Software Requirements Specification
Version 1.0

Theme: Home Interiors
Project Name: DecorVista
Category: Web Application Development

Table of Contents

1.1 Background and Necessity for the Web Application

The home interior design industry has seen significant growth with an increasing number of homeowners seeking professional guidance to beautify their living spaces. Traditional methods of interior design involve face-to-face consultations and physical portfolios which can be time-consuming and limited in reach. As technology advances, there is a growing demand for digital platforms that can offer comprehensive interior design services online.

1.2 Proposed Solution

The proposed solution titled DecorVista is a comprehensive home interior design Web application that offers a wide range of features to cater to both homeowners and professional interior designers. The Web application will provide access to a vast product catalog, inspiration galleries, and options for professional consultations.

1.3 Purpose of the Document

The purpose of this document is to outline the requirements for the development of the home interior design Web application. This document will serve as a guide for the development team, ensuring that all stakeholders have a clear understanding of the project's objectives and functionalities.

This document explains the purpose and features of the Web application, its interfaces, what the Web application will do, and the constraints under which it must operate. This document is intended for both stakeholders and developers of the Web application.

1.4 Scope of the Project

DecorVista will be a responsive and visually appealing Web application to be used by individuals via modern browsers on both desktop and mobile devices.
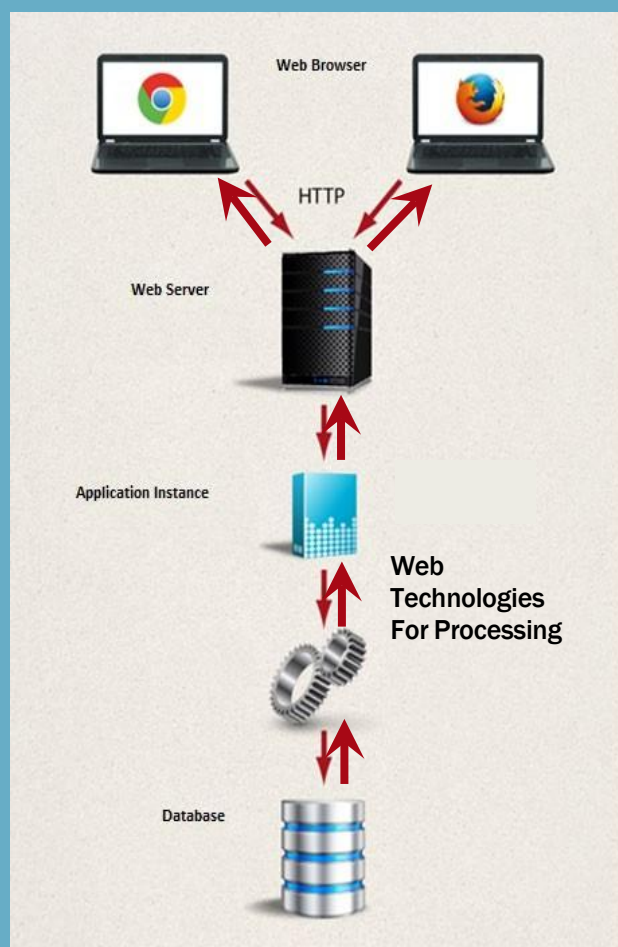
Users can browse through various designer profiles, product catalog for various decor products, price, and so on. They can search for specific products, add them to the cart, modify cart items if required, and check the total amount they are expected to pay. However, payment and delivery functionality are beyond the scope of this project.

