GYALPOZHING
COLLEGE OF INFORMATION TECHNOLOGY

Proposal

For

CSF303 Project

Bachelor of Science in Information Technology

E-Gadgets

Submitted by

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Gyalpozhing College of Information Technology

Read carefully before filling the form.

1. Please do not alter the layout of the application form. Information must be filled in the spaces provided, under set format.

2. Guidance notes in various fields should not be deleted.

3. Required information should be duly filled in the specified fields.

Guidelines and Forms

Submission Procedure

Duly filled proposal forms completed in all respects should be submitted in the form of soft copy in the VLE. On receipt of the applications the proposals will be evaluated by the examiner and proposals would then be defended by student groups. The project group may need to revise the proposal in light of the examiner's recommendations.

For further information, please contact:

Module Coordinator

Ms. Sonam Wangmo

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Description   Page #

1. Introduction

1.1 **Reference Number:**

2024_CSF303_Fullstack_6

(for office use only)

1.2 Problem statement

With the global rise in demand for electronic products, Bhutan's need for electronics has also rapidly increased. While more consumers are accessing these goods, there are accompanying concerns such as dissatisfaction with services and the cost of electronic items. Furthermore, consumers are burdened by the necessity to personally visit stores to access these services, which is both time-consuming and expensive. Moreover, with the increasing number of consumers, there is a corresponding increase in queues for services, leading to user frustration and a lack of organization. Another issue is the lack of consumer awareness regarding the available products in stores unless they physically visit them. Therefore, there is an urgent requirement to establish an electronic website exclusively dedicated to promoting electronic products and advancing technological progress in Bhutan.

1.3 Project Title:

(Provide a concise, accurate and informative title which immediately orientates your reader to the focus of your project.)

E-Gadgets

1.4 Key Words:

- Electronic
- Store
- Gadgets
- Computers
- Appliances

(Please provide a maximum of 5 key words that describe the project. The key words will be incorporated in our database.)

1.5 Project Guide:

Name:

Designation:

Mobile # :	Tel. # :
Email:	

1.6 **Project Duration:**

Starting Date: _____

Completion Date: _____

2. Aims, Goals, Objectives and scope of the Project

2.1 Aims of the Project:

The aim of the project is to create a website that serves as a central hub for promoting Bhutanese electronic products and showcase varieties of products.

2.2 Goals of the Project:

To build a comprehensive website to establish easy access to a wide range of electronic products and foster economic development and technological innovation for consumers across Bhutan.

2.3 Objectives of the Project:

- Create an interactive and user-friendly website that includes diverse collections of electronics
- Make ease for consumers to get the electronic products
- Create a reliable and free accessible website

2.4 Scope of the Project:

System scope

Admin:
- An admin dashboard for electronics sellers to manage their product listings and orders.
- Feedback logs to see the user's feedback to improve the services.
User:
- Login and Signup functionalities to personalize the user experience and secure the application.
- Feedback forums to send feedback to admin to know about their services
- Search functionalities to search the desired product.

User Scope:
- ● Our electronic website serves as a digital hub for the people of Bhutan, offering a wide range of online services and resources.

3.Project features

3.1 Background

(Explains why you are doing the project. It provides a brief overview of the background to the project and establishes a particular area, or problem, that needs to be investigated further. It provides a clear statement of the topic of the proposed work.)

Bhutan, a small Himalayan kingdom known for its rich culture and natural beauty, has seen a rapid increase in the demand for electronic products in recent years. This surge can be attributed to various factors, including economic development, increased access to technology, and changing consumer preferences. As Bhutanese consumers become more technologically savvy and integrated into the global marketplace, their expectations for electronic products and services have also risen.

However, despite the growing demand for electronics, Bhutan faces several challenges in meeting the needs of its consumers. One significant issue is the dissatisfaction with existing services and the perceived high cost of electronic items. Many consumers in Bhutan report feeling frustrated with the quality of service provided by electronics retailers, including limited product options, poor customer service, and high prices. These concerns not only impact consumer satisfaction but also hinder the country's economic growth and technological advancement.

