SHRI VAISHNAV VIDYAPEETH VISHWAVIDYALAYA

➢ **SHRI VAISHNAV INSTITUTE OF INFORMATION TECHNOLOGY**

Project Report

on

Innovate Spaces (IS)

In partial fulfillment of requirements for the degree

of

BACHELOR OF TECHNOLOGY
IN

➢ **COMPUTER SCIENCE & ENGINEERING**

Submitted by:

Samradhi Jain [21100BTCSE09961]

Shreya Dubey [21100BTCSE10417]

Under the guidance of

Prof. SHUBHAM KOTHARI

SHRI VAISHNAV VIDYAPEETH VISHWAVIDYALAYA, INDORE

SHRI VAISHNAV INSTITUTE OF INFORMATION TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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SHRI VAISHNAV VIDYAPEETH VISHWAVIDYALAYA, INDORE

➢ **SHRI VAISHNAV INSTITUTE OF INFORMATION TECHNOLOGY**

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

DECLARATION

We here declare that work which is being presented in the project entitled "**Innovate Spaces**" in partial fulfillment of degree of **Bachelor of Technology in Computer Science & Engineering** is an authentic record of our work carried out under the supervision and guidance of **Prof. Shubham Kothari** Asst. Professor of Computer Science & Engineering. The matter embodied in this project has not been submitted for the award of any other degree.

SHRI VAISHNAV VIDYAPEETH VISHWAVIDYALAYA, INDORE

➢ **SHRI VAISHNAV INSTITUTE OF INFORMATION TECHNOLOGY**

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

<u>PROJECT APPROVAL SHEEET</u>

Following team has done the appropriate work related to the "**Innovate Spaces**" in partial fulfillment for the award of **Bachelor of Technology in Computer Science & Engineering** of "SHRI VAISHNAV INSTITUTE OF

INFORMATION TECHNOLOGY" and is being   submitted   to SHRI VAISHNAV VIDYAPEETH VISHWAVIDYALAYA, INDORE.

Team:

1) **Samradhi Jain**
2) **Shreya Dubey**

Internal Examiner   **External Examiner**

Date :

SHRI VAISHNAV VIDYAPEETH VISHWAVIDYALAYA, INDORE

➢ SHRI VAISHNAV INSTITUTE OF INFORMATION TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

➢ <u>CERTIFICATE</u>

This is to certify that **Ms. Shreya Dubey** and **Ms. Samradhi Jain** working in a team have satisfactorily completed the project entitled "**Innovate Spaces**" under the guidance of Prof. Shubham Kothari in the partial fulfillment of the degree of **Bachelor of Technology in Computer Science & Engineering** awarded by SHRI VAISHNAV INSTITUTE OF INFORMATION TECHNOLOGY affiliated to SHRI VAISHNAV VIDYAPEETH VISHWAVIDYALAYA, INDORE during the academic year **June 2021 - January 2022**.

Prof. Shubham Kothari

Project Coordinator

Dr. Anand Rajavat

➢ **Director & Head,**

Department of Computer Science & Engineering

ACKNOWLEDGEMENT

Abstract

Innovate Spaces[IS]-Transform your Space, Create your Dream Home, translate your vision into reality, crafting stunning and functional interiors that reflect your unique style. We begin with in-depth consultations to understand your needs, preferences, and budget. Through open communication and collaboration, we ensure every detail aligns with your personality, creating a space that inspires and uplifts you.

Revolutionize Your Design Experience: Step beyond traditional static layouts with our innovative 360-degree design technology. Immerse yourself in a photorealistic visualization of your transformed space before a single brushstroke is made. Virtually walk through your rooms, experiment with furniture placement and décor options, and witness your design come to life before your eyes. This interactive experience allows you to refine your vision and ensure the final design perfectly suits your functional and aesthetic desires.

Innovate Spaces is your comprehensive solution for exceptional interior design. Contact us today and let's embark on a journey to craft a space that tells your story.

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1.1 Introduction

1.2 Problem Statement

1.3 Need for the Proper System

CHAPTER – 1

INTRODUCTION

1.1 Introduction

Do you stare at your living room walls, yearning for a transformation that sparks joy? Does your kitchen feel cramped and uninspiring, hindering your culinary adventures? Perhaps your home office lacks the focus and energy you need to thrive. At Innovate Spaces, we understand the profound impact a well-designed space can have on your life. We're not just about aesthetics; we're about transforming your living environment into a haven that reflects your unique personality, fosters well-being, and empowers you to live your best life.

