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**COMSATS University Islamabad (CUI)**

Software Design Specification  
(SDS DOCUMENT)

for

**Smart Construction Manager**  
Version 1.0

***By***

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*Bachelor of Science in Computer Science (2018-2022)*

Revision History

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| --- | --- | --- | --- |
| **Name** | **Date** | **Reason for Changes** | **Version** |
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Application Evaluation History

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| **Comments (by committee)**  **\*include the ones given at scope time both in doc and presentation** | **Action Taken** |
| ‘Modules are clear and Well defined. Can Proceed for next step’ – Dr Basit Raza | N/A |
| ‘Project idea is ok. All the modules are properly explained ‘– Mr. Zulfiqar Ali | N/A |
| ‘Add some major modules other than management systems’ – Tehseen Riaz Abbasi | Modules Added |
| ‘Replace the “targeted project” with your project name in tables’ caption.’ – Mr. Tehseen Riaz Abbasi | “targeted project” replaced with project name in tables’ caption. |
| ‘There is a difference between functionality and advantages, you have written too functionality of the system in advantages section, please correct it.’ – Mr. Tehseen Riaz Abbasi | Functionality and advantages section updated |
| ‘The modules are not written with logical and technical flow, rather students tried to add modules without proper flow, understanding the system needs and boundaries.’ – Mr. Tehseen Riaz Abbasi | Modules added with the flow |
| ‘Modules needs to refine, redefine, and improved.’ – Mr. Tehseen Riaz Abbasi | Modules refined, redefined, and improved. |
| ‘Revise concept section. Explain it.’ – Mr. Tehseen Riaz Abbasi | Concept section revised. |
| ‘Milestones for the Gantt chart needs revision, so revise your Gantt chart. Format is also not correct.’ – Mr. Tehseen Riaz Abbasi | Gantt Chart revised |
| ‘Mockup images quality is not good, redesign them.’ – Mr. Tehseen Riaz Abbasi | Mockup images quality improved and redesigned. |
| ‘The screenshot of plagiarism report is missing.’ – Mr. Tehseen Riaz Abbasi | Plagiarism report added |
| ‘Limited tabular use case Add more tabular use cases.’ – Mr. Tehseen Riaz Abbasi | Tabular use cases added. |
| ‘Revise the tabular use cases and FR in proper format with all required fields to be filled as guided w.r.t to updated modules. – Mr. Tehseen Riaz Abbasi | FR tables revised |
| ‘Revise and quantify the non-functional requirements properly. Add more NFR like scalability etc. – Mr. Tehseen Riaz Abbasi | More NFRs added |
| ‘Milestones for the Gantt chart needs revision, so revise your Gantt chart. Format is also not correct. – Mr. Tehseen Riaz Abbasi | Gantt chart revised |
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Supervised by

Dr. Ashfaq Hussain Farooqi

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# Introduction

This is the SRS (Software Requirement Specification) document for our project Smart Construction Manager. The document briefly explains the working and description of the project. The document contains the Use Cases against specified modules. The Functional and Non-Functional requirements are also elicited in the document. The UML diagrams and Class diagrams explain the flow of the application. Moreover, user interfaces describe the working of application for the end user.

## Purpose

Smart Construction Manager is a One Window Solution for the construction process of housing in the state. Keeping in view the incumbent government’s housing and construction policies & packages to minimize the time & effort for the construction process and ensure transparency. This solution also addresses unexpected turn of events in the fiscal policies caused by the global pandemic (COVID-19). It also ensures the safety of people regarding the SOPs. Smart Construction Manager is an all-rounder application addressing basic house construction needs.

## Scope and Modules

System will provide a one window application and act as agent of communication between construction companies, user, and government bodies. The user will provide the required information to the system the system will authenticate the user. User will submit request to respective organization (depending upon the location of project) & The construction company. The authorities and the industries will accept the request. Design and Layout will be sent by user. After review authorities and industries will generate the response.

### Modules

**First module** buys and sell, user can buy land and other construction equipment posted by other users for sale. **Second module** deals with user searching and provides functionality to search by talking. **Third module** is user chatting with other users. **Fourth module** shows user recommendations on home page. **Fifth module** helps user decide the map for construction site. And **sixth module** will be for designing and decorating house with AR. **Seventh module** deals with the user sending application requests to government bodies for various procedures. **Eight module** provides admin portal to government bodies to manage user requests.

# Design Methodology and Software Process Model

# System Overview

## Architectural Design

## Process Flow/Representation

# Design Models

# Data Design

## Data Dictionary

# Algorithm and Implementation

# Software Requirement Traceability Matrix

# Human Interface Design

## Screen Images

## Screen Objects and Action

# Appendix I