Additionally, the traditional method of purchasing electronics in Bhutan often involves visiting physical stores, which can be inconvenient and time-consuming for consumers, especially those living in rural areas. The lack of online platforms dedicated to electronic products further exacerbates this issue, as consumers have limited access to information about available products and prices without physically visiting stores. This inefficiency not only inconveniences consumers but also hampers the growth of the electronic retail sector in Bhutan.

Furthermore, the increasing number of consumers accessing electronic products has led to overcrowding in stores and long queues for services, resulting in frustration and disorganization. This lack of organization not only impacts the overall shopping experience but also poses challenges for retailers in managing their operations effectively.

In light of these challenges, there is a pressing need to establish an electronic website exclusively dedicated to promoting electronic products and advancing technological progress in Bhutan. Such a platform could provide consumers with access to a wide range of electronic products, transparent pricing information, and convenient online purchasing options. By addressing these issues, the ElectronicHub project aims to improve the accessibility, affordability, and quality of electronic products and services in Bhutan,

ultimately contributing to the country's economic development and technological advancement.

3.2 Literature Review:

Online electronics websites have boomed in popularity, giving people an easy way to shop for gadgets without leaving home.

These are some of the online electronic stores:

1. Croma Electronics, a prominent retailer in India's electronic market, distinguishes itself through its user-centric online platform. Croma's interface prioritizes usability, visual appeal, responsiveness, interactivity and accessibility.

   It's well-designed interface not only allows users to effortlessly explore a wide range of electronic products but also provides comprehensive product details, transparent pricing and user reviews, fostering trust and confidence in purchasing decisions.

2. Zala.bt, is the one of biggest online stores in Bhutan with products from various categories including consumer electronics, IT equipment, groceries, hardware tools, etc. Zala Electronics is a subsection dedicated for only electronic gadgets.

   Its commitment to providing a seamless and transparent shopping experience is exemplified through its user-friendly interface but also through detailed product information, transparent pricing and user reviews, real-time stock availability, innovative chatbot system thus contributing to a frictionless shopping experience.

3.3 Requirements

Functional Requirements

1. User Registration:
- Provide a registration form for new users to create accounts.
- Collect necessary information during registration, such as name, email address, and password.
- Validate user input to ensure accuracy and completeness.
- Implement measures to prevent duplicate accounts and ensure uniqueness of email addresses.
- Send email verification for account activation, including a link to confirm registration.

2. User Login
- Offer a login page with fields for username/email and password.
- Authenticate user credentials against the stored database of registered users.
- Implement session management to keep users logged in during their browsing session.
- Allow users to reset forgotten passwords through a secure password reset mechanism, such as email verification or security questions.

- Provide error handling for incorrect login attempts, with informative messages to guide users in case of login failures.

3. Admin login
- Offer a login page with fields for username/email and password for admin.

4. Search products:
- Offer the capability for users to search desired products and will provide privileges for users to add products to the cart.

5. Order products:
- Users can place their order.

6. Perform CRUD on product by admin:
- The admin can post the available products, read and view feedback from users and delete posts if products are out of stock.

Non-functional Requirements
1. Security: The system should implement robust security measures to protect user data, including encryption of sensitive information, and protection against cyber threats.

2. Responsive: :Can automatically adjust the screen size when an application is accessed on different devices.

3. Scalability:Ability to scale up the number of users as user's increase

4. Compatibility: The website should be compatible with a wide range of devices and browsers, ensuring a consistent user experience across different platforms.

5. Performance: The system should be able to handle a high volume of concurrent users and orders efficiently, with minimal downtime and fast response times.

6. Usability: The user interface should be intuitive and user-friendly, ensuring ease of navigation and order placement for users with varying levels of technical expertise.

