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CoDevelop: A Project Collaboration Tool To Achieve Project Based Learning

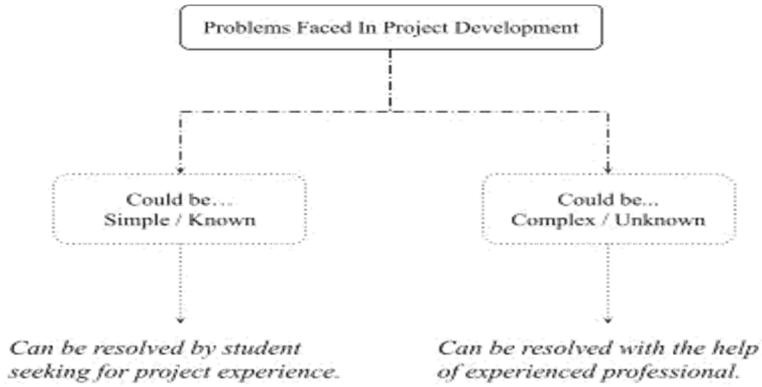
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Abstract: ***Project-based learning is a vital procedure for the 21st-century homeroom. The instructional method is grounded in cooperative learning for understudies and cooperative education rehearses for teachers. At the point when virtual entertainment and computerized advancements are utilized as help in the task-based learning approach, it adds another element of learning for understudies and educators. It likewise starts correspondences and joint efforts in the community. Most educators concur that instructing with project based learning enjoys various benefits, particularly in the field of software engineering. Understudies can apply their specialized information, obtain common sense abilities in programming, get involved in group processes, and comprehend now and again all things being equal called delicate variables in the project on the board. Anyway, IT projects in showing conditions act strangely when one attempts to apply normalized structures onto them. After over a decade of regular utilization of project based learning in Computer Science, the creators attempt to distinguish basic achievement factors for such tasks.***

Keywords: Project based learning, project finder, web technology, MERN stack.

I. INTRODUCTION

Project-based learning is understudy-focused learning. Instructors give understudies a task that depends on an issue that should be tackled. The understudies start examining the issue through examination and afterward cooperatively figure out how to shape arrangements. As new learning happens all through the innovative work process, corrections are made. All through the project based learning action, instructors utilize their educational information to direct understudies with criticism. The objective for the understudies is to show the particular abilities and accomplishments of these abilities. The objective for instructors is to work with a cooperative learning climate where they permit understudies' distinction. On the other hand



Project based learning is the intuitive strategy that can most unequivocally cause an adjustment of the showing society, including joint effort between the two understudies and among understudies and the educator, who frequently goes about as a facilitator. The criticism that the instructor occasionally gives is concrete, valuable, and positive.The following are some of the benefits of project based learning over standard teaching methods:

1) Students are well-prepared for life in general.
2) Learning material is better absorbed.
3) Improving students' attitude to learning.
4) The project's or idea's beginning.

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II. LITERATURE SURVEY

The examination paper was distributed on the fifth of February 2018. It was seen that Between 2005 and 2013, 85% of business development rose out of the gig economy. Gig economies are those economies where people market their abilities, whether in incompetent work markets, like Uber drivers, or as talented experts, for example, coders who bid out their administrations on locales like Upwork. For each economy, joblessness is a difficult concern which might be derived with this venture by tolerating such a gig economy culture creating framework.

Task calculations will be as calculations from wedding locales. An examination paper distributed by the American monetary audit in 2010 gives us appealing data about that calculation. The examination in this paper depends on an example of 3,004 men and 2,783 ladies situated in Boston which gives the end that, They measure mate inclinations using information on customer credits and cooperation from an online dating website, then use the Gale-Shapley equation to predict stable mates. The anticipated matches resemble the dating service's actual matches, and the genuine pairings are often successful.Purposely or accidentally our application spins around the project-based procedure. Along these lines, an exploration paper having more than 500+ undertaking surveys was distributed in 2011. Because of that examination paper, Four principal reasons could be distinguished as instructive necessities of our application that are:

1) Students are inexperienced project leaders who frequently encounter problems in the early phases of their endeavors.
2) The inspiration of understudies to complete the venture changes between low and very high qualities.
3) Interactions of understudies with industry experts, reliant upon factors like the explicit experience of a given educator with a particular task or understudies who are modest to pose idiotic inquiries early.
4) Origin of the task or undertaking thought.

