



International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Construction Planning App

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ABSTRACT

Construction Planning App is a application that helpsto organize and track activity, punch lists, document management. These systems provide firms with the appropriate management and documentation management required to process information requests (RFIs), change orders and purchase orders so that they can add here to the project budget and timeframes.

Building a business run and our construction planning application makes sure people know exactly what to do. All activities in the project are planned and commercialized. The functions of construction planning app typically include the following: Specifying project objectives and plans including, budgeting, scheduling, setting performance requirements, managing documents.

Keywords: Construction Planning, Construction management, Androidstudio, Java, Budgeting

1. INTRODUCTION

The functions of construction planning app typically include the following:

- Clarify Project objectives and plans including, budgeting, scheduling, setting performance materials required and selecting project participants.
- Our mobile construction planning application keeps your team in the field Connected on all core use cases: plan viewing, punching lists, scheduling, and reporting.
- Construction Planning is best done by people who have a thorough knowledge of architecture, such as building engineers or architects. However, some aspects of this work, such as budgeting or purchasing, can be done by people who do not have a building background. With enough training and experience, the average person can get enough experience to work as a construction project manager.
- Construction management can be done by the various agencies in the project. It can be done by project contractors, project owners, independent consultants employed by the owners, project designers, or investors in the project. It is important to note that each agency may have different goals and motivations for the project. For example, a builder might want to increase the cost of the building, and the owner may want to reduce it. Independent consultants may wish to delay the project, as they are paid a monthly maintenance fee.

The key elements of Construction planning are: Construction Planning, Quality Control, Contract management, Procurement management.

2. METHODOLOGY

This application was developed using Java, firstly the login page was created where the construction site workers and manager has to login by using the email id and password and if the user is new than he has to register by adding details such as his email id, mobile number, username and password. After login site manager and worker get separate panel and features to use. A construction manager get options to assign a task by adding task's name, assigned worker, starting date, ending date, priority of task, status of task and can create a new floor plan ,add and delete tracks of inventory, etc. A construction site worker get options to view assigned task, upload progress of task, upload and make changes in inventory list, upload task's progress photos, view floor plan uploaded by site manager.

