Logo, company name

Description automatically generated

**COMSATS University Islamabad (CUI)**

**Project Proposal**

**for**

**Stock Logistics**

Version 1.0

***By***

**Waqas Ahmad CIIT/FA19-BCS-087/ISB**

**Ahmed Habib Pandit CIIT/FA19-BCS-094/ISB**

***Supervisor*Mr. Asif Muhammad**

***Bachelor of Science in Computer Science (2019-2023)***

**Table of Contents**

[Abstract ii](#_Toc121305138)

[1. Introduction 1](#_Toc121305139)

[2. Problem Statement 1](#_Toc121305140)

[3. Problem Solution/Objectives of the Proposed System 1](#_Toc121305141)

[3.1 Objectives 2](#_Toc121305142)

[4. Related System Analysis/Literature Review 2](#_Toc121305143)

[5. Vision Statement 3](#_Toc121305144)

[6. Scope 3](#_Toc121305145)

[7. Modules 4](#_Toc121305146)

[7.1. Module 1: Account Management 4](#_Toc121305147)

[7.2. Module 2: Inventory Management 5](#_Toc121305148)

[7.3. Module 3: Warehouse Management 5](#_Toc121305149)

[7.4. Module 4: Order Handling 6](#_Toc121305150)

[7.5. Module 5: Buyer Management 6](#_Toc121305151)

[7.6. Module 6: Payments & Sales 7](#_Toc121305152)

[7.7. Module 7: Data Analysis & Recommendations 7](#_Toc121305153)

[7.8. Module 8: Dispute Management 8](#_Toc121305154)

[7.9. Module 9: Chat 8](#_Toc121305155)

[8. System Limitations/Constraints 9](#_Toc121305156)

[9. Data Gathering Approach 9](#_Toc121305157)

[10. Tools and Technologies 10](#_Toc121305158)

[11. Project Stakeholders and Roles 10](#_Toc121305159)

[12. Module based Work Division 11](#_Toc121305160)

[13. WBS and Gantt Chart 11](#_Toc121305161)

[14. Mockups 13](#_Toc121305162)

[15. References 16](#_Toc121305163)

[16. Plagiarism Report 17](#_Toc121305164)

**Project Category**

**A-**Web Application/Web Application based E-commerce System

**B-**Recommendation System

# Abstract

Helping small businesses break into the market of global E-commerce is why we are proposing this project. Right now, various marketplaces allow a business to cater to the need of buyers, but they have some strict requirements and policies. These strict requirements and policies make small business unable to pursue the goal of e-commerce through legal means and they opt for a way that is profitable in the small run but leads to a major loss in the future. Stock Logistics helps small businesses to grow in the field of e-commerce by providing them with a platform that can take care of their storing and shipping requirements.

Stock Logistic would allow filling the gap between business and global e-commerce buyers. As a platform, we would enable small businesses to break into the e-commerce market by providing them with a warehouse and a stable supply chain. We would also target users who have free space and want to earn passive income without an initial investment. Stock Logistics will help businesses by providing them the opportunity to scale their business into different marketplaces and will help buyers to efficiently find the things they are looking for from trusted sellers. Recommendation to the customers will be shown based on their interest.

# Introduction

Our Project is an E-commerce based web application which would provide businesses a storing and shipping solution to maintain good service and fast shipping. It’s based on the concept of distributed warehouse networks where any person with space can open a warehouse to accommodate a business inventory. Warehouses can provide different services e.g., packing, storing, or shipping. Warehouse can charge business based on the service they provide to that business. By using Stock Logistic businesses can open multiple warehouses online in different region at only fraction of a cost and thus can minimize the shipping time and cost required for a product to reach to the customer. This would also help businesses to target a wide range of audience in different regions and thus increase their profits. Also, we provide businesses the ability to list their products on our website. Businesses will register themselves as Seller and will provide services to the buyers. Recommendations to the customers will be shown based on their interest.

# Problem Statement

There are millions of E-commerce businesses that are providing their services in different marketplaces but are not following the requirements and policies of that marketplace. As a result, their accounts are beings deactivated and all their assets which could amount to thousands of dollars being lost. Also, for an average or a new company it would not be feasible to buy or rent out a warehouse in multiple places due to increase in the prices of labor, utilities, and housing. As a result, they cannot source the store their products in a timely manner and end up losing shelf space and money. An average household has empty space which is not being used.