Professional interior designers can also use this Web application to stay updated on trends, purchase products, and gather inspiration. This application can facilitate client engagement, support professional networking and offer portfolio showcasing to attract potential clients.
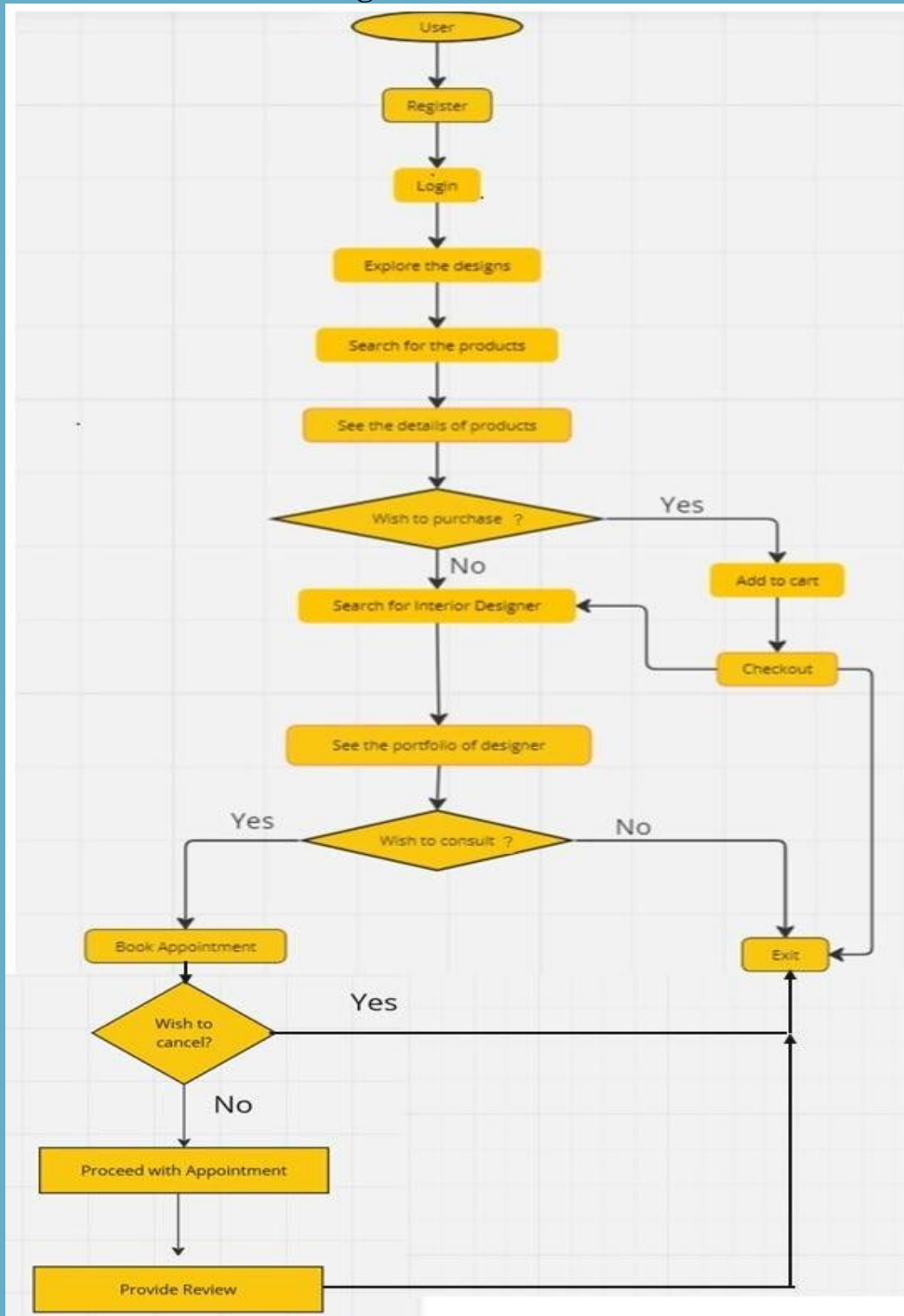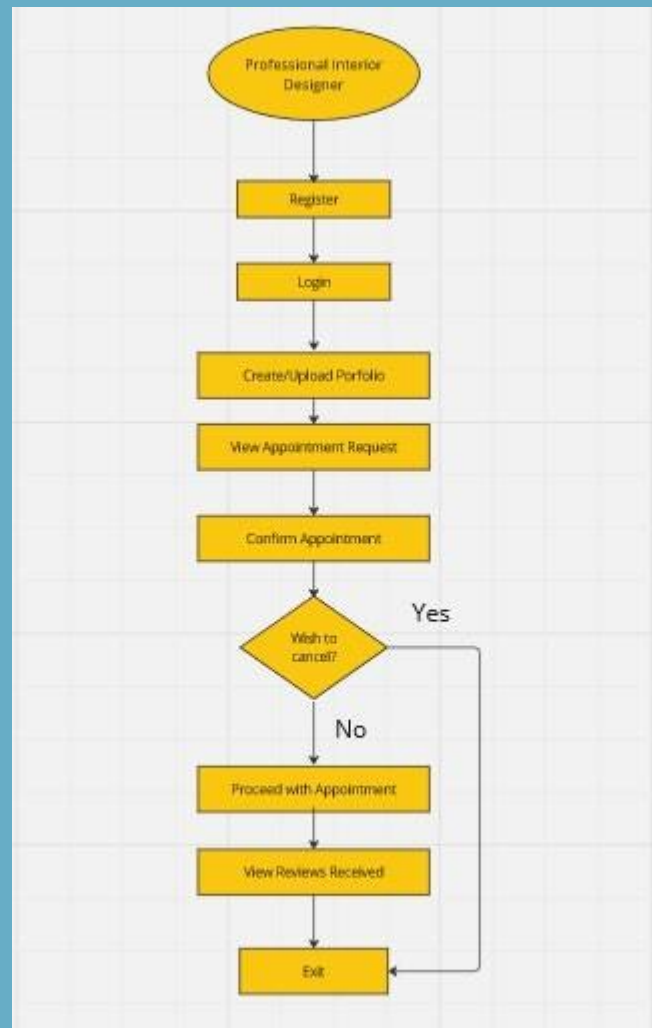
Architecture Diagram