Imagine stepping into a space that feels like an extension of yourself. A living room bathed in warm light, perfect for cozy evenings with loved ones. A kitchen that inspires culinary creations with its sleek design and efficient layout. A calming bedroom that promotes restful sleep and rejuvenation. At Innovate Spaces, this isn't just a dream – it's our mission to make it a reality.

We believe that innovative design transcends trends. It's about creating spaces that are not only stunning but also functional and personalized. Through a collaborative approach, we get to know you, your lifestyle, and your vision for your dream home. We delve into your aesthetic preferences, functionality needs, and budget constraints to craft a customized design that reflects your essence.

Our expertise extends far beyond traditional interior design. We leverage cutting-edge 360-degree design technology to offer a truly immersive experience. Imagine virtually walking through your future space, experiencing the flow of the design, and fine-tuning details in real-time. This innovative approach allows you to visualize the final product before a single piece of furniture is placed, ensuring your complete satisfaction.

Ready to transform your space and create your dream home? Let Innovate Spaces be your partner in this exciting journey. Explore our website for a glimpse into our design philosophy, browse our portfolio to discover the possibilities, and get in touch today for a free consultation.

1.2 Problem Statement

Millions of homeowners stare at bland, uninspiring spaces, longing for a transformation but feeling overwhelmed by the design process. Traditional interior design can be:

- **Inaccessible:** High costs and limited consultation options often exclude those seeking design expertise.
- **Impersonal:** Generic design solutions fail to capture the unique personalities and needs of homeowners.
- **Uncertain:** Static 2D plans leave homeowners with limited visualization of the final outcome, leading to potential dissatisfaction.

1.3 Need for the proper system

- **Enhancing User Experience:** A user-friendly website with intuitive navigation allows potential clients to effortlessly explore our services, portfolio, and design philosophy. Clear calls to action encourage inquiries and project bookings.
- **Streamlining Communication:** An efficient system allows for seamless communication with potential clients. Easy-to-find contact forms and scheduling tools make it simple for them to connect with us for consultations or project discussions.
- **Showcasing Expertise:** A robust system enables us to showcase our design expertise. We can utilize the website to display high-quality images and 360-degree virtual tours, immersing visitors in the transformative power of our work.
- **Building Trust and Credibility:** A professional website with clear information about our team, process, and testimonials fosters trust and credibility with potential clients.
- **Content Management and Scalability:** A well-organized system allows us to easily manage and update website content, ensuring fresh information and a constantly evolving online presence as our business grows.

1.4 Objective

- **Empower homeowners:** Make professional interior design accessible and approachable.
- **Personalize the experience:** Craft unique spaces that reflect individual styles and needs.
- **Revolutionize visualization:** Offer immersive 360-degree design technology for confident decision-making.
- **Bridge the communication gap:** Ensure clear and collaborative communication throughout the design process.
- **Simplify the journey:** Provide a comprehensive suite of services, from consultations to project management.
- **Fuel creativity and inspiration:** Showcase innovative design solutions and inspire dream renovation.
- **Breakthrough traditional limitations:** Move beyond generic design to create functional and inspiring spaces.
- **Transform lives through design:** Foster well-being and empower homeowners to live their best lives in dream spaces.

1.5 Scope

- ➢ **Target audience:** Homeowners seeking to transform their living spaces.
- ➢ **Services offered:**
  - In-depth design consultations.
  - Personalized design plans leveraging 360-degree technology.
  - Project management and product sourcing (optional)
- ➢ **Content:**
  - Information about Innovate Spaces' design philosophy and approach.
  - Portfolio showcasing past projects
  - Educational resources on interior design trends and tips
  - Client testimonials
- ➢ **Functionality:**
  - User-friendly interface for easy navigation
  - Contact forms and scheduling tools for seamless communication
  - Platform for showcasing 360-degree virtual tours

- Content management system for maintaining fresh information

- Analytics tools for tracking visitor behavior.

➢ **Overall objective:** To create an accessible and informative online space that attracts potential clients, showcases Innovate Spaces' expertise, and simplifies the process of transforming dream homes into reality.

CHAPTER -2

LITERATURE SURVEY

2.1 Existing System

The existing online interior design platforms offer a great starting point for refreshing your space, but there can be some drawbacks. That are limited customization, communication challenges, design consistency concerns, and limited budget flexibility.