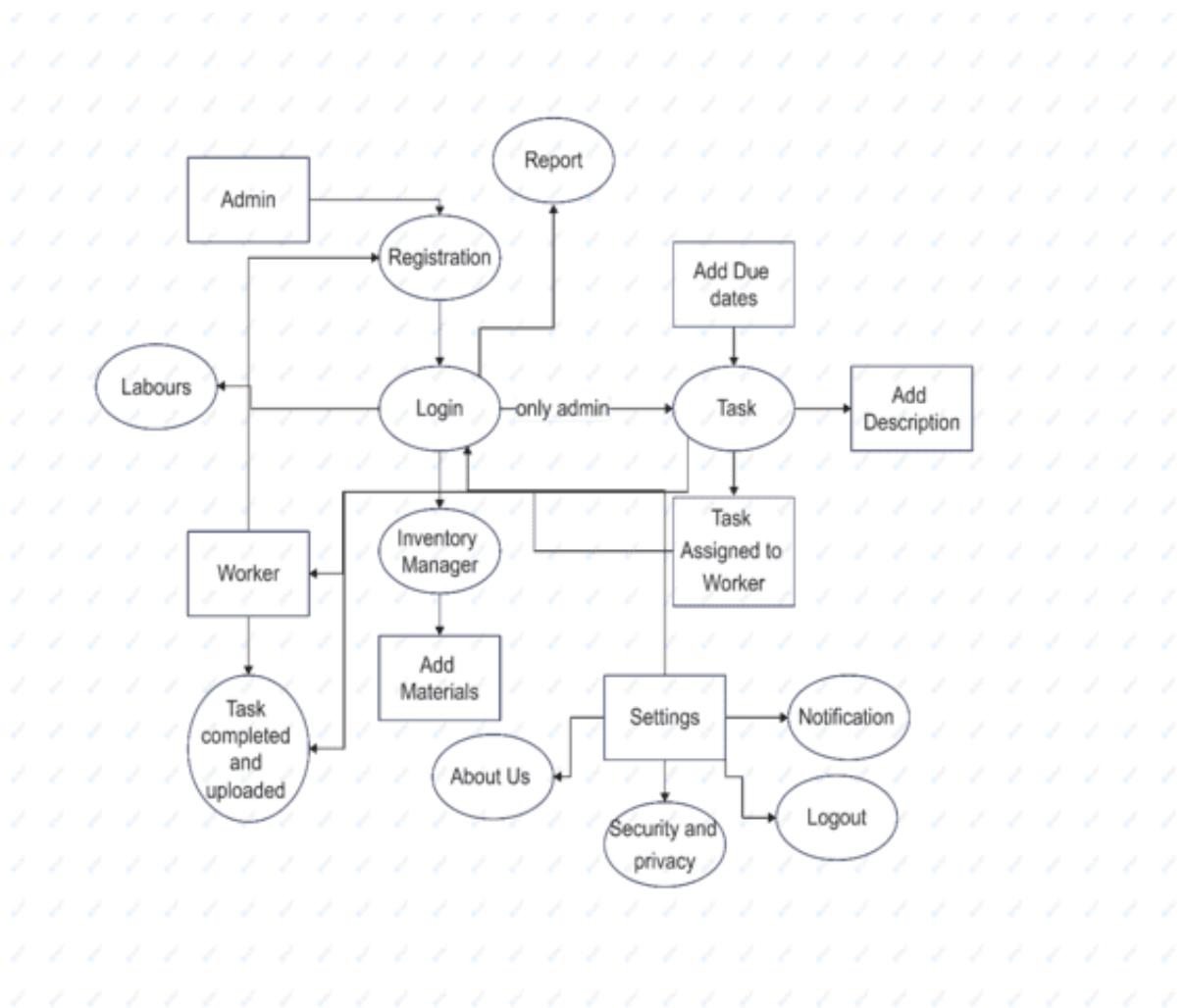


Fig. 1–Data Flow Diagram of App

3. PROJECT TRACKING

This application is useful in Construction project management for managers and workers in all phases of software development. This application will help for creating project schedules as well as budgets that optimize limited resource usage. It will also improve communication between project stakeholders. As the application is embedded in mobile, it can be accessed anywhere at any time. Agile software development methodology is used in this application. It provides iterative software development methodology.

A. Control Desk

There is a user friendly interface which gives list of projects, tasks, that are assigned to the worker. It also gives the role of the worker in the task. There is a facility of uploading photos giving the status of the project to enable managers to intervene where required. Site managers add workers to project team. It is very simple to use this application. If anyone wants to use this application, he/she has to register using email-id and mobile number.

B. Project Planning

Project manager assigns various tasks to the team members and these tasks need to be scheduled considering schedule of them.

- Task assigning: Interface that allows user to add or edit tasks, change schedules or assignments
- Resource allocator: Customize work hours for the users. New tasks are scheduled automatically according to the availability by the system.

C. Project Tracking

It is necessary to track the progress of project for its successful completion.

- Project progress: Manager or teammembers indicate progress of construction. The system shows the projected end dates of the tasks and project.
- Progress Photos: Identify the completed and pending task across project

4. TOOLS AND TECHNOLOGIES

- A. Hardware used laptop with
 1. System type – 64-bit OS
 2. Installed memory - 4 GB and more ram
- B. Platform
 1. Android Phone
- C. Software Tool Used
 1. Microsoft windows 7 or above.
 2. Android Studio
 3. Firebase Database
 4. Java Development Kit