Flow Diagrams

A few sample flow diagrams are depicted here.

Flow diagram for a homeowner:

Flow diagram for a professional interior designer:

1.5 Constraints

The **DecorVista** Web application must adhere to several constraints to ensure its successful implementation and operation. The Web application must be compatible with major Web browsers, including Chrome, Firefox, Safari, and Edge ensuring a consistent experience across different platforms. The Web application must be fully responsive, providing a seamless user experience on both desktop and mobile devices. It should have fast load times and handle high traffic efficiently with real-time features such as the virtual designs performing without significant lag.

1.6 Functional Requirements

Following list explains major features expected from this Web application:

For Users:

1. **User Registration and Login Authentication:** The registration feature will allow users to create new accounts. It will enable new users to register themselves. At the time of registration, users must provide details such as Name, Email ID, Contact Number, and Username and then configure their password.

   Appropriate error-checking must be done on the fields of the form to ensure correct data. For example, email id can be checked to see if it is of appropriate format. (Hint: Use client-side validation).

2. **Inspiration Gallery:** The Web application should display high-quality images of interior designs.

   The application should categorize images by room type, Theme/style, and Color scheme.

   Subcategories could include:

   ➢ Living Rooms
   ➢ Bedrooms
   ➢ Kitchens
   ➢ Bathrooms
   ➢ Offices
   ➢ Outdoor Spaces

   Users should be able to save favorite images to their profiles.

3. **User Dashboard:**
   Under this option, the application can have:

   - **Design Management:** Users can view, edit, and manage their saved designs.
   - **Activity Overview:** Overview of user's recent activities, saved items, and upcoming consultations.
   - **Notifications:** Alerts for new design inspirations, product updates, and Consultation reminders.

4. **Product Catalog:** Menus/Features under this option can include:
   - **Integrated Product Listings:** A catalog of furniture, decor items, and materials from various brands and retailers.

Subcategories could include:

> ➢ Furniture
> ➢ Lighting
> ➢ Decor
> ➢ Rugs and Carpets
> ➢ Wall Art
> ➢ Curtains and Blinds

- **Search and Filter:** Advanced search functionality and filters to find products by category, brand, price, style, and so on.
- **Product Details:** Detailed information about each product including dimensions, materials, and price.
- **Product Selection, Purchase, and Cart Management:** These options will enable users to select products, add them to the cart, delete them from the cart if required, and proceed to checkout (if applicable). Actual payment and delivery features will be beyond the scope of the application.
- **Third Party Purchase Links:** Direct links to purchase products from partner Websites.