1. Havenly:

Havenly offers personalized online interior design services. You collaborate with a designer who creates a mood board and furniture layout based on your style preferences and budget. They also offer curated furniture packages for purchase directly through their website. This website allows you to browse designer portfolios, take a style quiz to match you with a suitable designer, and access project inspiration through blog posts and curated collections.

2. Modsy:

Modsy provides online interior design consultations and 3D room visualizations. You upload photos and dimensions of your space, and their designers create photorealistic renderings with furniture and décor options. They also offer furniture and décor shopping through their website.The website allows you to explore design ideas through project galleries, filter furniture by style and room, and access a free online room planner tool for experimenting with layouts

2.2 Proposed System

Innovate Spaces isn't just another online interior design platform. We're committed to creating a website that empowers you to transform your dream home into reality, with a focus on these key qualities:

- ❖ **Personalized Design:** No cookie-cutter solutions here. We delve into your unique style, needs, and budget to craft a bespoke design plan that reflects your personality.

- ➢ **Immersive Visualization:** Step into the future! Our cutting-edge 360-degree technology allows you to virtually walk through your transformed space before a single brushstroke is made, ensuring complete design confidence.

- ❖ **Collaborative Approach:** Design is a journey, not a destination. We work closely with you throughout the process, ensuring open communication and addressing your concerns every step of the way.

- ❖ **Accessibility and Flexibility:** We offer a range of design services to cater to various budgets and project scopes. Whether it's a full home renovation or a single room refresh, we're here to guide you.

- ❖ **Expertise and Inspiration:** Our team of passionate designers brings a wealth of experience and creativity to the table. Explore our portfolio for design inspiration and trust us to translate your vision into a functional and beautiful space.

- ❖ **Seamless Communication:** Easy-to-use communication tools make it simple to connect with us, ask questions, and stay informed throughout the design process.

- ❖ **Treasure Trove of Information:** Our website is more than just a pretty face. Find valuable design resources, educational content, and client testimonials to fuel your design journey.

2.3 Feasibility Study

A feasibility study is a comprehensive analysis that evaluates the potential success of a proposed venture. For Innovate Spaces, the interior design website, this study will explore the technical, operational, and economic feasibility of bringing the website to life. By examining these factors, we can identify potential challenges, opportunities, and ultimately determine the viability of the website and its potential for success.

- ➢ Technical Feasibility
- ➢ Operation Feasibility
- ➢ Economic Feasibility

2.3.1 Technical Feasibility

This section assesses the technical resources and capabilities required to build and maintain the Innovate Spaces . Key considerations include:

- ➢ HTML
- ➢ CSS
- ➢ JavaScript

2.3.2 Economical Feasibility & Operational Feasibility

➢ **Economic Feasibility :**

To determine economic feasibility, we need to analyze the costs associated with developing and maintaining Innovate Spaces:

- **Website Development:** Factor in costs for web design and development, 360-degree technology integration, and content creation.
- **Content Management System (CMS):** Consider subscription fees for a user-friendly CMS to manage website content and functionalities.
- **Web Hosting:** Choose a reliable web hosting provider with costs based on expected traffic volume and data storage needs.
- **Marketing Efforts:** Allocate budget for online advertising, social media marketing campaigns, and potential SEO optimization services to attract new clients.
- **Staffing:** Estimate salaries and benefits for personnel needed for website management, design consultations, and potentially project management services. This could include designers, developers, content creators, marketing specialists, and customer support representatives.

- > **Operational Feasibility:** By carefully considering team structure, communication channels, workflow management, and marketing strategy, Innovate Spaces can establish a robust operational framework. This will ensure efficient project execution, foster strong client relationships, and create a sustainable foundation for business growth. Remember, ongoing evaluation and adaptation of your operational processes will be crucial as Innovate Spaces evolves and expands its services.

CHAPTER – 3

REQUIREMENT ANALYSIS

3.1 Method used for Requirement analysis

There are two methods that are used for requirement analysis, they are-

1. Business Process Model and Notation (BPMN)

Business Process Model and Notation is used to create graphs that simplify the understanding of the business process. It is a popular technique used by business analysts to coordinate the sequence of messages between different participants in a related set of activities.

3.2 Data Requirements

- ➢ **Basic User Information:** Name, email address, phone number (optional depending on communication preferences).

