or mechanisms that facilitate quick access to relevant content found on the Internet Traditionally, tourists have used human resources, maps, brochures or tour agents to gain information about their destination. After the advent of the Internet, it influenced various aspects of human life including tourism. As a result, E-tourism has emerged, which aimed to digitize the processes related to tourism, as much as possible. Being a tour guide is no easy task these days: tourists have often experienced travellers and are becoming more and more demanding. As the new origin and destination areas are opening up, the task of the Tour Guide in building bridges between cultures is assuming more importance every day. In the aspect of tourism, Internet and web technologies have made more readily available information on tourist locations, accommodations, transportation, shopping, food, festivals, and other attractions, thus improving the tourism experience. However, with technology being embedded within the cities environment, the Intelligent Tourist Guide System concept represents new challenges to enhance their sustainability, tourism research still fails to fully cover proper information, developments and their current status.

This study aims to provide definitional clarity and a comprehensive approach to the anatomy of the tourist system as a convergence of a smart city and smart tourism: which elements are critical for the development of an Intelligent Tourist Guide System. This study presents insights regarding smart tourism roles in sustainable development. The goal of this research is to design and implement an intelligent platform that will aid tourist in India to have access to information on tourist location thus help fasten the decision making.

II. LITERATURE REVIEW

There are many kinds of tourism projects but some of the drawbacks and features are left over. The existing system is failed to propose a much-needed navigation system. Some of the drawbacks in the existing system are less efficient, slower, outdated methods, platform limitations.

Author	Topic	Remarks
P.K. Jithin, M. Vishnuram, P. Prasath, J.T. Thirukrishna	Tourist guide for Tamil Nādu	It does not contain multiple destination option, does not support cross-platform.
Dadape Jinendra R, Jadhav Bhagyashri R, Gaidhani Pranav V, Vyavahare Seema U, AchaliyaParag N.	Smart travel guide	Outdated Map view, no route option, does not support cross-platform.
Krzysztof Jeleń	Intelligent tourist information system	Older version, does not support cross-platform

We have taken several references, many projects inspired us. The common problem among all the project is cross-platform is not supported since these projects are made only for android based mobile. Also, our idea of improving navigation system is entirely new idea from other existing projects. The project [1] is entirely made only for Tamil Nādu, providing hyperlink to google map for popular places, [2] project contains map view which is older version so interacting between user and map seems to be difficult, the weather report feature, distance between two places, all these features are good but in this era these features are not enough, [4] is entirely older version of map view and outdated methodology. Finally, our project stands unique among existing projects in many ways. Our new also promising methodology of creating mobile application that will support cross-platform in future, easy to add new features using us in future, the main thing is our improvised navigation system.

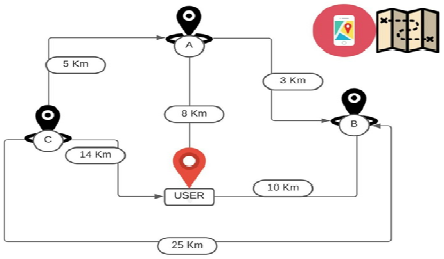
III.PROPOSED METHOD

There are many tourists guide mobile applications or maps that never solve the problem of the tourist in many cases. One of the major requirements of the tourist or travellers is to find the path for their destination. Since there are maps to solve the route problems, but there is no solution for the tourist to find the best ways to reach their number of destinations. Some cases affect the tourist my not solving this problem.

1) *Case 1:* Time consumption: The Tourist time is very important, wasting time in an unknown place is unfair. When the tourist travels more places without knowing the distance among each other will ruin the tourist time.
2) *Case 2:* Money consumption: Money matters for everyone, spending money without organizing in a new place also roaming several places will increase the cost of travel rather than the estimated amount.
3) *Case 3:* Multiple mobile OS; Many applications are available for tourism but mostly it's only for android OS, not iOS. Build an app for both OS requires different programming languages and different tools.

