**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**CS64: MINI PROJECT WORK**

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**MINI PROJECT SYNOPSIS**

**Submitted to**

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**SYNOPSIS**

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**1. Title of the project**

TechRidge: A platform for developers to develop their technical potential and inter-personal skills.

**2. Intoduction**

Students gain practical experience only by indulging themselves into different projects and only through this they get introduced to new concepts of technologies whose practical knowledge can help them in their career. But the students with skills may not be having ideas and people with ideas may not be having skills to work upon those ideas.

New ideas pop up in our mind when we know about others’ ideas and think of making it better. Team work is something which is important to a project as it will decide at what rate the project can get finished and how efficiently the work was done.

Currently there are platforms which rank the coders based on their competitve coding ability, which is a really good metric but developers develop things which can be helpfull to the society and there are no platforms for ranking a person based on these factors. Even if such platform exists it is common opinion that people get bored of the system after a certain point of time. Coding experience must be enjoyable making it more fun to create something.

**3. Problem Statement**

Many students in a college are unaware of the project works going on in their departments and the research activities undergoing in the college. The main reason for this can be communication gap between the students or between students and professors.

So, we, here as developers try to solve this problem by creating a platform where ongoing projects of the departments will be listed. Any students interested to work on the listed projects can contact the guide or the head of the project.

We, as developers, when worked on teams can bring up great products. But in the current existing platforms developers are isolated and are unaware of essentiality and power of the team work. The developers build very useful things for the society, may be targetted groups or universal. But the majority of developers are hidden and no platform is present for their recognition.

Also majority of the developers today are cut half their way because of lack of motivation in the area of their interest. Today technology has grown far way long, that all fields of developing can combine to produce great products.

Hence, here we put forward a platform where we see group of developers working on their area of interest competing with each other, just to provide the society a great product and also themselves a note of recognition.

**4. Objective of the project**

* To provide an informative interface:

Here we provide an interface where students can know about the work happening around them in the college.Students in a college sometimes doesn't have any idea about the projects undergoing in their department or in other departments where they can work on the areas of their interest.

* To provide the opportunity to upload their own projects/ideas:

Each student working on a project of their own or under some professor will list it in this interface with their interest. All the students of that college will be able to see the project listed here.

* To provide the opportunity to contact previous project heads to continue or improve the same project:

Any student interested in working on a particular project will be able to contact the guide and head of the project team, provided in the description.

* To provide the students a platform where they can get an idea on how to proceed ahead in project development:

Also the projects completed earlier by some students can be used for extended ideas by the permission of the project lead listed in the project. This will help the students of next generation to know the patterns of the projects made by the students earlier.

* Providing a platform for aspiring developers of all forms to include themselves in groups:

Students interested in developing are usually isolated, unlike competitive coding. While developing is complete team work in any of the industry. We aim at providing a platform for aspiring developers of all forms to include themselves in groups. This will allow them to have experience with variety of developers throughout the engineering life, which will help them in industry.

* To provide a healthy environment for developers to enhance their developer skills:

Quality of developers can be increased when we have a group of developers discussing and challenging each other with their developing skills. This also provides a healthy environment for developers to enhance their developer skills and present their best to the society.

**5. Motivation**

The problems listed are the problem faced by almost every developer including us. Searching for a solution resulted in non-satisfactory results. So, we decided to take up the problem and solve it on our own.

In today’s world coming up with new ideas is a big hassle, since most of the projects that you can thin of (in college level), in some wa or another have been taken up by the students of previous batches. But then, the students of current batch are unaware of it on so many levels. Also, the previously taken up projects always have room for improvement. We with TechRidge bridge this gap between project ideas and students by providing an interface where students can derve the ideas from previosly taken up projects and also ask the original team worked on it for permission for improvement of same projects.

Here at TechRidge, we also provide the facility of comparision of projects, where projects are ranked based on different criteria provided by the college as well as the externals, and weights of specific criterion are decided by our algorithms so as to provide efficient judgement and ranking. Thus students can take up projects which suit them and rank good. This helps students to gauge their abilities and skills on the basis of project ranking/difficulty.

**6. Existing System**

The proposed system has existing variants across the globe, the most famous one being IEEE Journal/ Research Paper collection site[**https://www.ieee.org/**](https://www.ieee.org/)which focuses on the distribution of research papers amongst paid members of IEEE.

One more variant for the idea is the platform that ranks competitive coders based on their problem solving skills, where its best example is Hackerrank website [**www.hackerrank.com/**](http://www.hackerrank.com/).

**7. Proposed System**

The proposed system contains a level database structure to store and distribute project descriptions to the user (just like IEEE, but distributes projects of college students instead of published research papers) and also provides options for contacting the project managing groups to ask for permission to continue/edit the existing project.

The proposed system also contains a platform for developers who are ranked according to their project and skill (just like Hackerrank).

This provides an interface where students can know about the work happening around them in the college. Each student working on a project of their own or under some professor will list it in this interface with their interest. All the students of that college will be able to see the project listed here. Any student interested in working on a particular project will be able to contact the guide and head of the project team, provided in the description. Also the projects completed earlier by some students can be used for extended ideas by the permission of the project lead listed in the project. This will help the students of next generation to know the patterns of the projects made by the students earlier.

**8. Hardware and Software to be used**

**Hardware:**

Server side:

1. Cloud with minimal configurations.

Client side:

1. Android smart phones
2. I phone
3. Mac book
4. Workstation
5. Laptops

**Software:**

1. React js
2. Node js
3. Firebase API
4. HTML/CSS
5. React-Native
6. Reduxjs

**9. Social/Environmental impact of the Project**

People are able to show their proficiency in their skills. There are people who have innovative ideas but need some human resources and there are people who have great skills but are in need of some idea or a team to work with. This website is able to link them. People are able to show themselves while earning some mentorship and commitment to work. Ranking system is present to show the community of your skill and contributions. Programmers are able to show their skills and climb the ranks through challenges and competitions. Each programmer is given a provision to join a group based on their ranks along with other helpful statistics like contributions. There is a display of the project importance and proficiency of the team members both in the team and in search of the team. Challenges and competitions have increased difficulty while climbing up the ranks and contributions are to show the amount of work done to help others in the community which also stands as an add-on point for ranking up. Each different queue type will have its own tier and rank according to skill the person develop and contribute upon independently. The ranking system is given a soft reset for a new season and new challenges.

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