- ➢ **Communication Preferences:** Preferred method for receiving updates and project communication (email, phone calls, website messaging system).

- ➢ **Client Reviews & Testimonials:** Positive client feedback can be displayed on the website to build trust and social proof. Consider a system for gathering and managing client reviews.

- ➢ **3D Visualization Data:** Technical specifications and file formats for storing and rendering 360-degree design visualizations for client presentations.

3.2 Functional Requirements

The functional requirements define what a system or its components are supposed to do. They outline the specific functionalities, features, and behaviors that the system must deliver to meet user needs and achieve its intended purpose. Our system Web community has the following functional requirements-

➢ **360-degree Visualization**: Allows users to virtually walk through a 3D rendering of their transformed space. The system should integrate with 3D design software used by designers. The website should be able to display high-quality 360-degree visualizations with smooth navigation. Users should be able to explore different design options and viewpoints within the 3D space.

➢ **Online Consultation**: Enable users to schedule and conduct consultations with designers remotely.Integration with a scheduling system for users to book consultation slots based on designer availability.Support for video conferencing or screen sharing functionalities to facilitate communication during consultations.

➢ **Responsive Design:** The website should be responsive and function seamlessly across various devices (desktop, tablet, mobile).

3.3 Non-functional Requirements

3.4.1 PERFORMANCE REQUIREMENTS

- ❖ **Load Time:** The website should load quickly across various devices (desktop, tablet, mobile) with a stable internet connection. Aim for page load times under 3 seconds for optimal user experience.
- ❖ **Scalability:** The website should be able to handle increasing user traffic and data volume as Innovate Spaces grows without compromising performance.
- ❖ **Uptime:** The website should be highly available with minimal downtime to ensure users can access services and information reliably.

3.4.2 SECURITY REQUIREMENTS

Protecting user information is a top priority for Innovate Spaces. We implement robust security measures to safeguard your data. This includes encrypting all user data, enforcing strong password policies, and maintaining regular backups. Our website undergoes regular security scans and updates to address potential vulnerabilities. We are committed to responsible data practices and provide users with control over their information. This focus on security allows you to browse with confidence and focus on achieving your dream home.

3.4.3 SOFTWARE QUALITY ATTRIBUTES

- ➢ **Performance:** Fast loading times (ideally under 3 seconds) across various devices for a smooth user experience. High scalability to handle increasing user traffic and data volume as Innovate Spaces grows.
- ➢ **Usability:** Intuitive navigation, clean and visually appealing UI, and mobile responsiveness for optimal user experience across platforms. Accessibility compliance with WCAG guidelines to cater to users with disabilities.
- ➢ **Security:** Strong data encryption to protect user information, secure login procedures, and regular security updates to address potential vulnerabilities. User control over their data and adherence to relevant data privacy regulations.

- ➢ **Reliability:** High uptime with minimal downtime to ensure users can access services and information reliably. Regular backups and disaster recovery plan to minimize disruption in case of technical issues.

- ➢ **Maintainability:** Clean and well-documented codebase for easy maintenance and future enhancements. Modular design to allow for independent development and testing of website components.

3.4 System Specification

3.4.1 Hardware Specification

- ➢ Intel core i5 or later

- ➢ Operating system (Windows10 : Recommended)

3.4.2 Software Specification

- ➢ Intellij IDEA Communication

Technologies used

1. HTML

The foundation of web pages, HTML provides structure and content. It defines headings, paragraphs, images, and other elements using tags. Think of it as the skeleton of a building. Beyond the basics, HTML allows for creating interactive forms, embedding multimedia, and even building basic animations with the Canvas element.

2. CSS

CSS controls the visual presentation of a webpage. It dictates fonts, colors, layouts, and positioning of elements. Imagine it as the paint, furniture, and decorations of a building. Advanced CSS features include creating smooth animations and transitions, adapting layouts for different devices (responsive design), and utilizing advanced layout models like Flexbox and Grid for complex website structures. Optionally, preprocessors like SASS or LESS can enhance code maintainability.

3. **JavaScript**

JavaScript brings webpages to life by adding interactivity and dynamic behavior. It can respond to user actions, manipulate content, and create animations. Think of it as the electrical wiring and appliances that make a building functional. JavaScript can dynamically modify webpage content, fetch data from servers without reloading the page (AJAX), and respond to user interactions (clicks, scrolls). For larger projects, object-oriented programming principles and frameworks like React or Angular can streamline development and provide pre-built functionalities.