# Problem Solution/Objectives of the Proposed System

We will provide an E commerce platform which would provide storing and shipping solutions to the businesses. A distributed warehouse network will be formed where people which have free space lying around will be able to use our platform to register themselves as a warehouse. Businesses then can source their products to these warehouse and theses warehouse will store and ship the product to the customer on behalf of the businesses. Also, businesses can get warehouses in multiple places, and they will only pay for the space they use. This would make the businesses products more accessible and reduce the shipping time for product to reach to the customers. Businesses would be able to target audience in different regions without the overhead of owning warehouses thus increasing their sales and profit margin. Sellers will be able to list products on their account while customers will be able to buy products from sellers of system.

## Objectives

* Reduce the cost of businesses for storing and shipping of their product.
* Minimize the shipping time for products.
* Make product of businesses easily accessible to the buyers.
* Provide an opportunity for nonresidents of the country to operate on a marketplace following their requirements.

# Related System Analysis/Literature Review

Table 1 shows the similar system, their weakness, and our proposed solution.

Table 1 Related System Analysis with proposed project solution

|  |  |  |
| --- | --- | --- |
| **Application Name** | **Weakness** | **Proposed Project Solution** |
| Amazon FBA [1] | * Only provides storing and shipping facility to amazon sellers. * Expensive for small seller and companies. | * Storing and shipping will be provided for sellers to work on different E commerce site * Reduced cost for small seller and companies. |
| UPS [2] | * Only have warehouses in USA. * Does not show and sell warehouse inventory to the public. | * Distributed warehouses to cover different regions and countries. * Will provide a platform in which warehouse can show and sell inventory to the public. |
| Maersk [3] | * Does not show and sell warehouse inventory to the customer directly. * It does not allow to register your own warehouse with Maersk | * Stock Logistics will provide buying option directly to customers. * It will allow anyone who is interested to utilize space to register warehouse with Stock logistics. |

# Vision Statement

For small businesses and who want to break into the e commerce business but don’t have enough assets to own a warehouse Stock Logistic is a web-based E commerce application that would provide businesses storing and shipping solution that would help businesses to target a wide range of audience all over the world. Unlike other platforms that charge excessive amount for storing the inventory our product will reduce the storing and shipping cost and will also allow buyers to buy the things they want from warehouses. Businesses can stock their product in multiple warehouses at a fraction of a cost to ensure fast delivery to the customers while at the same time following rules and regulations of an e commerce platform.

# Scope

This project aims to provide a platform for small businesses storing, shipping, and selling solution to maintain good service and fast shipping. It’s based on the concept of distributed warehouse networks where any person with space can open a warehouse to accommodate a business inventory. Warehouses will also be required to ship the business inventory to the required customers. Warehouse will be able to sell their own inventory to customers along with other services. Stock Logistic also provide the opportunity for the people to have space and are looking to earn profit from it.

A supplier will be able to source product and will send it to warehouse. Supplier can register with multiple warehouses so that their inventory will be able to wide range of customers. After selecting the warehouse, the supplier can source the product and our system will keep track of all the inventory. Now, it will be the responsibility of warehouse management to store, ship according to requirements of supplier. Warehouse can have multiple suppliers and it will be the responsibility of warehouse manager to keep track of the supplier inventory. Store logistic will manage all the activities and will charge 10% of revenue and $40 per month. Store logistic will recommend products to buyers. System will analyze data and will recommend warehouse managers to open a new branch in a specific area depending on order traffic.

# Modules

## Module 1: Account Management

* FE-1: Sign up

User will be able to sign up by providing required information.

* FE-2: Sign in

User will be able to sign in into system.

* FE-3: Update Password

User will be able to reset or update password.

* FE-4: Sign out

User will be able to logout from system.

* FE-5: Manage Profile

User will be able to manage profile.

* FE-6: View Account

User will be able to view account.

* FE-7: Restore Account

Admin will be able to suspend user’s account.

* FE-8: Restore Account

Admin will be able to restore user’s account.

* FE-9: Account Setting

User will be able to manage settings.

## Module 2: Inventory Management

* FE-1: Add Product

User will be able to add Product

* FE-2: View Product

User will be able to add Product

* FE-3: Remove product

User will be able to remove inventory.

* FE-4: Update Product details

User will be able to update details of inventory.

## Module 3: Warehouse Management

* FE-1: Add Supplier

Warehouse manager will be able to add supplier.

* FE-2: View supplier

Warehouse manager will be able to view list of suppliers.

* FE-3: Remove supplier

Warehouse manager will be able to remove supplier.

* FE-4: Manage shipping Addresses

Warehouse manager will be able to include/exclude shipping addresses.

* FE-5- Add service charges

Warehouse manager will be able to set charges for different services.

* FE-6- Update charges

Warehouse manager will be able to update charges.

## Module 4: Order Handling

* FE-1: Automatics Order detail fetching

System will be able to automatically get order details by linking sellers.

* FE-4: View orders

Warehouse manager will be able to view shipped/unshipped/canceled orders.

