Indian Institute of Technology Roorkee



A Project Report

On

“Research Project Management System”

(Spark Internship Project - 2020)

**Project Guide Submitted By**

Prof. Sohom Chakrabarty Vaibhav Singh

Prateek Agarwal

**Indian Institute of Technology Roorkee**

**CERTIFICATE**

This is to certify that the project entitled “Research Project Management System” has been submitted to Prof. Sohom Chakrabarty, Indian Institute of Technology Roorkee for the completion of Spark 2020 Internship project under the guidance of Prof. Sohom Chakrabarty by the following students:

Vaibhav Singh (IIT Kharagpur)

Prateek Agarwal (IIT Roorkee)

Prof. Sohom Chakrabarty

(Project Guide)

**DECLARATION**

We, hereby declare that the project entitled “Research Project Management System” being submitted by us towards the completion of Spark 2020 internship is a project work carried by us under the supervision of Prof. Sohom Chakrabarty, and has not been submitted anywhere else.

We will be solely responsible if any kind of plagiarism is found.

Date: /07/2020

Vaibhav Singh Prateek Agarwal

**ACKNOWLEDGEMENT**

The internship opportunity we had with SPARK was a great chance for learning and professional development. Therefore, we consider ourselves as very lucky individuals as we were provided with an opportunity to be a part of it. We are also grateful for having a chance to meet so many wonderful people and professionals who led us though this internship period.

We are using this opportunity to express our deepest gratitude and special thanks to Prof. Sohom Chakrabarty who in spite of being busy with his duties, took time out to hear, guide and keep us on the correct path and allowing us to carry out the project and completing it successfully.

It is our radiant sentiment to place on record our best regards, deepest sense of gratitude to Sohom Chakrabarty sir for their careful and precious guidance which were extremely valuable for our project.

We perceive as this opportunity as a big milestone in our career development. We will strive to use gained skills and knowledge in the best possible way, and we will continue to work on their improvement, in order to attain desired career objectives.

Sincerely,

Vaibhav Singh

Prateek Agarwal

Place: Roorkee

Date: /07/2020

**ABSTRACT**

Today with many ongoing research projects across the globe at different universities and colleges, there is a need for a tool which could help the community to manage their ongoing research projects. The era of information technology opens the window for the web applications. So, we are introducing ‘App’s Name’, now more efficient, smarter and easier way—helping you save time and do more with your Research Projects.

In today’s world there are many project management tools but we are different from others. Our unique feature is that in any project we have users divided up into 4 types: Faculty, Lab-Incharge, Mentor and Team members. In our web app, all these user types are placed hierarchically in database and they are granted different permissions. One can create project and then he can invite people to join the project and assign them the user type. Here one can assign tasks and inventories to others based on hierarchy, share documents, fix meetings, interact with project members on inbuilt chat-box and discussion threads. Not only this, one can manage his own work by assigning a task to himself, setting deadlines and reminders for himself, etc. ‘App’s Name’ is a complete all in one solution for all universities and researchers to help them manage their research work efficiently and get more done with their research projects.

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**INTRODUCTION**

Today with many ongoing research projects across the globe at different universities and colleges, there is a need for a tool which could help the community to manage their ongoing research projects. The era of information technology opens the window for the web applications. So, we are introducing ‘App’s Name’, now more efficient, smarter and easier way—helping you save time and do more with your Research Projects.

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**Development Tools**

1. Languages: HTML, CSS, CSS3, JavaScript, PHP, SQL
2. We made our Module with: PHP, MYSQL
3. Frameworks and Libraries: Bootstrap 4, jQuery
4. Web Server: Apache Server
5. Code Editor: Visual Studio Code
6. Web-Browser: Google Chrome/Microsoft Edge/Mozilla Firefox/Opera Mini/Safari/IE11

**SYSTEM REQUIREMENTS**

**On Client Side**

* Operating System (any)
* Web Browser (Google Chrome, Microsoft Edge, Mozilla Firefox, Opera Mini, Safari, IE11)

**On Server side**

* Web Server (Apache)
* PHP
* MYSQL

**Hardware Requirements**

Server Side

* P IV or above Processor
* 1 GB RAM
* 120 GB HDD
* LAN or WAN

**FEATURES**

* 4 types of users are there in any project- (faculty, lab in-charge, mentor and team members).
* All user types are placed hierarchically in database with different permission levels (1.Faculty, 2.Lab-Incharge, 3.Mentor, 4.Team member).
* One can make project, tasks, calendar entries for his own purpose.
* Project owner can invite different people to join his/her project via request system and assign them roles in that project.
* A person can be Mentor in one project and team member in some other project, or Lab-Incharge in one project and team member in some other, etc. Hence roles are given in a project and a person can be a member of multiple project at the same time.
* Flexibility in changing roles of project members as and when project owner wishes.
* One can assign tasks, fix meetings, assign deadlines to others in a project based on his/her permissions (i.e. faculty can assign tasks to mentor but vice versa is not possible as faculty is hierarchically above than team member).
* Inventories can be added in database and can further be assigned to others in a project.
* Resources can be shared in a project.
* Inbuilt chat-box and discussion threads (for easy interaction among project members).
* Reminder is also present where one can add some deadlines or important dates with time.
* Inbuilt notifications area is present.

**SNAPSHOTS**

**SOURCE CODE**

**FUTURE SCOPE**

* Mobile App Version (Android + IOS)
* Desktop version similar to SLACK desktop app (for easy notifications).
* Verification via OTP while registration (to be done once the app is launched).
* Invite system similar to google classroom

**REFERENCES**

* <https://www.w3schools.com/>
* <https://www.youtube.com/channel/UC8Nbgc4vUi27HgBv2ffEiHw> – help taken for making chat bot