5. **Professional Consultation:**

This feature is applicable only to homeowners.

Menus/Features under this option can include:
- **Booking System**: Users can book consultations with professional interior designers.
- **View Designer Profiles**: Users can view profiles of available designers with their portfolios and reviews.
- **View Scheduling**: Users can view available time slots and schedule appointments.
- **Add Consultation Reviews**: Users can provide reviews for the consultations they receive.

6. **User Reviews:**
Under this option:
- Users should be able to provide reviews for products and designers as well based on their consultation.

7. Admin Features and Functionality:
Under this option:

- Admins should be able to manage user accounts including modifying or deleting accounts.
- Admins should be able to add, edit, and delete content in the inspiration gallery.
- Admins should be able to   generate reports on user activity and site performance.

8. Blog:
- Articles and posts related to interior design trends, tips, and Do It Yourself (DIY) ideas can be displayed here. These can be managed by the Admin.

9. My Account:
- User profile management.
- Subcategories could include:
  o Profile settings
  o My designs
  o Saved items
  o My consultations
  o Order History

For Professional Designers:
Menus/Features can include:

1. Registration and Profile Setup:
Interior designers can sign up using their professional email address, create a comprehensive profile by filling out their personal and professional information, upload images and descriptions of past projects to their portfolio, and set their availability for client consultations by defining available time slots.

2. Managing Consultations:
Designers set their available time slots for consultations. Clients can view these slots and book appointments directly through the Web application.

Professional interior designers can also cancel appointments that they are unable to fulfill.

3. Interacting with Clients:
The designer receives a booking notification and reviews the client's initial project brief.

4. **Receiving Reviews**:
   The client provides a review on the designer's profile. The designer can respond to the review and use the feedback to improve their services.

   By providing these features and functionalities, the **DecorVista** Web application will enable interior designers to effectively manage their services, engage with clients, and showcase their work ultimately enhancing their professional visibility and client satisfaction.

Common Features to both types of users:
About Us and **Contact Us** pages should be part of the Web application. Implement GPS/Geolocation functionality if applicable.

Example of Homeowner Journey on the Web application:

- **Registration**: A user visits the Web application and signs up using their email address.
- **Login**: A user who has registered earlier visits the Web application and logs in.
- **Exploring Designs**: The user browses the inspiration gallery to get ideas for their living room makeover.
- **Shopping for Products**: The user explores the product catalog to find a sofa and a coffee table they like and then, clicks the links to purchase them from the partner Websites.
- **Booking a Consultation**: The user books a consultation with a professional designer to get expert advice if and when required.
- **Saving Designs**: After finalizing their design, the user saves it to their profile.
- **Adding a Review**: After the consultation, user adds a review (feedback) for the designer based on their experience.

Example of an Interior Designer Journey on the Web application:

- **Registration and Profile Setup**: An interior designer visits the Web application and signs up using their professional email address. They create a profile by filling out their information and uploading their portfolio.
- **Login:** A designer who has registered earlier visits the Web application and logs in.
- **Managing Consultations**: The designer sets their available time slots for consultations. Clients can view these slots and book appointments directly through the Web application.
- **Receiving Reviews**: Once the project is completed, the client provides a review on the designer's profile. The designer can respond to the review and use the feedback to improve their services.

1.7 Non-Functional Requirements

There are several non-functional requirements that should be fulfilled by the application. These include:

- **Safe to use**: The application should not result in any malicious downloads or unnecessary file downloads.
- **Accessibility**: The application should have clear and legible fonts, user-interface elements, and navigation elements.
- **User-friendliness**: The application should be easy to navigate with clear menus and other elements and easy to understand.
- **Operability**: The application should be reliable and efficient.
- **Performance**: The application should demonstrate high value of performance through speed and throughput. In simple terms, the application should have minimal load time and smooth page redirection.
- **Scalability**: The application architecture and infrastructure should be designed to handle increasing user traffic, data storage, and feature expansions.
- **Security**: The application should implement adequate security measures such as authentication. For example, only registered users can access certain features.
- **Availability**: The application should be available 24/7 with minimum downtime.
- **Compatibility**: The application should be compatible with latest browsers and various devices.