Fig 2 Splash Screen

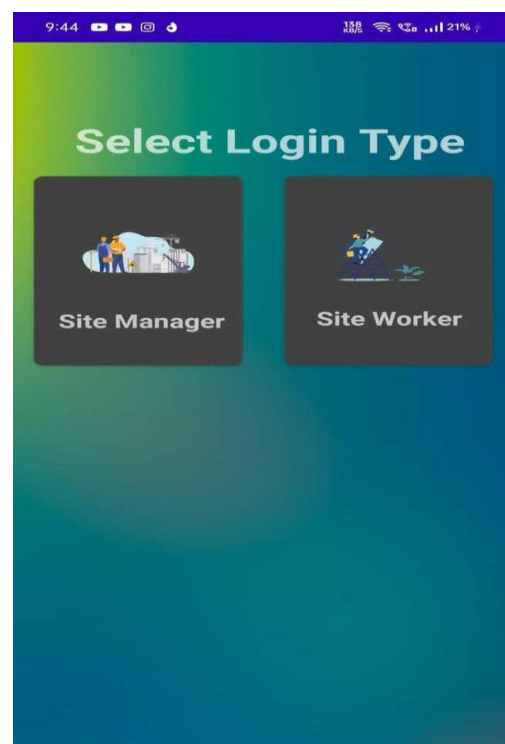
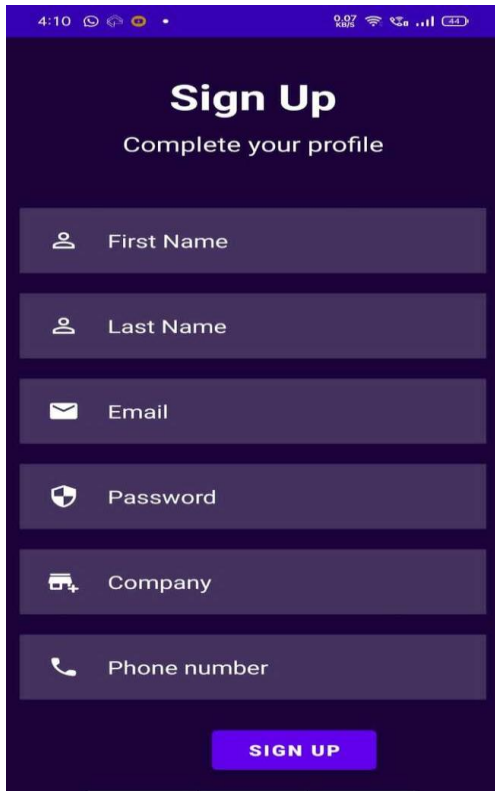


