**COMSATS University Islamabad,   
Abbottabad Campus**

**Project Proposal   
(SCOPE DOCUMENT)**

**for**

**TheTechNest**

***By***

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**SCOPE DOCUMENT REVSION HISTORY**

**Supervisor Signature**

**Date:**

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**Project Category: (**Select all the major domains of proposed project**)**

* **A-**Desktop Application/Information System **B-**Web Application/Web Application based Information System **C-** Problem Solving and Artificial Intelligence ** D-**Simulation and Modeling ** E-** Smartphone Application ** F-** Smartphone Game ** G-** Networks ** H-** Image Processing****Other (specify category) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Abstract**  
Our e-commerce project is all about changing how people buy and use tech products. We want to make online shopping easy. Our website will have a wide variety of cool gadgets, electronics, and tech accessories. We aim to meet the needs of tech fans, professionals, and regular shoppers by offering a carefully chosen range of products from top brands.

We believe in helping our customers make smart buying choices. So, not only we will offer a lot of great tech products, but we’ll also provide detailed product information, expert reviews, and a website that’s easy to use.

**Introduction**

Welcome to our e-commerce website, our platform is a place for the latest in technology, gadgets, and electronics. In a world driven by innovation, we're here to simplify our users tech shopping experience. Our platform is designed to make finding and purchasing the latest tech products easy and accessible. Whether our user is a tech enthusiast, a professional, or someone seeking the newest gadgets.

**Background:**

In today's world, technology is a big part of our lives, and we all want the latest gadgets. But here's the challenge: finding a good and easy place to buy them online can be tough. That's where we come in.

Our idea is simple: we want to create a website where our users can buy the newest tech stuff easily.

Our main idea is to make this website really easy for user to use. Our user can check out all the details about the products user is interested in. But that's not all we also want you to be a part of our tech community. Our user can share thoughts and reviews, which will help others make smart choices too. It's like tech enthusiasts coming together to help each other out.

As technology keeps changing our world, we want to make sure we have a place where tech shopping is simple and trustworthy.

**Problem Statement**

The project we are making address several problems that are currently present in the E-commerce

Industry. There are very few or almost no platform that are focused on technology products users

will have to search a lot for different products but we will provide everything in one place even if

there are some platforms but they don’t provide the products of all the categories.

Secondly some of the commerce platforms lack in providing a user-friendly interface with less

product information additionally some of the website don’t offer to directly interact with the seller.

**Problem Solution for Proposed System**

Our proposed system will be focused on providing everything related to technology under one shed. we will provide all the technology product and will divide them in categories to improve user experience. In our platform we will provide in depth specs of the products so that user don’t need to go to on other sites to know the in depth specs. we will be working on improving user experience by proving user an interactive interface that is easy to use and understand. Additionally we will provide different payment methods like Master card, Visa, Jazzcash, Easypaisa, Stripe and many other

**Related System Analysis/Literature Review**

**Table 1 Related System Analysis with proposed project solution**

|  |  |  |
| --- | --- | --- |
| **Website name** | **Weakness** | **Proposed Project Solution** |
| https://saamaan.pk/checkouts | Limited number of payment methods as well as we can’t directly chat with seller | In our system we will be adding multiple number of payment methods and we will provide the functionality to chat with seller directly |
| AtAlfa.pk | Don’t have any payment method and proper checkout process | Our system will provide smooth checkout process and will also have different payment methods |
| Daraz.pk | Not focused on technology products, a lot of fake sellers | Our system will be focused on tech products only |
| https://www.goto.com.pk/ | Very slow in loading the product images, only 2 options of payment, and very little product information | Our proposed system will be fast, and will provide more than 4 payment methods |
| Telemart.pk | Provide very little information about the product and don’t provide much payment options and not focused toward tech products | Our system will provide detail information about the product and our system will more payment options and will be focused toward tech products |

**Advantages/Benefits of Proposed System**

1. **Specialized Tech Focus:** The proposed system will offer a dedicated and specialized platform for technology product shopping, making it easier for customers to find the latest and most relevant gadgets, electronics, and accessories in one place.
2. **Comprehensive Product Information:** Users will benefit from detailed product descriptions, specifications, and expert reviews, empowering them to make well-informed purchasing decisions confidently.
3. **User-Friendly Interface:** The system will feature an intuitive and user-friendly interface with advanced search filters and categorization, ensuring a seamless shopping experience even for those less tech-savvy.

**Scope**

Our project is designed to cater to a wide audience, including tech enthusiasts, professionals, and everyday consumers in Pakistan. The platform will be accessible online, making it convenient for users to shop for tech products from the comfort of their homes.

Users of our system will be able to explore a diverse range of tech products, conveniently categorized for easy navigation. They can create user profiles to track their order history and personalize their shopping experience. Detailed product information, including specifications and features, will be readily available to aid users in making informed purchasing decisions.

However, it's important to note that our system will not support physical retail or in-person shopping. Users will not be able to physically interact with products before purchase. Additionally, the platform will focus exclusively on tech-related products, and users won't find items from other non-tech categories.