CHAPTER – 4

DESIGN

4.1 Software Requirement Specification

4.1.1 Glossary

HTTP - Hypertext Transfer Protocol

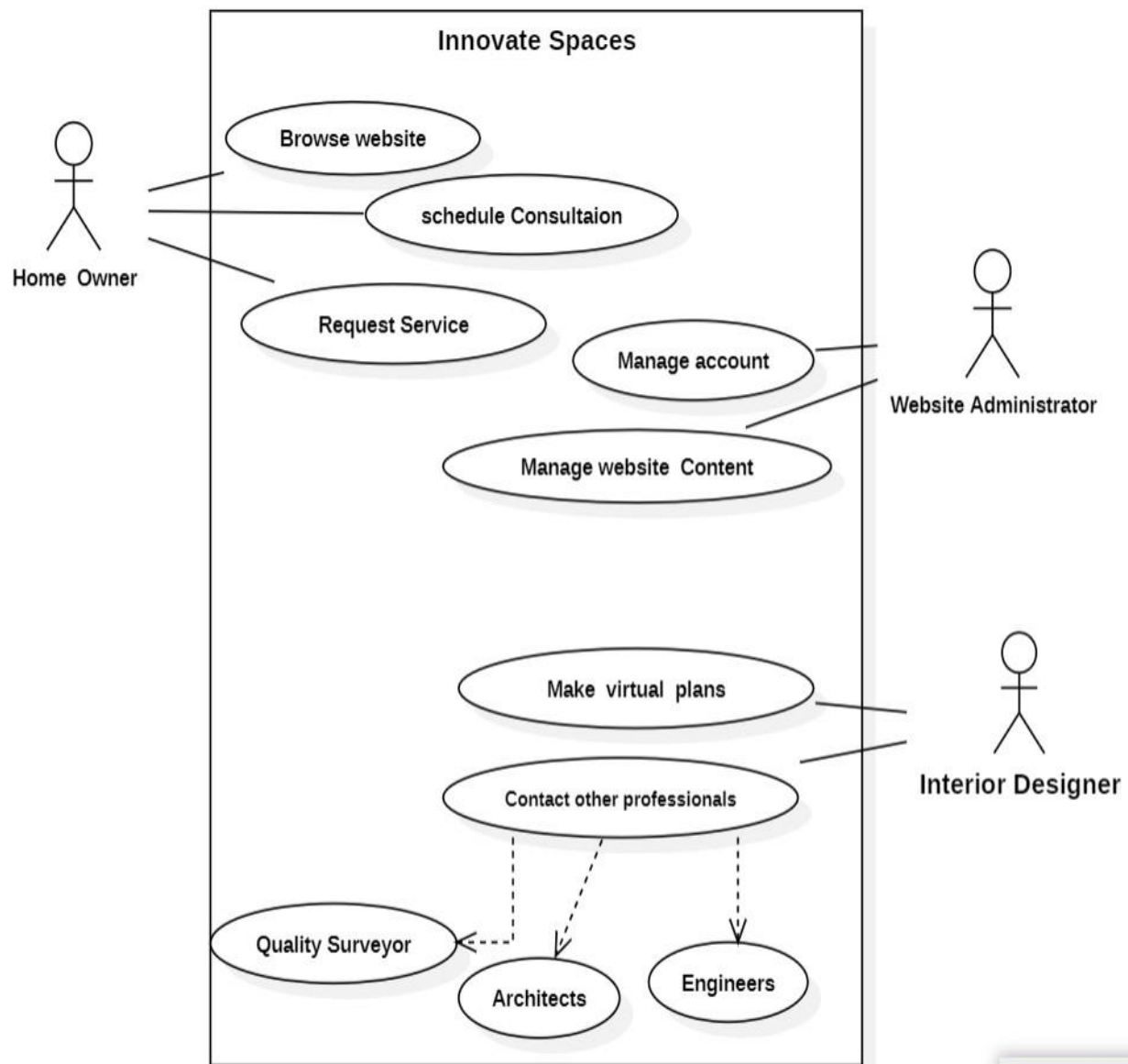*Authentication* - The process of identifying an individual, usually based on username and password

Server - Computer program that provides functionality to other programs such as clients