Our mobile application project will solve all the above cases, by getting the user various destination and giving the optimal path for the user to travel all the given locations in an organized way so it will save the user's time and money very effectively. Since our project is built using the flutter tool, we can build a native mobile app easily in future works.

A. Architecture



B. Steps

Step 1: Getting Access

Using the permission request module that accesses the mobile's current location, the app requests the user to turn on the location immediately at the time of opening the application.

Step 2: Current Location

After turning on the location in mobile, it locates the user's current location with a green marker on the map

Step 3: Getting the number of Destination

This step will get the number of locations the user wants to travel to limited up to five places.

Step 4: Getting various places

After step 3, the user should give the name of the various places to travel to.

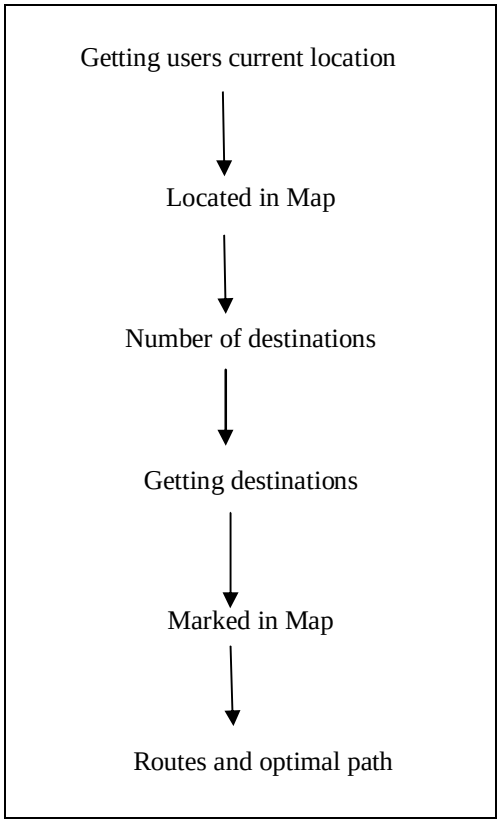
Step 5: Marking in Map

After getting the various places from the user, the map will point to all the locations with current location with a green and blue marker in the google map respectively.

Step 6: Sorting out the Problem

After step 5, the map will get all the distance between each place connected to the current location, Finally suggests to the user about where to start the travel and ends with routes.

C. Process



D. Module

1) *Current Location:* After opening the flutter app, the app will get the user's current location using the location access on request.
2) *Map:* There will be Map for the user, it points the user current location with a marker. The map can be also used normally to locate the places.
3) *Number of destinations:* There will be widget to get the number of destinations the user wants to travel. Limited to five destinations.
4) *Getting the Destination:* After selecting the number of destinations. The app will the get all destinations the user wants to travel from current location.
5) *location Point:* The user current location and number of places are marked in the map using different marker, so the user can visualize that easily.
6) *Routes:* The Distance in kilometre are shown in the map of all the marked location from the current location. It will make a connected route.
7) *Optimal Path:* After doing all the above operation, the app will suggest the optimal path for user to reach their destination.

E. Transport and Description

Not only the optimal path also the available transport and brief description of that places are given that helps the user.

F. Software Requirement:

1) Visual Studio Code (VS code)
2) Flutter Tool
3) Dart Language
4) XML Language

IV. RESULT AND DISCUSSION

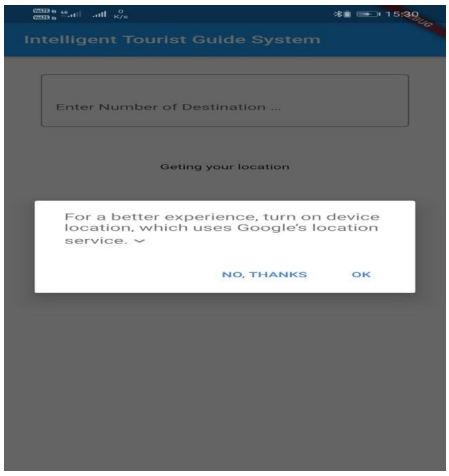


Fig 1. After Opening the Flutter App, the app will get the user current location by requesting the user to turn on for better experience.

