Feasibility Study

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The Interior House

An Online Marketplace for Interior Design Products

1. Vibha Puthran (01FB16ECS441)
2. Vishal S Rao (01FB16ECS450)
3. Vishnu V Singh (01FB16ECS451)
4. Aditya Lokesh (01FB16ECS461)
5. Ayushi S Mehta (01FB16ECS465)
6. Parul Tebriwal (01FB16ECS475)
7. Sanjana U (01FB16ECS478)

Document Owner

Name: Vishal S Rao

SRN: 01FB16ECS450

Project Name: Interior Marketplace

Email: vish.xsport@gmail.com

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Problem Statement

Online marketplaces provide an easy method for interested customers to buy/sell products online without the hassles of visiting a store/showroom. The operator of the marketplace does not own any inventory, their role is to present other people's inventory to a user and facilitate a transaction. Consumers don't like using apps from single retailers. They are much more likely to use applications that offer product ranges broader than one store can offer.

The Interior House is an Online Marketplace but its uniqueness lies in the domain of products that it targets. The Interior House is the first-of-its-kind marketplace for Interior Products. This web application conglomerates all the various offline and online interior companies into one place where Customers and Architects can easily find their requirements and have a simpler and faster shopping experience.

Stakeholders

End Users

- **Buyers**

  The main aim of this application is to help various buyers find Interior Products for the best price and quality without the hassle of visiting multiple offline stores. The buyers have to sign up with the website before they can place an order, after doing so, each buyer will get their own shopping cart and payment checkout system so that they can seamlessly transition from finding a product to purchasing it.

- **Sellers**

  This application also aims to provide sellers with a quick and easy way to connect with buyers across the world. Generally the customer-base of a particular store/shop is restricted to the people in and around their store. This application also helps the sellers to broaden their customer base and will help raise revenue significantly. It will also make the process of selling much easier. It also has the added benefit of maintaining a systematic record of all the products sold, which would otherwise have to be maintained manually.

Support Team

- **System Administrator**

  The person responsible for making sure the application is live and the different Stakeholders are able to use the application in the exact way that it is meant to be used. The system administrator is also responsible for deploying new versions of the application and is also responsible for the overall maintenance of the application.

- **Database Managers**

  The people responsible for maintaining the database and keeping the database up to date. The database needs to be created and updated so that the sellers, buyers and administrators are able to track products and transactions.

- **Legal Team**

  They make sure that the content/images/algorithms used in the creation of the web application is not plagiarized. It is their responsibility to inform the developers regarding any legal infringements in the application.

- **Customer Support**

  A range of customer services that assist the customers in solving problems related to their orders like transactions, refunds, returns or any other queries. This helps build good relationships with the customers.

Scope:

The marketplace is designed for both buyers and sellers.

Sellers should be able to -

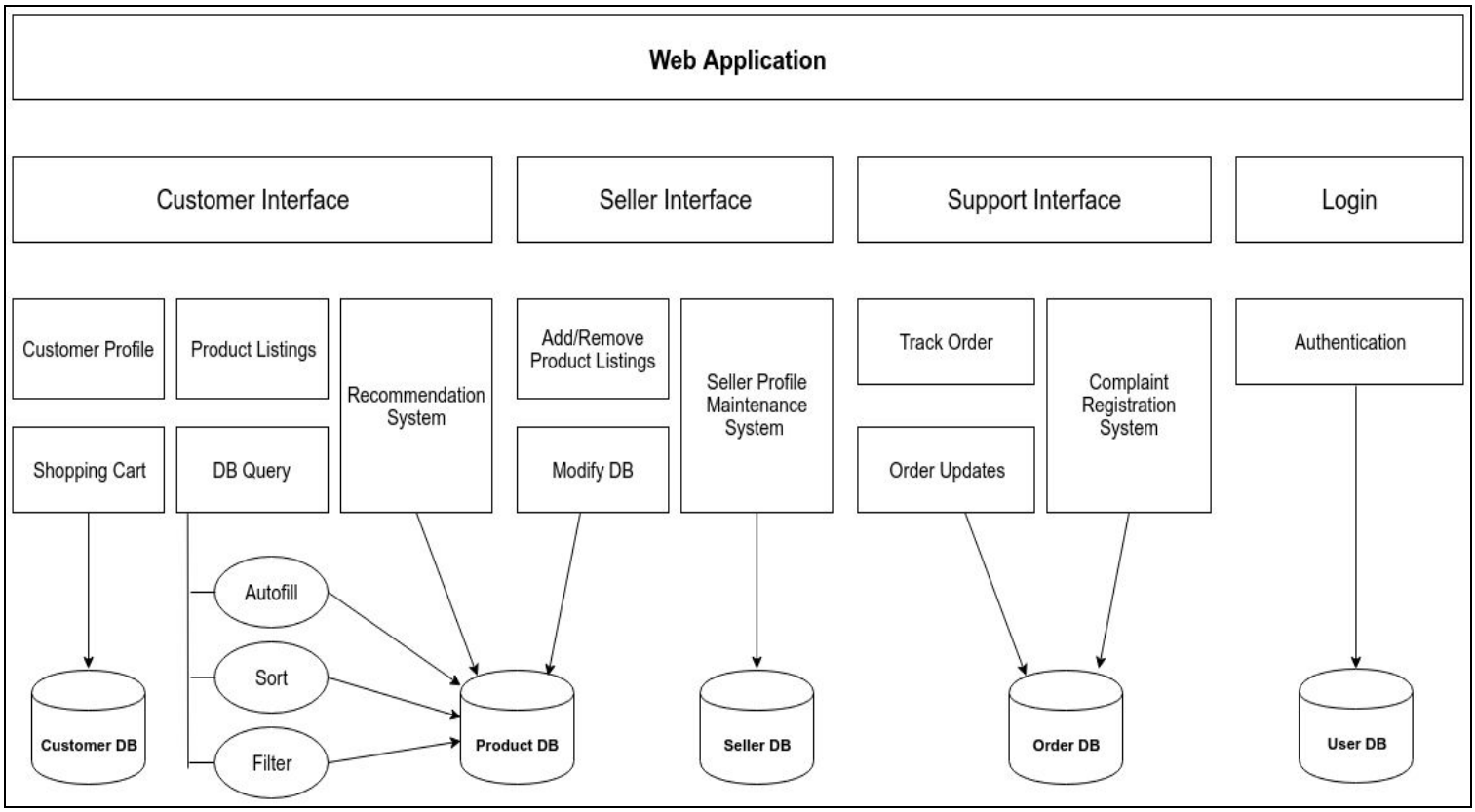
1. Add their listing on the platform.
2. Modify their listing.
3. Remove product listings.
4. Change the price of their listing.
5. Create coupons for various discounts.
6. Keep in touch with their customers via chat to help track their orders and answer any queries which will, in turn, build a strong customer relationship.