3.4 Technology

Tools and Technologies

Front-end

- Programming languages: React, HTML, CSS, JavaScript

- Visual design tools: Figma

- Code editors: Visual Studio Code

Back-end

- Programming languages: Java

- Databases: MySQL

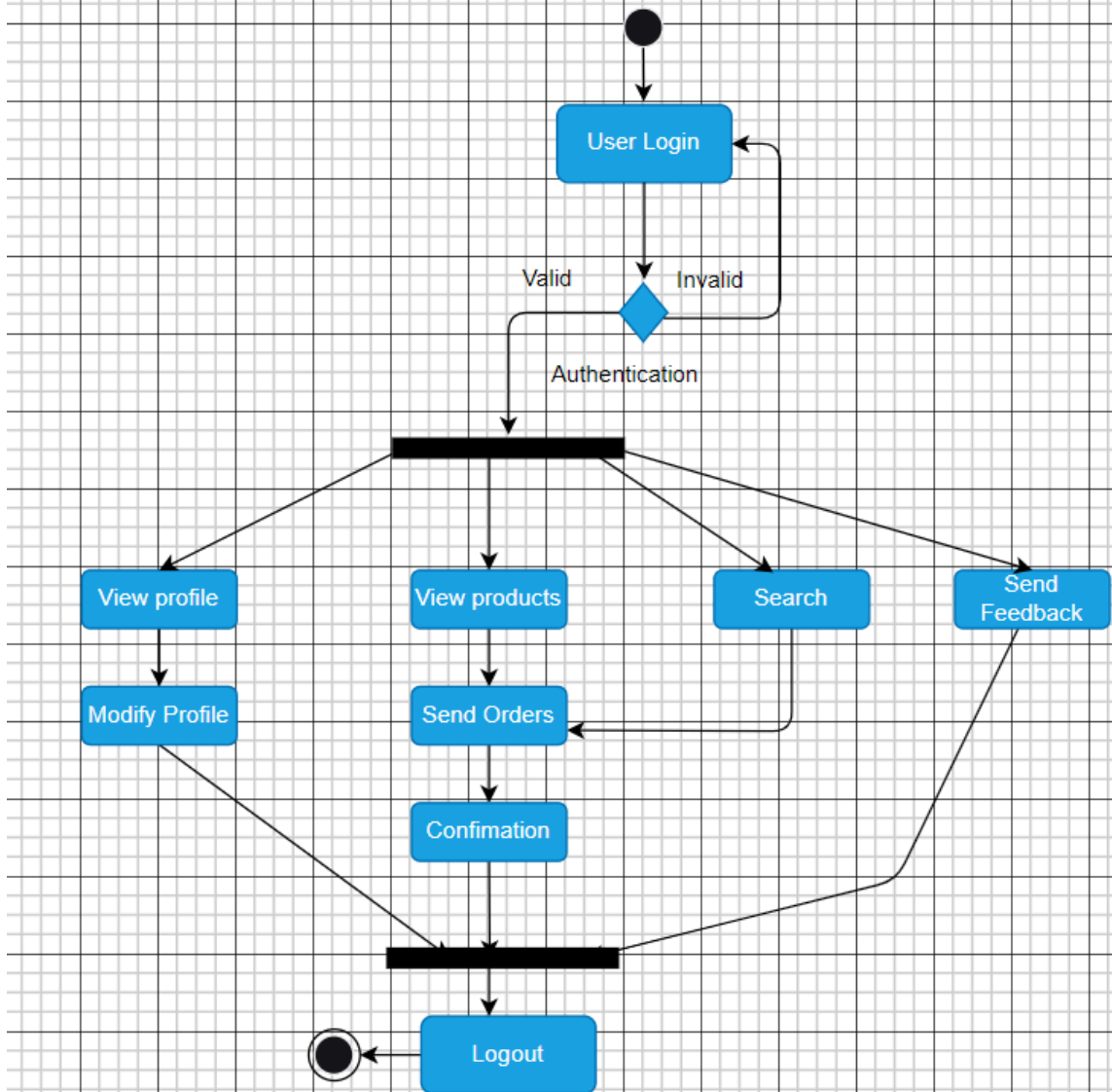- Web frameworks: Spring Boot 3

- Version control systems: GitHub