Our project aims to streamline the tech shopping experience, providing a user-centric platform that caters to the unique needs of tech enthusiasts and consumers in Pakistan.

**Modules**

**Module 1: User Management:**

* User registration and authentication.
* User profiles.
* Password reset and email confirmation.
* Role-based access control (admin, customer, seller, etc.).

**Module 2: Product Management:**

* Product catalog with categories and subcategories.
* Product search and filtering.
* Product details, images, and descriptions.
* Product reviews and ratings.

**Module 3: Shopping Cart:**

* Add/remove products to/from the cart.
* Update product quantities.
* Calculate cart totals.
* Save cart state for logged-in users.

**Module 4: Checkout:**

* Shipping address and billing information.
* Order summary and total.
* Order confirmation.
* Integration with payment gateways (Stripe, EasyPaisa, JazzCash, MasterCard, Visa).

**Module 5: Order Management:**

* Order history for users.
* Order status.

**Module 6: Admin Panel:**

* Product management.
* User management (admin privileges).
* Order management and processing.
* Analytics and reporting.

**Module 7: Search and Filters:**

* Implement search functionality.
* Allow users to filter products by various criteria (price, rating).

**Module 8: Reviews and Ratings:**

* Allow users to write reviews and rate products.
* Display average ratings and reviews on product pages.

**Module 9: Security:**

* Implement secure authentication and authorization.
* Protect against common web application vulnerabilities (SQL injection).
* Use HTTPS for secure data transmission.
* Regularly update dependencies to patch security vulnerabilities.

**Module 10: Payment Integration:**

* Integrate with payment gateways like Stripe for international payments.
* Integrate with local payment gateways like EasyPaisa and JazzCash for regional payments.

**Module 11: Inventory Management:**

* Track product quantities and availability.
* Automatically update product availability upon order placement.

**System Limitations/Constraints**

1. Delivery Challenges: The efficiency largely depends on the delivery services in Pakistan this can be a major constrain.
2. User Adoption: Convincing users to shift from their current shopping platform to the new platform can take time we would need an effective marketing for this.
3. Internet accessibility: Our platform largely depends on the availability of the internet that can be a major constrain in some of the regions in Pakistan.
4. users trust: users trust to shop online can be a constrains.

**Software Process Methodology:**

Agile Methodology: Agile is a flexible and iterative approach to software development that focuses on collaboration, customer feedback, and incremental progress. It is well-suited for projects with changing requirements and a need for rapid delivery. In an e-commerce context, Agile can be beneficial for continuous improvement and feature updates based on user feedback. We will use iterative. We would be working in Procedural methodology.

**Tools and Technologies**

**Table 2Tools and Technologies for Proposed Project**

|  |  |  |  |
| --- | --- | --- | --- |
| **Tools**  **And**  **Technologies** | **Tools** | **Version** | **Rationale** |
| Visual Studio Code | 2022 | IDE |
| Mongo DB | 2022 | Database |
| Mongoose |  | Schema Validation |
| Figma | 2022 | Design Work |
| MS Word | 2019 | Documentation |
| MS Power Point | 2019 | Presentation |
| Star UML | 2.0.5 | Mockups Creation |
| **Technology** | **Version** | **Rationale** |
| React JS | 18 | Front End Development |
| Node JS | Es6 | Backend Development |
| Express JS | Es6 | Server |
| Socket.io |  | Notifications,chats |
| Git and GitHub |  | Version Control and Collaboration |

**Project Stakeholders and Roles**

Write down the project stakeholders and their roles.

**Table 3Project Stakeholders for Proposed Project**

|  |  |
| --- | --- |
| **Project Sponsor** | COMSATS University, Islamabad |
| **Stakeholder** | M.Awais, Ali Sher Khan, Nabeel   * Project Supervisor Name: Mr. Muhammad Ali Khan * Final Year Project Committee: Evaluation of project |

**Team Members Individual Tasks/Work Division**

**Table 4Team Member Work Division for Proposed Project**

|  |  |  |
| --- | --- | --- |
| **Student Name** | **Student Registration Number** | **Responsibility/ Modules** |
| Muhammad Awais | FA20-BSE-021 | User Management  Product Management  Shopping Cart  Checkout |
| Ali sher khan | FA20-BSE-078 | Order Management  Admin Panel  Search and Filters  Reviews and Ratings  Notifications |
| Nabeel Javeed | FA20-BSE-061 | Security  Payment Integration  Inventory Management |

**Data Gathering Approach**

1. User Surveys: Conduct online surveys targeting potential users in the Pakistani tech market. These surveys can help gather quantitative data on user preferences.
2. User Interviews: Engage in one-on-one or group interviews with select users and tech enthusiasts. These interviews provide qualitative insights into user experiences, preferences, and pain points.
3. Competitor Analysis: Analyze existing e-commerce platforms, especially those operating in the Pakistani market, to identify trends, strengths, and weaknesses.

