Decor Dream

INTERIOR DESIGN AND CONSTRUCTION MANAGEMENT PLATFORM

NAME: Ahalya V L
BATCH: A
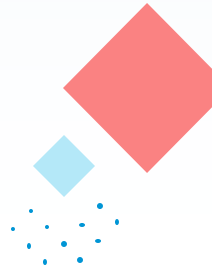ROLL NO: 11
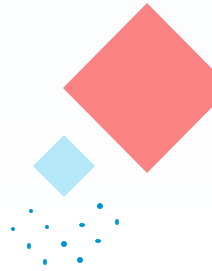PROJECT GUIDE: Dr.Shidha M V
SCRUM MASTER: Ms.Sona Mary Louis

DESCRIPTION

Decor Dream is a comprehensive construction and interior design management platform that simplifies the home-building process from design selection to project completion. Users specify building requirements, customize interiors, and receive design recommendations,Once finalized, designs are sent to contractors, who procure materials from vendors, estimate costs, and manage payments.The platform provides real-time project updates, budget forecasting, and structured user management, ensuring seamless coordination between users, contractors, and vendors for a transparent and efficient construction process.

OBJECTIVE

➢ Simplify Design and Customization: Allow users to easily define building requirements and personalize interiors, receiving tailored design recommendations based on their preferences.

➢ Streamline Contractor and Vendor Collaboration: Facilitate efficient communication and coordination between contractors and vendors for timely material procurement, cost estimation, and smooth project execution.

➢ Cost Estimation and Budget Control: Automate cost estimation, provide budget forecasting, and ensure accurate invoicing to maintain financial oversight and prevent unexpected expenses.
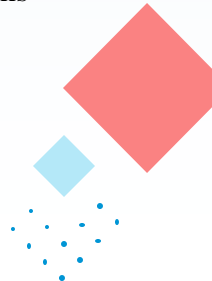
EXISTING SYSTEM

❖ **Design Customization**

Existing systems allow users to define basic building specs but lack personalized design recommendations. Users often need to consult with designers or contractors, and there are limited tools for visualizing or customizing interior styles, materials, and layouts, making the process time-consuming and less automated.

❖ **Contractor-Vendor Interaction**

Material procurement, cost estimation, and invoicing are handled separately by contractors and vendors, often through emails or phone calls. This leads to delays, inconsistencies, and manual assessment of materials and costs.

❖ **Cost Estimation and Budgeting Tools**

Cost estimation is often a manual, error-prone process, with contractors manually inputting costs for materials, labor, and expenses. Budgeting tools are basic and lack the ability to predict or adjust for potential cost overruns during the project.

PROPOSED SYSTEM

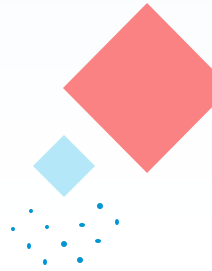➤ **Personalized Design Customization**

Users define building details and customize room styles, colors, materials, and layouts. The system suggests design images based on their preferences, removing the need for designer consultations.

➤ **Streamlined Contractor-Vendor Interaction**

Contractors generate material lists from user designs, with material requests sent directly to vendors. The system tracks requests in real-time to ensure timely delivery and reduce errors.

➤ **Automated Cost Estimation and Budget Forecasting**

The platform automates cost calculations for materials, labor, and other expenses, offering accurate budget forecasts and predictive features to manage potential cost overruns and adjust budgets dynamically.

MODULES

❑ **USER MANAGEMENT MODULE**

Manages all user roles and permissions within the system, ensuring efficient management of each user type (Admin, Contractor, Customer, Vendor). This module handles user registration, authentication, and access control.

❑ **INTERIOR DESIGN CUSTOMIZATION MODULE**

Building Specifications: Users specify their building's structure—selecting options for floors, rooms, and additional features like balconies or home offices.

Interior Customization: Each room can be personalized, allowing users to pick from various styles, colors, and materials for each space (e.g., a modern kitchen with marble countertops and wooden flooring).

Design Submission: After customization, users can submit their preferred designs to designers for further action.

❑ DESIGN RECOMMENDATION MODULE

The system searches the database for designs that match the user's selected preferences. It then filters the available designs and selects the most suitable ones. Finally, the recommended interior design images

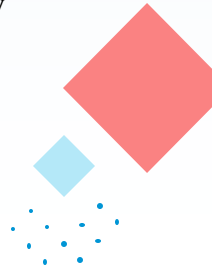## ❑ CONTRACTOR MANAGEMENT & PROJECT TRACKING MODULE

Design Review: Contractors receive design submissions and review the project's requirements.

Material Management: Identify and list all materials needed for each project, then send requests to vendors.

Cost Estimation: Calculate the total construction cost based on selected materials, labor, and additional expenses.

Invoicing: Generate detailed invoices and manage payment processes within the platform.

Progress Reporting: Regularly update the project's status, including completed tasks, upcoming phases, and any issues or delays.
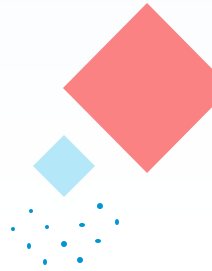
❑ **VENDOR & MATERIAL PROCUREMENT MANAGEMENT MODULE**

Manages the procurement process by enabling contractors to request materials and equipment from vendors.

Vendors can approve or reject supply requests, and the system tracks delivery status to ensure timely receipt of

essential materials, helping maintain project timelines and avoid delays.

☐ **BUDGET FORECASTING AND COST ESTIMATION MODULE**

Automates the estimation of project costs based on selected materials, labor, and other factors. The system helps

create accurate budget forecasts, ensuring financial transparency and minimizing the risk of cost overruns.

TOOLS AND TECHNOLOGIES

WEB DEVELOPMENT

FROND END: JavaScript,HTML,CSS, Python

BACK END: Python Flask

ANDROID DEVELOPMENT

- Java,JavaScript,Xml

DATQBASE: MySQL

DATASET: Construction Estimation Data

REFERENCES

[1] X. Liu, Y. Tang, and W. Zhang, "Blockchain Technology in Construction Project Management: A Survey and Applications," IEEE Access, vol. 9, pp. 6712-6726, 2021.

[2] Shah, Fakhar Hassan, Omer Shujat Bhatti, and Shehryar Ahmed. "Project Management Practices in Construction Projects and Their Roles in Achieving Sustainability—A Comprehensive Review." Engineering Proceedings 44.1 (2023): 2.

[3] Zhan, Chenwen, Chunwei Fu, and Xiaohong Wu. "Research on collaborative construction management of construction project based on BIM technology." International Journal of Critical Infrastructures 19.1 (2023): 79-93.

THANK YOU