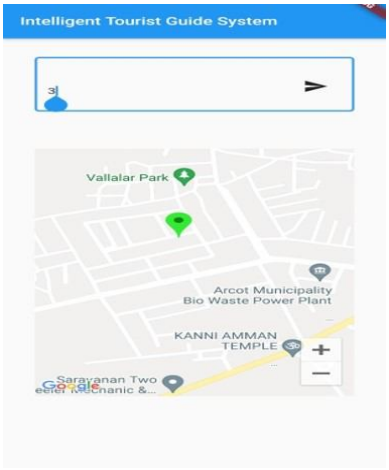


Fig 2. After getting the user's current location the map will be visible on the app pointing the user's current location with a green marker.

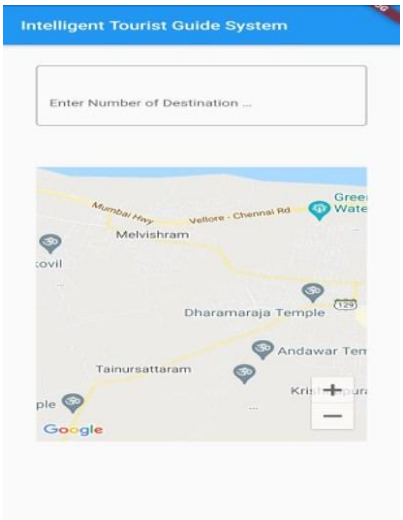


Fig 3. There will be a widget visible at the top called 'Enter Number of Destination'

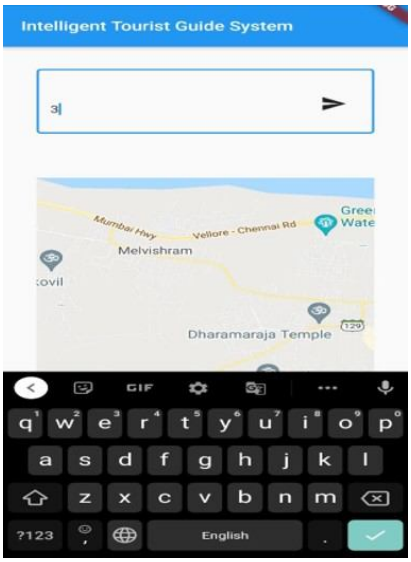


Fig 4. This widget will get the number of destinations the user wants to travel.

Fig 5. In case the user gives three destination, three widget bar will be visible to enter the location the user wants to travel.

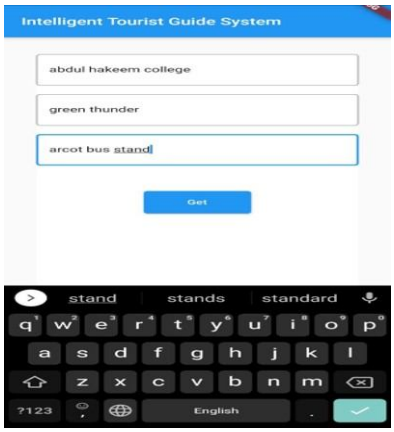


Fig 6. Then gets the places the user wants to travel

After getting the required destinations from the user, the map shows the optimal path to all those places. The app shows the route to each place that is near to the current location that saves time. It gives suggestions to the user by showing the best routes and transport ideas.

V. CONCLUSIONS

This Project is mainly focused on improving the navigation experience of the tourist that is not provided by the existing system. The existing system contains navigation only for a one place and destination but our mobile application has a feature to get a solution for more than one place. The entire system is documented and can be easily understood by the end-users. The application developed has been designed and run to satisfy the requirements and needs of the end-users. This work designed and implemented an intelligent mobile application platform that will help the tourists to get accurate and relevant information about the number of destinations and give optimal solution. Therefore, in the proposed system, the rate of recommendation of the packages improved and performed better than the existing system.

