

**II Trimester MCA  Software Project Development Proposal**

**Department of Computer Science**

**Peer for Peer Marketing**

**By**

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**Table of Contents**

|  |  |  |
| --- | --- | --- |
| **Sl no.** | **Title** | **Page Number** |
| **1.** | **Introduction** | **1** |
|  |  |  |
|  |  |  |
|  |  |  |

**Introduction**

Peer-to-peer Marketing is a platform which offers people to test out their creativity products on markets to ensure their products provide a value to the society or customers. We create a Blog System and E-commerce Platform where a seller can showcase their creative-side they have built through the blog system at zero cost or they can put into our e-commerce website at a very minimal cost.

The project is viable if we have been able to attract a huge set of customers and provide them value and independence on putting a price to a product they want to sell.

Novelty of the projects lies in the blend of marketing own-made products with low-cost e-commerce options, potentially making it appealing creators who are just starting and cannot invest in larger platforms.

Its relevance lies in niche markets interested in supporting independent or creative products, providing them with easy access to a variety of new and creative items.

**Alignment With SDG Goals**

**SDG 8: Decent Work and Economic Growth**

This project will provide or motivate individuals to start their own side work with their own creativity, bringing a blog platform allows people to show-off their creativity where people who value it and finds efficiency in it will choose to purchase it and seller can sell it based on the price they want to.

The e-commerce platforms allow them to sell their products which has a demand for it, without providing the need or time to negotiate on it.

**Proposed System**

**Backend Development (Node.js & Express)**

1. **Build up the Database Schemas**
2. User.js (User Schema)
3. Product.js (Product Schema)
4. Order.js (Order Schema)
5. **Controllers**
6. UserController.js
7. ProductController.js
8. **Routes**
9. UserRoute.js
10. ProductController.js

Entry Point: server.js

1. **User Authentication**
   * Use the User Schema with MongoDb
   * Implement JWT-based authentication for login and registration in userController.js

* Use bycrypt.js for password hashing

1. **Product Listing**

* Use the Product model where sellers can post their Creations

1. **Request Postings**

* Add a feature for buyers to post requests in the Request model (similar to Product)

1. **Real-time Chat (Socket.io)** 
   * Implement Socket.io for real-time negotiations between buyers and sellers
   * Set up a chat model and integrate it in the server.
2. **Blog Posting** 
   * User can share new products they create
   * User can share their experience with new products they have bought
3. **Order Management**
   * Track orders, payments and delivery status with the Order Model.
   * Use payments APIs

**Front-End Development**

1. **Partial Files (View/ Partials )**
2. **navbar.ejs**: Navigation bar that would be included across multiple views.
3. **auth.ejs**: Contains the Login and Register forms.
4. **productList.ejs:** Displays a list of products.
5. **productCard.ejs:** Represents each product in productList.ejs.
6. **createProduct.ejs**: Form for sellers to create a new product.
7. **requestForm.ejs**: Form for buyers to make a product request.
8. **chat.ejs**: Contains chat UI integrated with Socket.io.
9. **blog**.**ejs:** Contains all the blogs posts and liked blogs.
10. **Main Views**
11. **Home.ejs: home page view, use navbar.ejs and could include a summary of popular products**
12. **buyerDashboard.ejs : Dashboard view for buyers with components lke productList.ejs and requestFrom.ejs**
13. **sellerDashboard.ejs : Dashboard view for sellers with components like productList.ejs and createProduct.ejs**
14. **bloggerDashboard.ejs: Dashboard view for blog post with components like blogpost and likedBlogPost**

**Hardware Requirements**

1. **Server Specifcations**

**CPU:**

* **Minimum: 2 cores**
* **Recommended : 4+ cores for handling more simultaneous users**

**RAM:**

* **Minimum: 4 GB**
* **Recommended: 8 GB or more for medium to high traffic**

**Storage:**

* **Minimum: 100 GB SSD**
* **Recommended: 256 GB SSD or more, depending on size of the database and media files.**

**Network:**

**Minimum: 100 Mbps bandwidth**

**Recommended: 1Gbps for handling larger traffic volumes and faster content delivery**

**Backup Solution:**

* **Cloud Storage for Regular Backups of Database and content**

1. **User Specifications**

**Desktop/Laptop:**

* **Minimum: Dual-core processor, 4 GB RAM, and a modern web browser (Chrome, Firefox, Edge).**

* **Recommended: Quad-core processor, 8 GB RAM, and an up-to-date browser for better performance**

**Mobile Devices:**

* **Compatible with iOS and Android operating systems (latest versions recommended).**
* **Minimum: 2 GB RAM and up-to-date browser for a smooth experience.**

**Feasibility Analysis**

1. **Development Time**
   1. Estimated Duration 3-6 months, depending on team size and expertise
   2. Includes time for design, coding, testing and debugging
2. **Economic Feasibility:**
   1. **Cost Estimates**
      1. Infrastructures Costs: Server and cloud storage costs
      2. Backup Solutions
   2. **Revenue Model**
      1. Ad Models
      2. Revenue from seller fees for product listings, advertisements and affiliate marketings.
3. **Schedule Feasibility:**
   1. **Project Timeline:**
      1. Planning Phase: 1 month for requirements gathering and project and planning
      2. Development Phase: 2-4 Months for frontend and backend development
      3. Testing Phase: 1 month for testing
4. **Risk Feasibility** 
   1. **Technical Risks:**
      1. Security Risks related to user data management and payment processing

Benefits of Proposed Systems

Goals and Objectives**:**

1. **Encouraging People to start a side hustle.**
2. **Providing a platform of variety of products where people will find efficiency and save cost on product they spend most to solve problems and enhance their status level**
3. **Encouraging people to use their creativity into solving real life problems.**