**Concepts**

Concept-1: User Experience (UX) Design

* Overview: UX design is about creating a website that's easy and enjoyable for users to navigate. It involves designing user-friendly interfaces, optimizing layouts, and considering how users interact with your platform to enhance their shopping experience.

Concept-2: Data Security

* Overview: Data security is important for users information and secure payment so for that we will need to learn the concept of encryption.

Concept-3: Payment Processing

* Overview: Payment processing includes understanding different payment methods, transaction handling, and payment gateway integration.

Concept-4: APIs (Application Programming Interfaces)

* Overview: APIs enable communication between our website and external services or systems, such as payment gateways or third-party data sources. Understanding how to integrate and use APIs is crucial for enhancing the functionality and features of your e-commerce platform.

Concept-5: Database Management

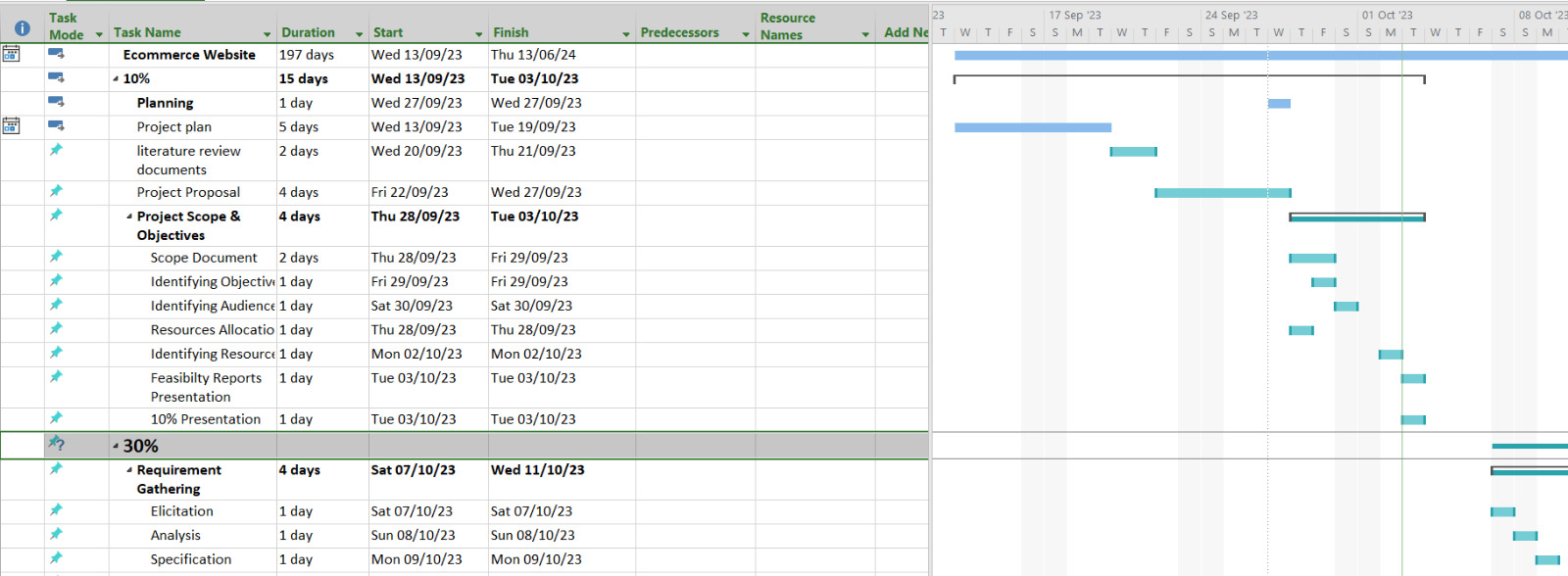
* Overview: In database management we will have to organize the data of order history product information, price, payment information

Concept-6: Inventory Management

* Overview: Inventory management involves tracking and organizing product listings. we learn how to manage stock levels, update product availability, and ensure that customers can purchase items in stock, contributing to a smooth shopping experience.

**Gantt chart**

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**Mockups**

Insert minimum mockups (Usually 4-6 mockups) which show the major modules mentioned in the scope section of the document. Do not include mockups for Login, Signup, Forgot Password, Contact Us, About Us etc. If the project is a Web or a Smartphone Application, then include at-least three mockups from each part of the project. You can design mockup in any design tool for example pencil tool (<https://pencil.evolus.vn/>) or Balsamiq (<https://balsamiq.com/>)

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**Conclusion**

In conclusion, our e-commerce project for the Pakistani tech market represents a dynamic and user-centric platform designed to meet the evolving needs of tech enthusiasts and shoppers. By integrating various data gathering techniques, responsive design principles, and key concepts like API integration and database management, we are committed to providing a seamless and secure shopping experience. Our project aims to align with industry best practices and agile methodologies to continually improve and adapt to the ever-changing tech landscape. We are enthusiastic about bringing this vision to life and delivering a valuable addition to the online tech retail ecosystem in Pakistan.

**References**

<https://www.telemart.pk/>

<https://www.goto.com.pk/checkout/onepage>

<http://atalfa.pk/>