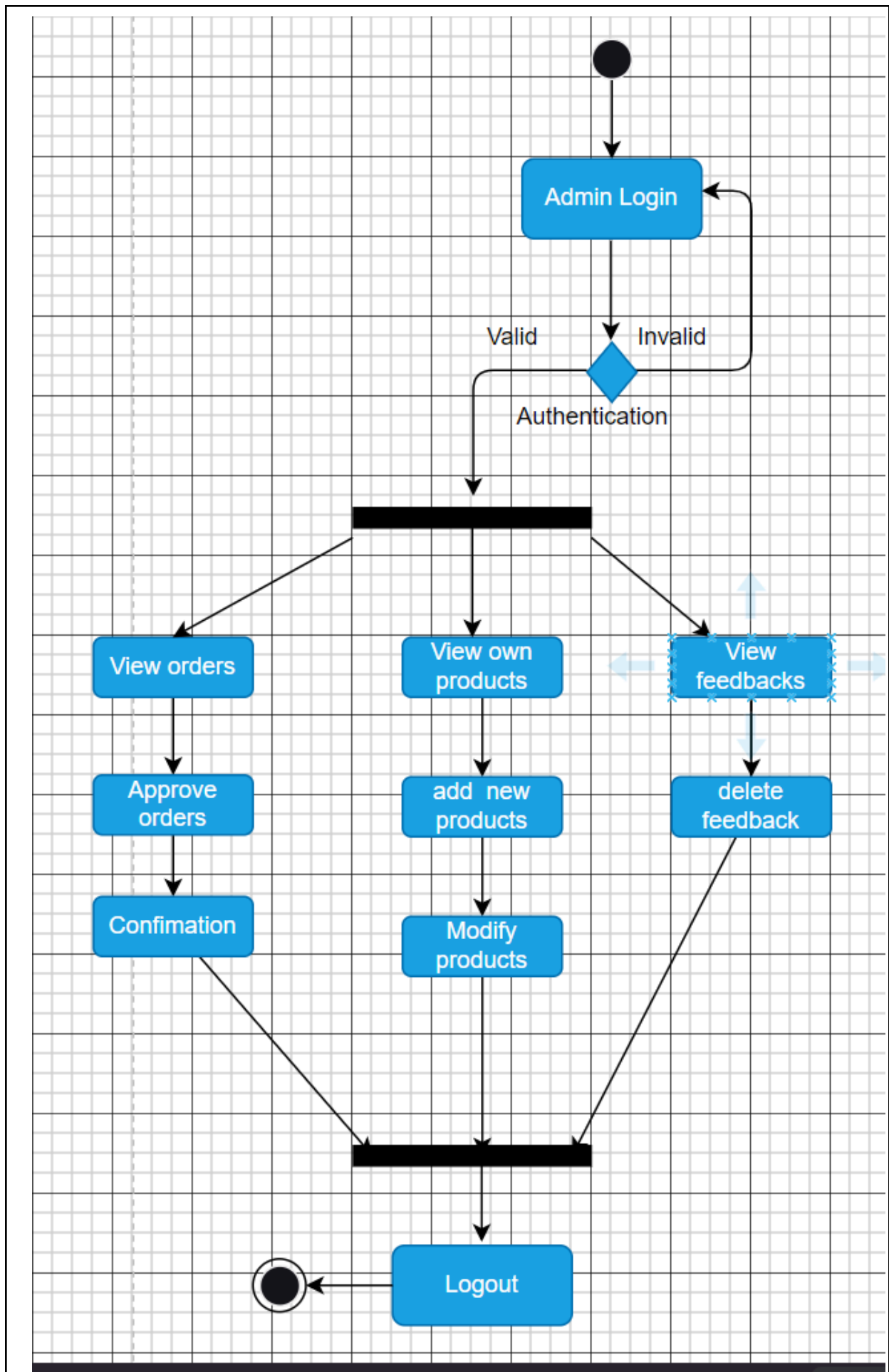

3.5 System Architecture

3.5.1 System Design

E-Gadget will use microservice architecture systems.Where microservice architecture is one type of software architecture, where the application is broken down into small, independent and loosely coupled services, so that the developers can easily manage and deploy one after another.