III. PROBLEM STATEMENT

This project can solve a lot of real world problems and offer a better useability and project development ecosystem for all of developers. Let’s explore these problems and the possible solutions that our project offers.

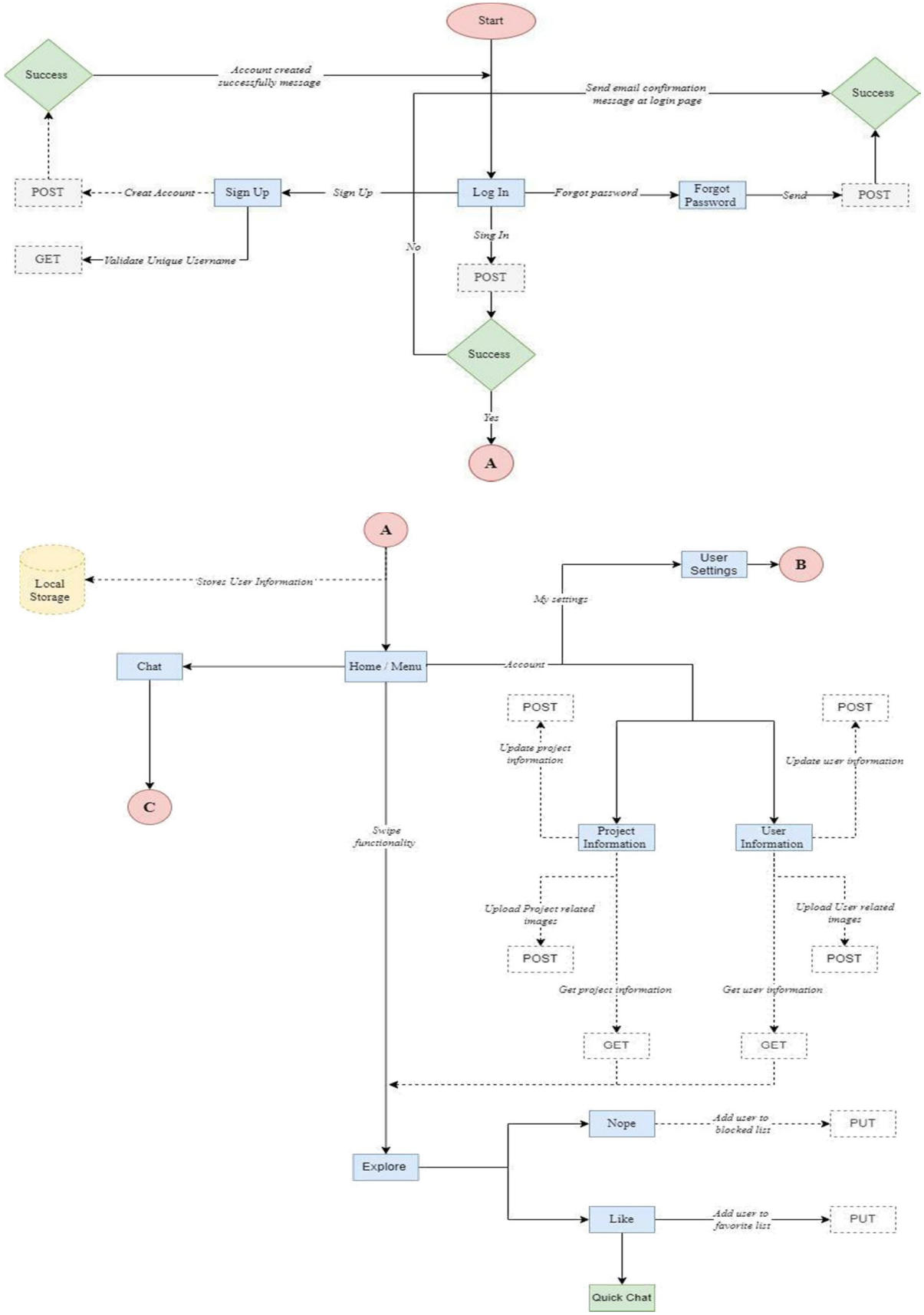
1) *Project and Project Team Finding:* Someone often finds it difficult to gather a good team or to get a desired project to work on for our industrial experience. Struggling to find teammates or desired projects because we are unable to understand technology.
2) *Lack of Individual Skill and Knowledge:* Sometimes we are unable to use or work under certain technology. There are various technologies available in the market which come with certain limitations considering the skill and knowledge of the developer.
3) *Unfavorable Infrastructure:* Such types of people and projects are there in the industry but how to find them? As we all know that there are developers available out there with the skill set and knowledge required for every project.
4) *No Such Portal:* Freelancing portals vs communities. We are aware that there are different portals like Upwork, Freelancer.com. which are having some traditional approaches to match their users' needs and communities like GitHub and LinkedIn which are not particularly focusing on this problem. One of the drawbacks of such leads to the main problem statement.
5) *Missing Project Experience in Students:* Missing innovation and development mentality in students due to lack of project-based industry experience. Which tends to affect motivation of students to actually finish the project and lacks the confidence to do itself.