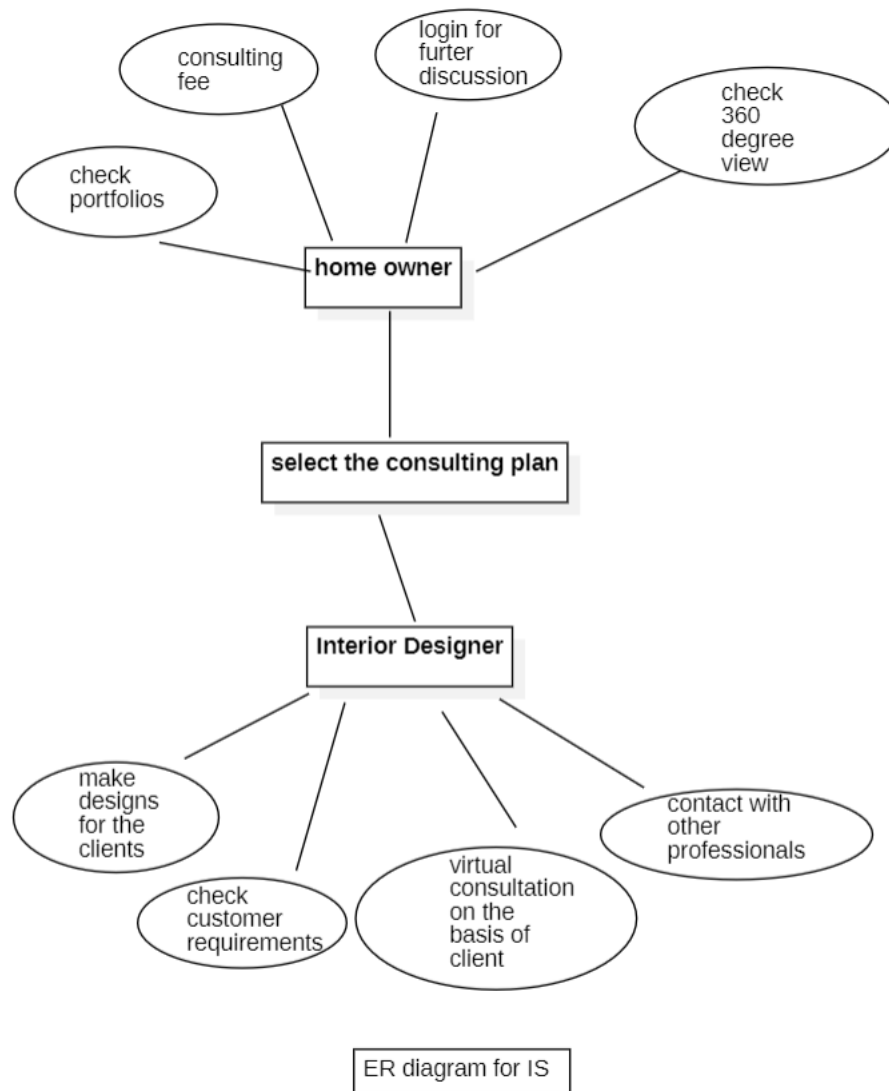*World Wide Web* - Combination of all resources and users on the Internet that are using HTTP.

Web-browser - Software application to access information on World Wide Web

Client – Computer web application, such as web-browser, that runs on a computer and connects to server as necessary Service Level Agreement (SLA) States agreed level of availability