These are the bare minimum expectations from the project. It is a must to implement the FUNCTIONAL and NON-FUNCTIONAL requirements given in this SRS. Once they are complete, you can use your own creativity and imagination to add more features if required.

1.8 Interface Requirements

1.8.1 Hardware

Intel Core i5/i7 Processor or higher
8 GB RAM or higher
Color SVGA
500 GB Hard Disk space
Mouse
Keyboard

1.8.2 Software

Technologies to be used:

- IDE: Appropriate IDE as per the platform

- Frontend:

HTML5, CSS3, Bootstrap (optional), JavaScript, Figma Toolkit, jQuery, AngularJS/Angular 9 or higher/ReactJS 18 or higher, and XML

- Backend:

Java 16 or higher, Java EE 7 or higher/Jakarta EE 9 or higher, with Apache NetBeans IDE/Eclipse latest version, Apache Tomcat 10.0 or higher, Glassfish 6.0 or higher, and related libraries

OR

C# 7.2 with ASP.NET MVC and ASP.NET MVC Core (optional), Visual Studio 2019 or higher

OR

PHP 7.0 or higher with Apache Web Server and Laravel Framework Homestead (optional)

OR

Python 3.0 or higher with PyCharm IDE, Django/Flask framework

For local hosting (optional):
XAMPP latest version

- Database:

MySQL 8.0 or higher/SQL Server 2019 or higher

Database Design

Data Dictionary: Users, UserDetails, InteriorDesigner, Products, Consultations, Reviews, Categories, and so on

Based on the given specifications, you will define suitable entities, attributes for these entities, and identify relationships between the entities.

For example, some entities along with their attributes can be identified as follows:

Users
user_id (primary key)
username
email
password

UserDetails
userdetails_id (primary key)
user_id (foreign key)
role
firstname
lastname
contactnumber
address

InteriorDesigner
designer_id (primary key)
firstname
lastname
contactnumber
address
yearsofexperience
specialization
portfolio

Products
product_id (primary key)
productname
category
brand
price
description
image

Consultations
consultation_id (primary key)
user_id (foreign key)
designer_id (foreign key)
scheduled_datetime
status
notes

Categories
category_id (primary key)
categoryname

Reviews
review_id (primary key)
user_id (foreign key)
product_id (foreign key)
designer_id (foreign key)
comment

ProductCategories
productcategory_id (primary key)
product_id (foreign key)
category_id (foreign key)
description

Relationships:

- Users to Designs: One-to-Many (One user can create multiple designs)

- Users to Consultations: One-to-Many (One user can book multiple consultations)

- Users to Reviews: One-to-Many (One user can provide multiple reviews)

- Products to Reviews: One-to-Many (One product can have multiple reviews)

- Designers to Reviews: One-to-Many (One designer can have multiple reviews)

- Products to Categories: Many-to-Many (Multiple products can belong to multiple categories)

Similarly, you can define other entities, relationships between entities, and methods representing activities on the entities.

Note: These are just examples; you do not have to adhere to these structures and can design your own table structure with more or less columns.

1.9 Project Deliverables

You will design and build the project and submit it along with a complete documentation that includes:

- Problem Definition
- Design Specifications
- Diagrams such as Flowcharts for various Activities, Data Flow Diagrams, and so on
- Database Design
- Test Data Used in the Project
- Project Installation Instructions (if any)
- **User Credentials for all Types of Users with Passwords**

Documentation is considered as a very important part of the project. Ensure that documentation is complete and comprehensive. However, do not include full source code inside the documentation.

The consolidated project must be submitted as a zip file with a ReadMe.doc file listing assumptions (if any) made at your end and SQL scripts files (.sql) containing database and table definitions.

Note: Preferably, host the working Web application on a Website and share the URL for evaluation.

Submit a video (.mp4 file) demonstrating the working of the Web application, including all the functionalities of the project. This is MANDATORY.

Sitemap: To help users understand the flow of the Web application, you will create a Sitemap and add it to the home page of your Web application.

Over and above the given specifications, you can apply your creativity and logic to improve the application.

~~~ End of Document ~~~