

# Software Engineering Project Architecture

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## Introduction

Thekedaar hatao is an application that aims to ease the process of building your dream home. It provides the users with features that makes the building process smoother and easier overall for the user of the application. The calculator on the application, will provide you with an estimated amount of cement, cinder blocks, sand, and other such raw materials that are essential while building your house. In addition, the application will help cater the dreamers by having a forum where people can communicate about the problems that have arisen and how they tackled them. Advice threads and asking for help will be carried out on the forum. Since you can never be sure of how much material you exactly need, there is always a (+ or -)5% chance of having extra material, you can also sell this to other users on the app through a buy and sell section. For individuals wanting to have a communication privately, the application will also provide an opportunity to privately chat with someone registered on the application.

## Requirements

### Functional

#### 1. Login

Our App will let users login with their email as well as with google.

#### 2. Raw Material Calculator

In the app, users can calculate the amount of raw material required for building based on their square footage.

#### 3. Forum

Users can interact with other consumers and discuss their problems on a moderated forum, which could also be referred by users having similar queries/problems.

#### 4. Market Place

A place where users can connect with reputable vendors.

#### 5. Chat

A personal chat with other users/vendors so they can talk and make deals privately.

## Non-Functional

### 1. Performance

The application will run smoothly on all devices supporting IOS 15 (and above) or Android 10 (and above). The application would not be resource intensive thus the performance would be enhanced.

### 2. Aesthetic

The aesthetic of the application will be developed in a way where it will make it easy for the users of the application to use it efficiently. The different features of the application will be inter-connected in a manner that will make the application a useful addition.

### 3. Usability

The mobile application will be usable in the sense that it will be easy for people of all ages to use the application for their benefit. The calculator, forum, marketplace, and chat messaging will all be easy to use.

### 4. Compatability

The application will be compatible with all mobile phones supporting the recommended operating system.

### 5. Reliability

The application will be reliable in the sense that it will not crash for users when they are using it. The application will also be reliable as it will always provide the perfect solution to the best of the applications knowledge.

### 6. Security

The user details submitted at the time of sign up to the application will be secure and will not be released to the public at any time.

## Use Cases

### Explanation

There are two actors in our class diagram. Our primary actor in the class diagram is the user of the application. The admins of the application that will manage the application will be the secondary actors of the application. The users will be concerned with the five features of the application that are;

- Login and/or Signup
- Raw Material Calculator
- Forum
- Private chat
- Marketplace

The user will first sign up to the application, if the user is already registered to the application, he/she will login to the application. The user will also use raw material calculator in which one can input the amount of land in sq/ft and get an estimation on how much raw material might be needed. In addition, they will also be concerned with the marketplace. The users will be divided into two types in the marketplace. The vendors that will sell the raw material, and the consumers that will buy the raw material. The forum and the chat will be administered by the admins as to stop anyone from misbehaving on the public forums. The user will also have to set their profile and will have to verify.