Buyers should be able to -

1. Browse through the entire website.
2. Customise their search using filters such as categories, price range etc.
3. Add products they are interested in to their wishlist or cart.
4. Chat with the sellers for further information.
5. Track their orders.
6. Add their feedback & rate the product.

A seamless payment experience will take place between the buyer and the seller via the platform using third party servers.

High Level Block Diagram:



Potential Benefits:

The online marketplace has the following benefits over a retail store outlet:

- It is a one-stop destination for all interior design products sold by multiple sellers. Hence it provides an opportunity for the sellers, as they do not need to invest in creating a separate online application for their sales, managing it or any other extra costs associated with the online application. They can rely on the marketplace for their sales.

- Reaching a broader customer segment since a customer would prefer to use one online marketplace, rather than ten different websites for each retail store.

- Better comparison with products across various sellers, and hence the customers have a wide variety of options to choose from, depending on their needs.

- The billing and all the financial transactions are managed by well trusted, secure third party platform and hence the sellers and buyers need not worry about it.

- The small time sellers do not have to spend money on brand awareness and marketing and hence it cuts off such unnecessary costs.

Project Plan:

1. Deliverables of the Project

An interior marketplace web application, deployed on the cloud, built for both buyers and sellers and will have all the functionalities mentioned in the Feasibility Report.

2. Process Model which you intend to follow

Agile Model - specifically the Scrum approach

3. Resources needed for the project/product

- Local Machines (Windows/Linux OS/Mac OS)
- A Cloud Server
- Internet Connection
- Database of Interior Design Products

4. How are you organizing your team in the project

We intend to divide the team such that each division will get to work on a microservice. This will be into effect once the project design is complete. And all the team members follow the suggested design for the full stack implementation

5. Standards-Guidelines-Procedures

1. We are following the REST oriented architecture for building the application which is standard for building web apps.
2. Using proper naming convention while coding for the project so that it becomes easier to understand the code base and debug.
3. To use Version Control System like Git for maintaining the code base. But for updates, we would still need to compromise on the availability.

6. Communication Mechanism

We will have daily scrum meetings and we will have weekly sprints, therefore at the end of each week we will hold sprint retrospectives and at the beginning of each week we will have sprint planning meetings. All our meetings will be in-person meetings.

7. Risks

Since we are a small team and aren't taking into consideration scalability, it might fail if it gets too popular.

8. Quality Criteria

There are various factors which we plan to consider as quality criteria :

1. Web app giving response to the query given by the user.
2. System being able to handle multiple requests if there is an increase in load
3. Customer satisfaction with the app (Based on the the customer response/review)
4. Web app being able to work on various platforms.

9. Delivery means

Delivery here means hosting the web app of Interior Design Marketplace on local servers and cloud. The app can be accessed by existing users and new users can sign up for the app.

Project Organization

The development of project will require an iterative model with continuous phases of development followed by phase-by-phase testing, with a window to accept new requirements, if any are required.

- ➔ Requirement manager and analyser

  Responsible for eliciting all requirements, and verifying that software developed is aligned with the requirements specified initially.

- ➔ Project Manager/Lead

  Oversee all aspects of the project including backend and frontend development.

- ➔ Developers

  - ◆ Back-End Developers

  Responsible for setting up and maintaining the database, and managing all code for communication between the front end and the database.

  - ◆ Front-End Developers

  Responsible for developing the user interface for the product.

  - ◆ Software Developers

  Responsible for developing all the back-end algorithms (like Recommendation Systems etc.) for the web app.

- ➔ Tester

  Responsible for stress-testing the product and identifying any bugs/faults in the product development phases.

Risk Analysis

The possible risks that may be faced during the course of the project:

1) Requirement Risks
    - Any mid-project requirement changes would result in a time-consuming process for accounting for these changes. Possibly a complete back-end rework.

2) Technology Risks
    - An inefficient database would lead to major problems in connecting the front end and the back end.
    - Inefficient/Heavy code would result in the slowdown of the site, thus resulting in customer dissatisfaction.