IV. SYSTEM ARCHITECTURE

The functioning of codevelop is easy and hassle free. Once anyone creates an account, they will start seeing profiles of different developers looking for project development, based on their preferences. And the process of matching starts.

1) *Swipe-Right:* If you like the work or project, you will swipe right.
2) *Swipe-Left:* If you don’t like projects, you will swipe left.
3) *Match:* If both the project creator and project finder swipes-right, then it’s a match. Double Opt-in Communication System: Communication between two developers can only start once both have swiped right one another. Hence, a double opt-in system for communication ensures more safety and more transparency.

Besides these user-centric actions, the web app provides the feature to view projects shared by other users such as images, likes/dislikes, questions, and more. The flow chart of the web app is as follows,


Start
Success
Account created successfully message
Send email confirmation message at login page
Success
POST
Creat Account
Sign Up
Sign Up
Log In
Forgot password
Forgot Password
Send
POST
GET
Validate Unique Username
No
Sing In
POST
Success
Yes
A
A
Local Storage
Stores User Information
User Settings
B
My settings
Chat
Home / Menu
Account
C
POST
POST
Update project information
Update user information
Swipe functionality
Project Information
User Information
Upload Project related images
Upload User related images
POST
POST
Get project information
Get user information
GET
GET
Explore
Nope
Add user to blocked list
PUT
Like
Add user to favorite list
PUT
Quick Chat

V. METHODOLOGY

The essential operation in a web page/application is CRUD (Create, Read, Update, Delete). It facilitates the MVC (Model-View-Controller) architecture that makes the web development process work smoothly.

Node.js — It's essentially a standalone machine with a runtime environment built in to interpret JavaScript code. The JavaScript Engine is used to execute it. We need to incorporate HTTP modules in this engine to make it a server-side component. Due to the fact that many modules are built-in and others are external dependencies.

Express.js : It's a server application framework built on Node.js. It's a Node.js web application framework with libraries for both mobile and web applications.

Router : The request from react.js will be passed to the router, which will determine which controller will handle and assess the request. Simply put, the router routes requests from react to express.js controllers.

Controller : Controller will assess and execute Router's request. Depending on the request, the request controller function will change. Call-back functions are what controllers are. That is, the function's signatures must match the router's call-back signature.