VI. FUTURE ENHANCEMENT

We look ahead to develop this mobile application not only in android platform but also for iOS and Web application platform since this project is done using flutter. Flutter has a promising future of advanced features and technique that will be provided by Google. This mobile application is easily capable of adding more features easily depends upon the requirement of users.

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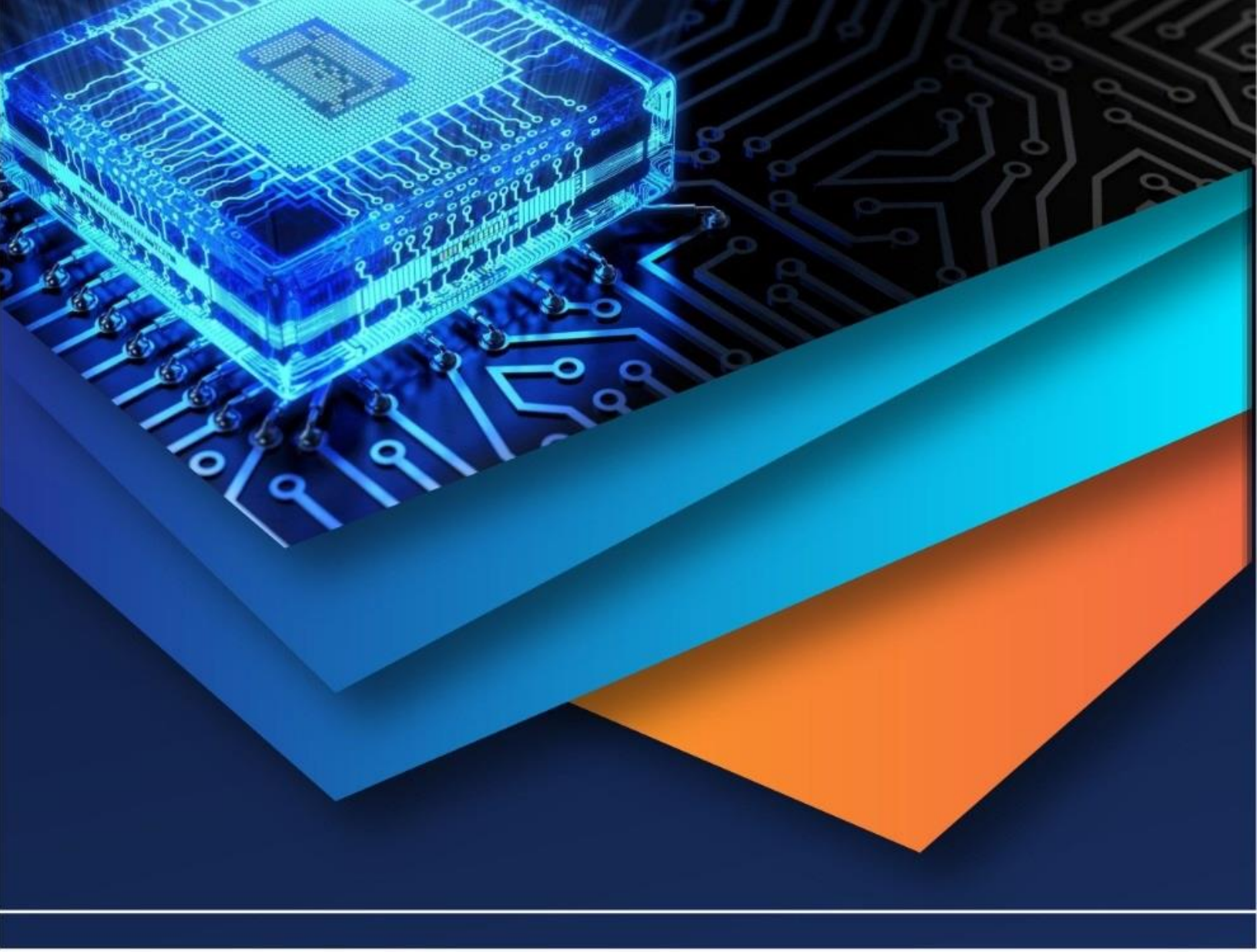

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