3.5.2 Workflow

User workflow:

Admin Workflow:

Admin Login

Valid   Invalid

◆ Authentication

View orders   View own products   View feedbacks

Approve orders   add new products   delete feedback

Confimation   Modify products

Logout

3.6 Deployment

Any free live server

4. Team Members Role

4.1 **Member 1 Name and Role**

Lhaki Dema (Team lead)

4.2 **Member 2 Name and Role**

Sonam Jamtsho (Backend)

4.3 **Member 3 Name and Role**

Rigden Losel (Backend)

4.4 **Member 4 Name and Role**

Ngawang Dorji (Designer)

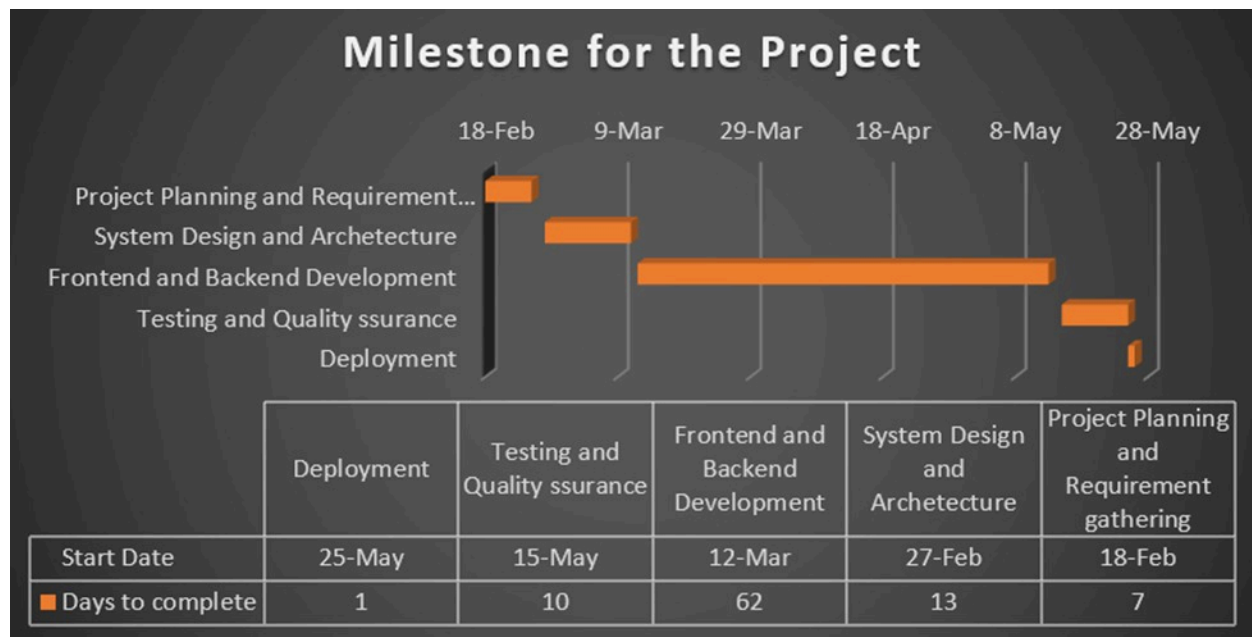### 4.5 **Member 5 Name and Role**

Jigme Dema (Designer)

5. Examiner Comments

6. Project Schedule / Milestone Chart /Work plan

[describes what you will do. It is a plan of the tasks which will enable you to achieve the stated aims of your project. To devise a plan, you need to break the project down into a series of steps or stages, and you then outline the tasks within each stage. The project plan should also include a timetable in which you plan the timing for the main tasks. This timetable can help to keep you on track throughout the project. The plan may also include a list of the resources required to do the project.]

(Project schedule using MS-Project (or similar tools) with all tasks, deliverables, milestones, clearly indicated are preferred. Task should be measured in terms of hours)

Milestone for the Project

	Deployment	Testing and Quality ssurance	Frontend and Backend Development	System Design and Archetecture	Project Planning and Requirement gathering
Start Date	25-May	15-May	12-Mar	27-Feb	18-Feb
Days to complete	1	10	62	13	7

Tasks (top to bottom): Project Planning and Requirement..., System Design and Archetecture, Frontend and Backend Development, Testing and Quality ssurance, Deployment

Timeline: 18-Feb, 9-Mar, 29-Mar, 18-Apr, 8-May, 28-May

7. Bibliography

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https://www.zala.bt/category/electronics

UBuy. (n.d). Ubuy Electronics. Retrieved February 23, 2024, from

https://www.bhutan.ubuy.com/en/electronics-store