

Planner-3D



Centre for Computational Technologies

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1 Introduction

1.1 Purpose :

The purpose of this document is to provide a detailed overview of the requirements for the development of "Planner-3D," a web application that allows users to design and plan interior spaces in 3D.

1.2 Scope :

Planner-3D is a web-based application that allows users to design interior spaces by selecting and placing 3D furniture models within a room. Users can choose from a variety of furniture shapes and styles, and interactively place them within the room to visualize their designs.

2 System Overview

Planner-3D is a user-friendly web application designed to simplify the interior design process.

- Provides an interface for users to interact with the application.
- Allows users to select room dimensions and furniture shapes.
- Supports drag-and-drop functionality for placing furniture within the room.

3 Functional Requirements

3.1 Room Creation:

Users should be able to create a new room by drawing a closed polygon .

3.2 Furniture Selection:

Users should be able to select furniture.

3.3 Furniture Placement:

Users should be able to drag and drop furniture into the room.
Users should be able to rotate and resize furniture as needed.

3.4 Design Saving:

Users should be able to save their designs for future reference.

3.5. Performance Optimization:

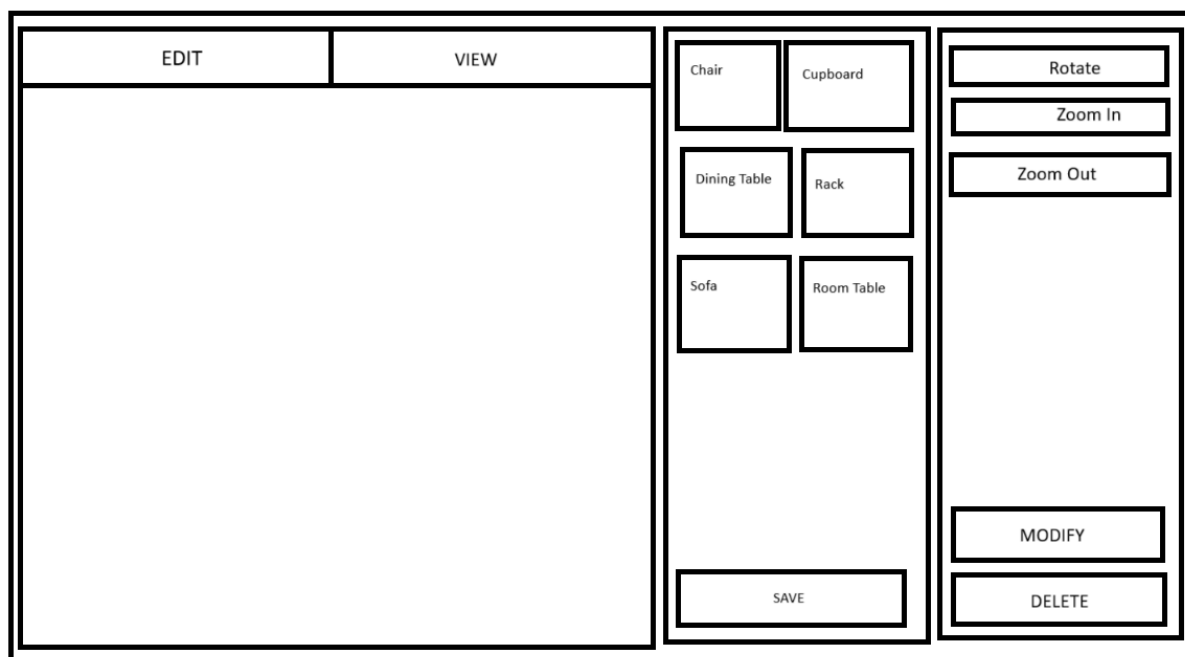
Optimize algorithms and data structures to achieve efficient computation and rendering.

4 Tools

- Frontend: ReactJS, HTML, CSS & TypeScript
- 3D Graphics: three.js
- Furniture Models: .stl files
- VS Code for the structuring part

5 Milestones and Timeline

Sr. No.	Milestones	Date and Time
1	Project Problem Definition	06 May,2024
2	SRS Presentation & Approval	07 May, 2024
3	Implementation of User Interface	07 May, 2024
4	Integration with the three.js API	08 May, 2024
5	Customization Functionality Implementation	08 & 09 May, 2024
6	Project Demonstration	10 May, 2024
7	Final Submission	13 May, 2024



6 Conclusion

In conclusion, Planner-3D is a web application designed to simplify the interior design process by allowing users to visualize their designs in 3D. By providing an intuitive user interface and powerful design tools, Planner-3D aims to empower users to create beautiful and functional interior spaces.