4.1.2 Use Case

4.2 Database Design (ER-Diagram)

consulting fee

login for furter discussion

check 360 degree view

check portfolios

home owner

select the consulting plan

Interior Designer

make designs for the clients

check customer requirements

virtual consultation on the basis of client

contact with other professionals

ER diagram for IS

CHAPTER – 5

SYSTEM MODELING

5.1 Activity Diagram

Activity Diagram for IS
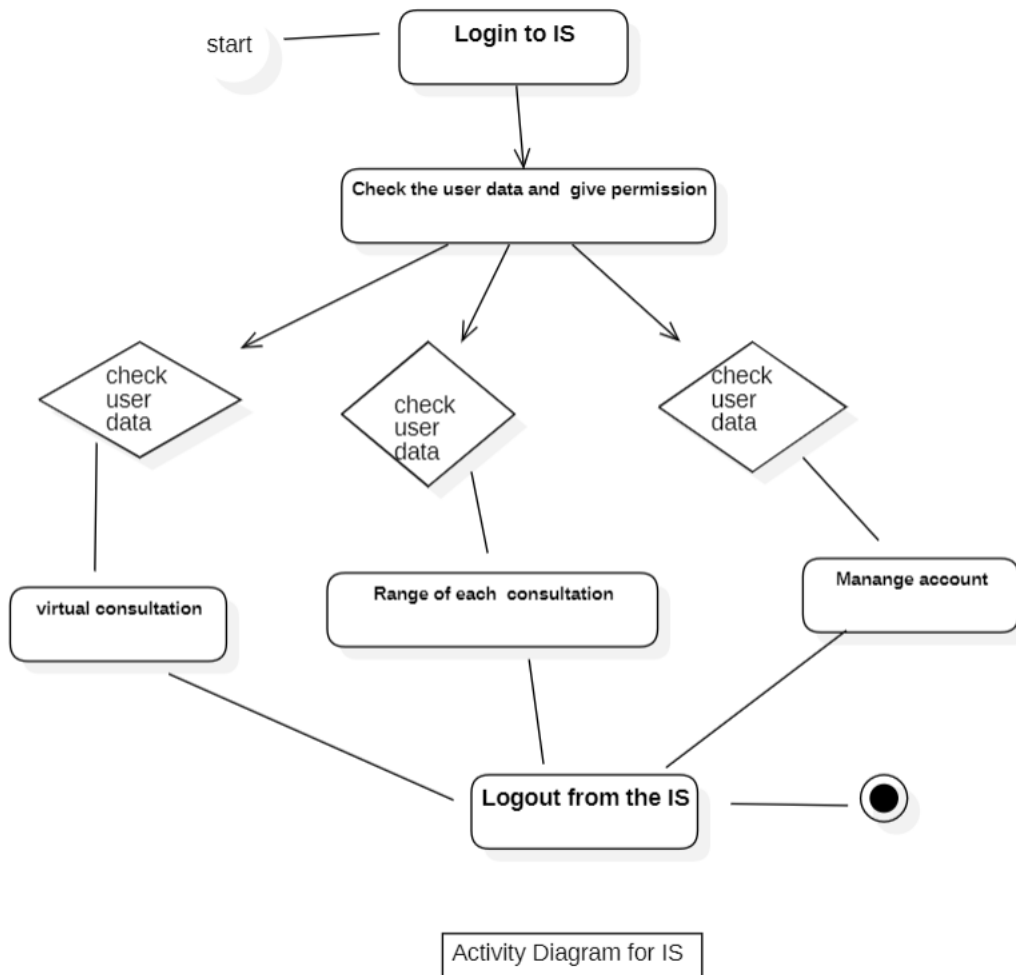
CHAPTER – 6

CONCLUSION & FUTURE WORK

6.1 Conclusion

➤ By carefully considering the requirements and functionalities outlined in this report, Innovate Spaces can establish a user-friendly and secure website that fosters a positive client experience and empowers users to achieve their dream homes. Regular review and updates based on user feedback and industry trends will ensure the website remains a valuable resource for interior design inspiration and project management.

6.2 Limitation of Project

➤ **Scalability of Design Services:** If Innovate Spaces experiences high demand for online consultations or design services, the website might need to adapt to manage increased user traffic and project requests. This could involve scaling server infrastructure or implementing appointment scheduling limitations.

➤ **Limited Remote Design Capabilities:** While the website can facilitate communication and initial design consultations, complex design projects might still require in-person visits for space measurements, material selection, and contractor coordination.

➤ **Project Management:** Managing remote design projects can be challenging. The website should have functionalities to streamline communication, document sharing, and project tracking for both designers and clients.

➤ **Competition:** The online interior design market is growing, and Innovate Spaces will face competition from established players and new entrants. A strong marketing strategy and focus on user experience will be crucial to stand out.

➤ **Accuracy of Project Information:** The quality of design recommendations and quotes generated through the website will depend heavily on the accuracy and detail of the information provided by users about their space and project goals. Incomplete or inaccurate information might lead to mismatched design suggestions.

6.3 Future Enhancement

➢ **Real-time Material and Furniture Customization:** Enable users to virtually experiment with different finishes, furniture styles, and layouts within the 3D visualizations in real-time. This would provide a more immersive design experience and allow for quicker decision-making.