Database : MongoDB is a non-relational database that stores data as JSON-like documents.It's ideal for storing and managing unstructured data because it's document-based. ODM is a notion used by MongoDB (Object Document Mapping)

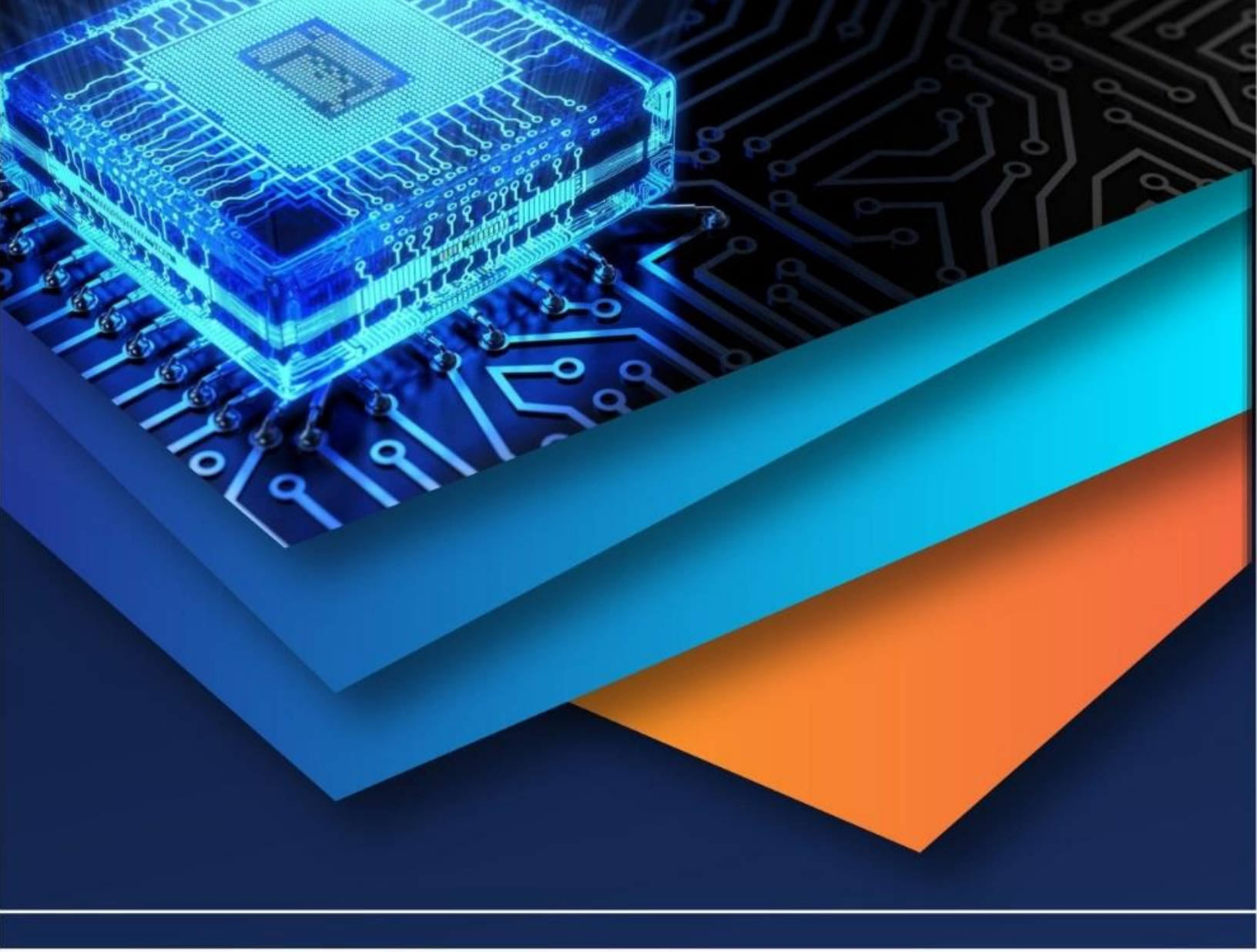
VI. CONCLUSION

Project-based learning has enormous potential as an approach for developing important skills and talents for the next 100 years. The technique's use allows for the improvement of the educational system's effectiveness, implying increased, engaged, and 'brilliant' use of ICT. The instructor should have the necessary preparation to carry out the PBL efficiently and comprehensively. The model provided allows the educator to quickly and easily implement the strategy. The concept is extremely beneficial for learning, creating, and managing project-based graphics. The turn of events, execution, and diffusion of PBL will all benefit from this paradigm. It is planned to develop graphical electronic user interfaces and correspondence administrations in the future: video, visit, and discussion.

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