Fig 3 Select Login Type page

5. SCREENSHOTS OF APPLICATION



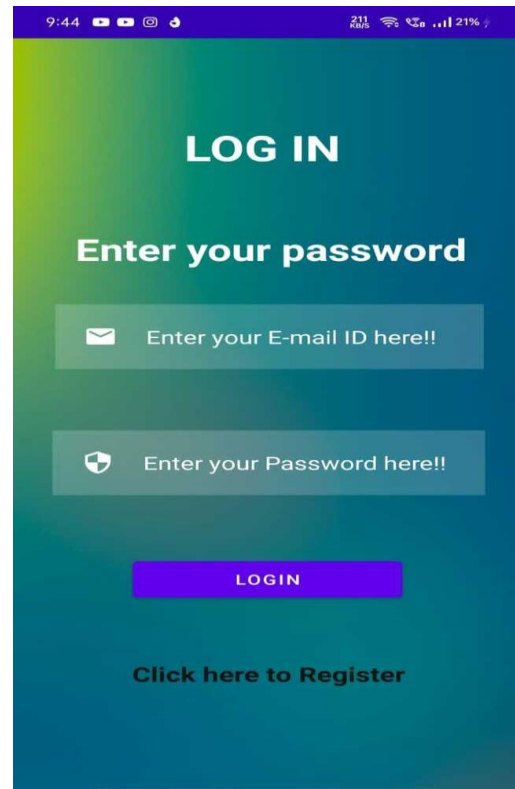
4:10 0.07 KB/s 21%

Sign Up

Complete your profile

SIGN UP

Fig 4 Login Page



9:44 21%

LOG IN

Enter your password

LOGIN

Click here to Register

Fig 5 Sign Up Page

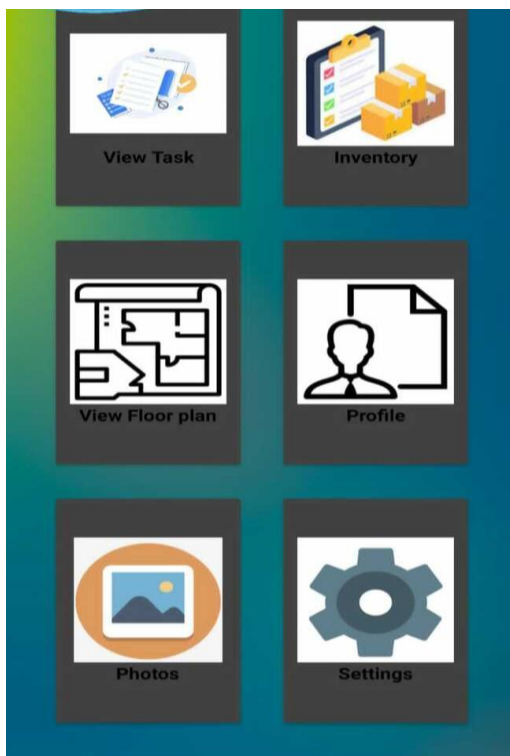


Fig 6 Applications Content

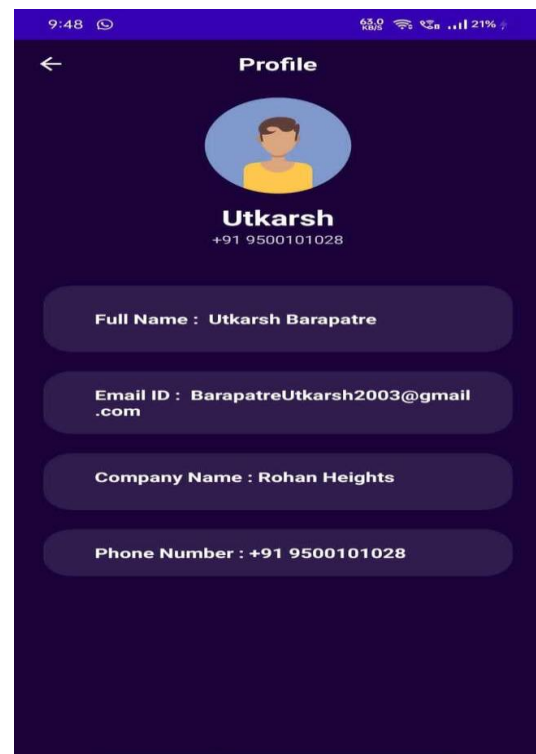


Fig 7 Profile Page

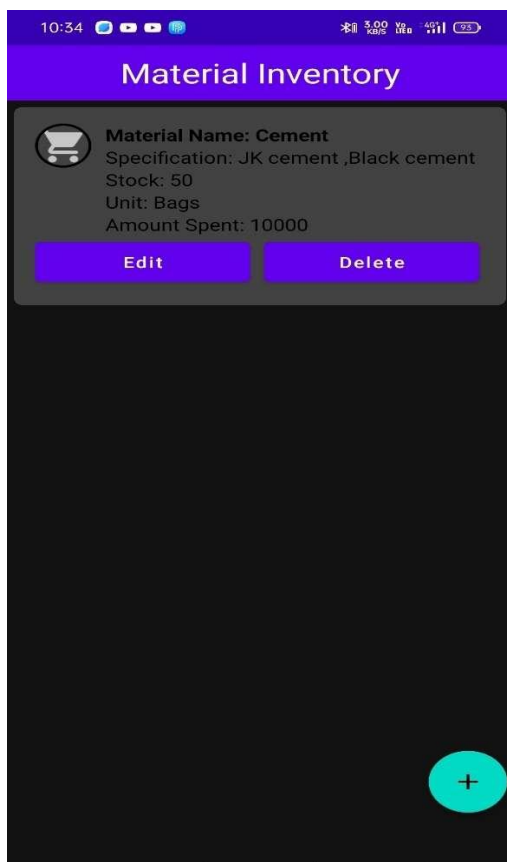


Fig 8 Material Inventory Page

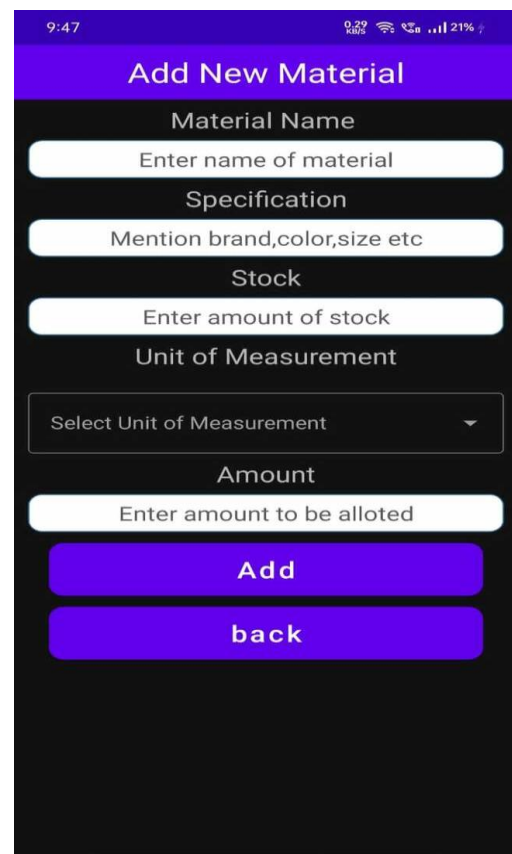


Fig 9 Page to add new material in inventory

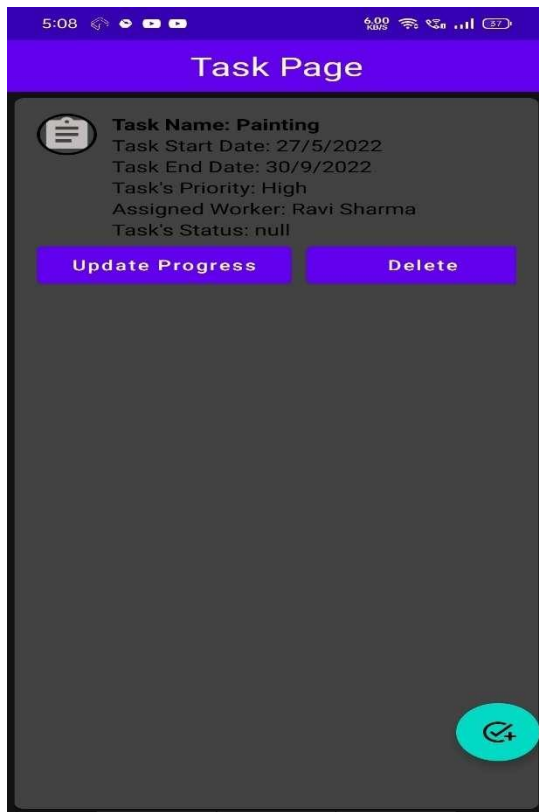


Fig 10 Task Page

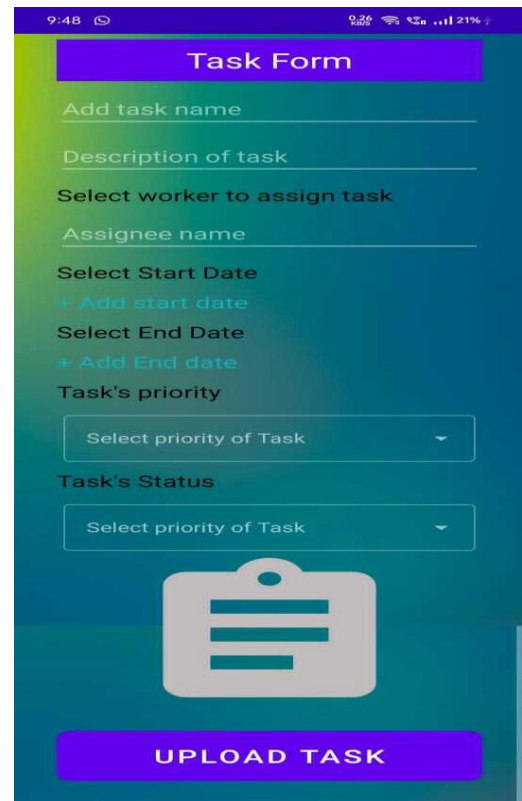


Fig 11 Page to add task

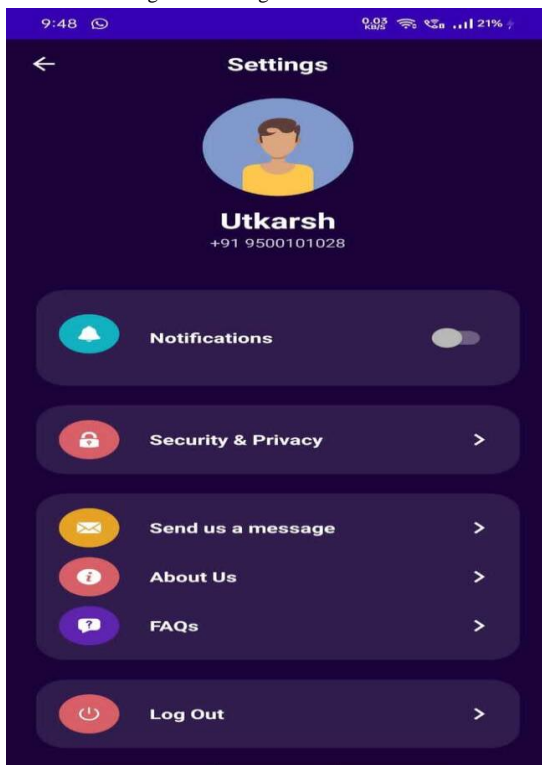


Fig 12 Settings Page

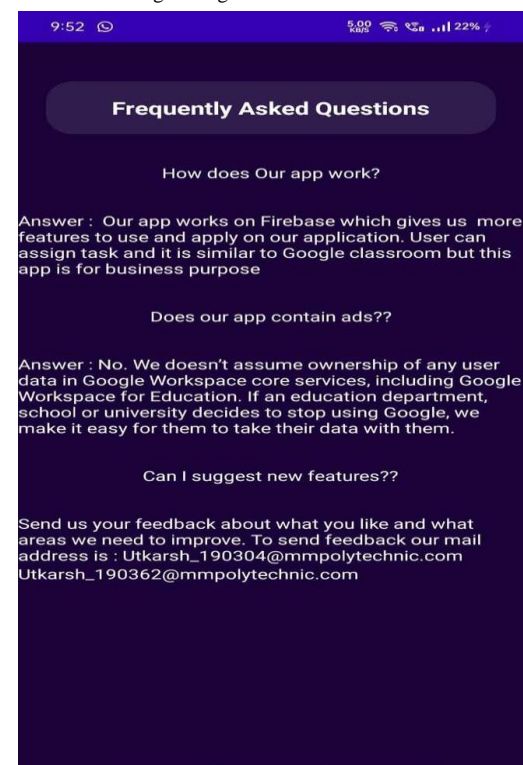