➢ **AI-powered Design Recommendations:** Leverage machine learning to personalize design suggestions based on user preferences, project goals, and budget constraints. This could streamline the design process and provide more relevant recommendations.

➢ **Community Forum:** Create a dedicated forum where users can connect with other users, share design inspiration, and ask questions for peer-to-peer advice. This would foster a sense of community and engagement.

➢ **E-commerce Integration:** Partner with furniture and décor retailers to allow users to purchase recommended items directly through the website. This would streamline the design implementation process and potentially generate additional revenue streams.

CHAPTER – 7

BIBLIOGRAPHY & REFERENCES

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- ➢ Ember.js in Action,"Joachmin Haagen Skeie",2014.

- ➢ Cody Lindley, "Front-End Developer handbook", 2017.

- ➢ Vasan Subramanian,"Pro MERN Stack",2019.

7.2 Other Documentations & References

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- ➢ https://www.modsy.com/

- ➢ Geeksforgeeks.com

- ➢ https://www.w3schools.com/

CHAPTER-8
PROJECT SCREENSHOTS

Home Page:

Login   Sign-up

Transform Your Space. Create Your Dream Home

Rafting bespoke interiors that reflect your personal style and functional needs.

 Download   ▷ Download

functional needs.

 Download   ▷ Download

⊘ **Customized Design Consultations**

Ensures that every aspect of the design reflects the client's style and preferences.

🎓 **360-Degree Project Management**

Our comprehensive project management ensures a smooth and seamless design process.

⚲ **Sustainable and Eco-Friendly Designs**

We specialize in creating eco-friendly interior designs that are as beautiful as they are sustainable.

"Our new home reflects our personality perfectly, thanks to InnovateSpaces! They were attentive, creative, and incredibly professional throughout the entire process."

Smiths, New York

TechCrunch　　**Mashable**　　**BUSINESS INSIDER**　　**TNW** THE NEXT WEB

A Plan for Every Client's Needs

Simple and affordable price plans for you and your dream house

Design Starter	Design Pro	Design Elite
Rs 150/mo	Rs 300/mo	Rs 500/mo
1 virtual consultation	2 virtual consultations	4 virtual consultations
Personalized design mood board	Detailed design plan and 3D visualizations	Complete design project planning
Shopping list and layout suggestions	Project management tools access	Full 3D renderings and detailed room layouts
Sign up for free	Get started	Contact us

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Section	Section	Section
Home	Home	Home
Features	Features	Features
Pricing	Pricing	Pricing

Features:

Our Design Features

Space Planning

We optimize your space for functionality and flow, creating a comfortable and stylish environment.
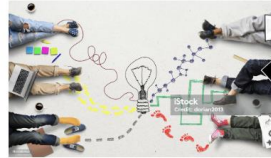

Interior Decoration

From furniture selection to color palettes, we curate a cohesive and personalized look for your space.

Custom Design

We bring your vision to life with unique furniture pieces, finishes, and artwork for a truly bespoke experience.

Sustainable Solutions

We incorporate eco-friendly materials and practices to create a healthy and sustainable living environment.

How It Runs

How InnovateSpaces Runs

How Our Seamless Design Process Works

Home Features How It Runs Contact

1. Initial Consultation

We discuss your vision, needs, and budget for your space. We'll also get a feel for your style preferences.

2. Space Planning & Design

We create detailed floor plans, mood boards, and 3D renderings to visualize your dream space.

3. Material Selection & Procurement

We source high-quality furniture, finishes, and decor that fit your style and budget.

4. Project Management & Installation

We manage all aspects of the project, from vendor coordination to installation, ensuring a smooth process.

We discuss your vision, needs, and budget for your space. We'll also get a feel for your style preferences.

We create detailed floor plans, mood boards, and 3D renderings to visualize your dream space.

We source high-quality furniture, finishes, and decor that fit your style and budget.

We manage all aspects of the project, from vendor coordination to installation, ensuring a smooth process.

Why Choose Our Design Process?

- Collaborative & Transparent
- Efficient & Timely Execution
- Personalized Design Solutions
- Budget-Conscious Approach

Ready to transform your space?   Contact us today for a free consultation!

© InnovateSpaces - 1999

Contact Us:

Contact US!

Let's Discuss Your Dream Space

Your Name: [   ]   Your Email: [   ]   Submit

Contact Information   Phone: 982714176   Email: InnovateSpaces@gmail.com   Address: ABC complex (Optional)