Build Ease

**FYP– I REPORT**

**BS (CS/SE/CYS/AI) Fall 2023**

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# Introduction

* 1. *Problem Statement*

The construction industry is a complex and fragmented market, with many different stakeholders involved in each project. This can lead to a lack of communication and coordination, which can ultimately delay projects and increase costs. Our proposed app would address these challenges by providing a platform for users to connect with contractors. These features would help to streamline the construction process, improve communication, and reduce costs. As a result, our app would benefit both users and contractors, and help to make the construction industry more efficient and effective.

*1.1. Here are some specific problems that the app would solve:*

1.1.1. Lack of Information of Private Contractors:  
As there is little or no information about the private contractors on the amount of work they do, how much projects they complete, how much they cost for a project and are the previous clients satisfied by them. All of the relevant information about any contractor or company will be provided by our project.

2.2.2. Determine the contractors with bad reputation:

A rating and a review system will help the clients to filter out the contractors which have low user ratings, low project completion and low customer satisfaction and will also mark out the contractors that are doing good. Clients can also get detailed information about the contractors by reading the reviews.  
  
2.2.3. Efficiency in searching projects and contractors:

Our project will use an AI recommender system to help the user to select the best contractor for their project that will save their time and effort searching manually.

# Related Work / (SRS/SDS)

Here is the list of the platforms that provided similar services which are:

* Zarea.pk
* Tameer.com
* Imarat.pk
* Astralconstructors.com

**Zarea.pk:** This website does provide different construction material for building the projects but does not provide any form of contracting or any form of construction project. It also does not provide any option for selecting different vendors.

**Tameer.com:** This a famous international construction company that builds projects for multinational companies and governments. They help clients build projects and hand the projects over to the client after the project is built but you cannot estimate cost for projects.

**Imarat.pk:** They also provide construction services and they built projects for the clients but cannot track online progress of your projects.

**Astralconstructors.com:** They build projects for the clients and they also have a vendor and supplier option but the only issue is that the clients have to email the administrators and then the administrators will see if they can provide a vendor for the service.

| **Services provided** | **Buying/selling of material** | **Client/ vendor**  **Interface** | **Rating system** | **Client reviews** | **Project contract** | **AI based recommendation** | **Progress tracking** | **Local contractor services** | **Cost estimation** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Build Ease\*** | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |
| **Zarea** | ✔ | ✔ | ❌ | ✔ | ❌ | ❌ | ❌ | ❌ | ❌ |
| **Tameer** | ❌ | ❌ | ❌ | ❌ | ✔ | ❌ | ❌ | ❌ | ❌ |
| **Imarat** | ❌ | ❌ | ❌ | ❌ | ✔ | ❌ | ❌ | ❌ | ❌ |
| **Astral-constructor** | ✔ | ❌ | ❌ | ❌ | ✔ | ❌ | ❌ | ❌ | ❌ |

# Methodology

The construction process is considered one of the challenging task, and one of the biggest challenges facing clients and professionals is the lack of data on private constructors and material data. This makes it difficult for clients to choose the right service provider for their needs. Our team is developing a mobile and web application that aims to bridge this gap by providing clients with information about construction service providers, as well as recommend the best service provider for their needs. The application will be developed using the following methodology:

∙ **Problem identification:** We will first identify the problem that our application will solve. In this case, the problem is that there is a lack of data on construction services and material, which makes it difficult for clients to choose the right service provider.

∙ **Solution development**: Once we have identified the problem, we will develop a solution. In this case, the solution is a mobile and web application that will provide clients with information about private constructors and materials Data, as well as recommend the best service provider for their needs.

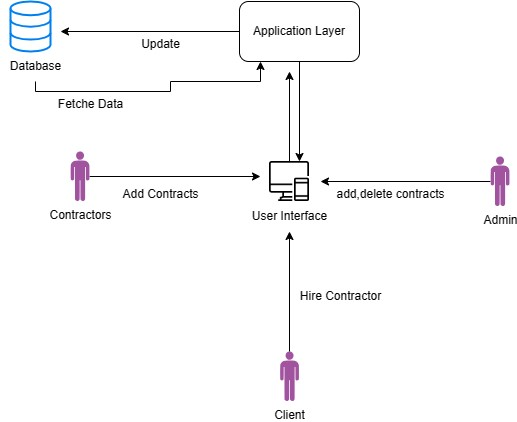
∙ **Wire framing and prototyping:** Then, we will start wire framing and prototyping the app.

∙ **Development and testing:** Once the wireframes and prototypes are finalized, we will start developing the app. Then finally, we will test the product to ensure its quality

1. Testing and Results

| **Test Cases** | **Names** | **Expected Result** |
| --- | --- | --- |
| TC1 | Contractor can add contracts listing | Listing will be update successfully |
| TC2 | Contractor can accept or reject requests | Hiring Request will be accepted or deleted |
| *TC3* | Contractor can update the progress of running projects | Progress bar will be updated |
| TC4 | Contractor can add members | Members will be displayed in table format |
| TC5 | User and contractor can see daily prices of construction materials | Material prices will be displayed and update every day |
| TC6 | User can see contract list | All available contract will be displayed |
| TC7 | User can message/call the contractor | Contractor phone no will be displayed |
| TC8 | User can see progress of their projects | Progress will be displayed |
| TC9 | User and Contractor can estimate cost of calculation | Cost Calculator will display the estimate cost |

1. System Diagram



1. Goals For FYP-II

| **Elapsed time in (days or weeks or month or quarter) since the start of the project** | **Deliverable** |
| --- | --- |
| Month 5 | Complete Connectivity of Frontend and Backend |
| Month 6 | Integration of Mobile App |
| Month 7 | Testing and Result |
| Month 8 | Finalize Project, other deliverables and Project presentation |

1. Conclusion

In conclusion, the construction management app project is a feasible and valuable project. The app would provide a platform for users and contractors to connect, collaborate, and manage their projects. The app would be developed using the latest technologies. It would be free to download and use. The project is expected to take 6-7 months to complete. The construction management app has the potential to make a significant impact on the construction industry. It would help to improve communication, collaboration, and efficiency, which would lead to more successful projects. The app would also help to reduce costs. For Now the Frontend of the project has been completed and the integration of database will be implemented in the coming modules.

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