Fig 13 FAQs Page



Fig 14 About Us Page

6. CONCLUSION

The Construction Planning is designed in such a way that the problems facing the consulting company to meet the requirements will end. The burden of the actual work was made easier with the development of the system. The user can view data and performance analysis can be done. The main objective of this project was to provide the required number of back-end reporting tools that can handle a sufficient amount of data.

Construction planning app will be very useful in construction planning, budgeting. This will help many constructors and will help in reducing the delays in Construction projects

6. ACKNOWLEDGEMENTS

Perseverance, Inspiration & Motivation have always played a key role in the success of any venture. At this level of understanding it is difficult to understand the wide spectrum of knowledge without proper guidance and advice, hence we take this opportunity to express our sincere gratitude to our respected Project Guide an example appendix

REFERENCES

- [1] Developer guide for android. Available [Online]
<http://developer.android.com/guide/topics/manifest/uses-sdk-clement.html>
- [2] <https://medium.com/muhamadjalaludin/how-to-create-user-interface-login-register-with-android-studio-34da847b05b2>
- [3] <https://www.geeksforgeeks.org/android-tutorial/>
- [4] Software development kit available at

https://en.wikipedia.org/wiki/Software_development_kit

- [5] Beginning Android® Programming with Android Studio

Available:<https://www.pdfdrive.com/beginning-android-programming-with-android-studio-e39898073.html>