* FE-5: Confirm shipment

Warehouse manager will be able to confirm shipment of an order.

* FE-6: Cancel Order

Warehouse manager/seller will be able to cancel order.

* FE-7: Search Order

User will be able to search a specific order by any details.

## Module 5: Buyer Management

* FE-1: View Product

Buyer will be able to view products offer by warehouses.

* FE-2: Search Product

Buyer will be able to search product.

* FE-3: Manage Feedback

Users will be able to give/delete/update feedback.

* FE-4: Manage Cart

Buyer will be able add/remove items from cart.

* FE-5: Checkout

Buyer will be able to place order.

* FE-6: View purchase history

Buyer will be able view purchase history.

* FE-7: Manage Address Details

Buyer will be able to manage address details.

* FE-8: Manage card

User will be able to add/remove Card.

## Module 6: Payments & Sales

* FE-1-Request Payment

User will be able to request payment.

* FE-2-View Payments

User will be able to view payments.

* FE-3- Release payments

Admin will be able to release payments of warehouse.

* FE-3: View balance

Warehouse manager will be able to view available/reserve balance.

* FE-4: View Sales

Warehouse manager will be able to view sales.

## Module 7: Data Analysis & Recommendations

* FE-1: Data Analysis

System will be able to analyze data.

* FE-2: Data Virtualization

User will be able to view data virtualization.

* FE-3: View warehouse Recommendations [4]

Warehouse manager will be able to view warehouse recommendations.

* FE-4: View product Recommendations

User will be able to view product recommendations.

* FE-5: Recommendation on keywords

User will be able to view product recommendations on basis of keywords that are

frequently searched.

## Module 8: Dispute Management

* FE-1: File Complaint/appeal

User will be able to file complaint/appeals.

* FE-2: View Complaint/Appeal

User will be able to view their filed complaint.

* FE-4: Respond to Complaint/Appeal

Admin will be able to respond to the complaint/appeal of users.

* FE-5: Manage returns

User will be able to manage returns.

* FE-6-Manage refunds

User will be able to manage refunds.

## Module 9: Chat

* FE-1: Contact Admin

Users will be able to contact Admin panel of the system.

* FE-2: Send Message

User will be able send message.

* FE-3: Receive Message

User will be able receive message.

* FE-4: View Message

User will be able view message.

# System Limitations/Constraints

1. Single user can not register multiple times in system.
2. User must have internet connection to access the system.
3. User must have a registered bank account
4. User can’t use system as a guest.
5. User must have ID verification to register warehouse.

# Data Gathering Approach

We gathered our data by following approaches.

* 1. **Brain Storming**

Brain Storming was required to identify the solutions to the problem faced by suppliers in the field of E commerce.

* 1. **Similar System Analysis**

We personally used and analyzed many related web-based applications to observe how they all are working? What are some common terminologies? what are some deficiencies in the current system and how they can be improved in our proposed. In this way, we gathered a lot of data through observation that how can proposed system can overcome the deficiencies in existing systems.

* 1. **Interviews**

We conducted interviews with our friends that are in field of E commerce. Almost all of them looked interested in our proposed system because they want such a system that helps them to meet the rules and regulations of an ecommerce platform and provide fast and efficient shipping to the customer.

* 1. **Group Discussion:**

Group discussions were used to find hypothetical solutions to problems which are part of the project.

# Tools and Technologies

Table 2 shows the tools and technologies that would be used in development of Stock logistics.

Table 2: Tools and Technologies for Proposed Project

|  |  |  |  |
| --- | --- | --- | --- |
| **Tools**  **And**  **Technologies** | **Tools** | **Version** | **Rationale** |
| MS Visual Studio Code | 2022 | IDE |
| MongoDB | 2022 | DBMS |
| Python | 3.10.8 | Machine Learning |
| Selenium | 4.4.0 | Testing |
| MS Power Point | 2022 | Presentation |
| MS Word | 2022 | Documentation |
| Figma | 2022 | Design Work |
| **Technology** | **Version** | **Rationale** |
| Node JS | 17 | Back-end Development |
| React JS | 17 | Front-end Development |

# Project Stakeholders and Roles

Table 3 shows project stakeholder and their roles in the project.

Table 3: Project Stakeholders for Proposed Project

|  |  |
| --- | --- |
| **Project Sponsor** | COMSATS University Islamabad, Islamabad Campus |
| **Stakeholder** | **Student Name:**   * Waqas Ahmad (FA19-BCS-087) * Ahmed Habib Pandit (FA19-BCS-094)   **Project Supervisor Name:**   * Mr. Asif Muhammad |

# Module based Work Division

Table 4 shows the work division between members of the team.

Table 4: Team Member Work Division for Proposed Project

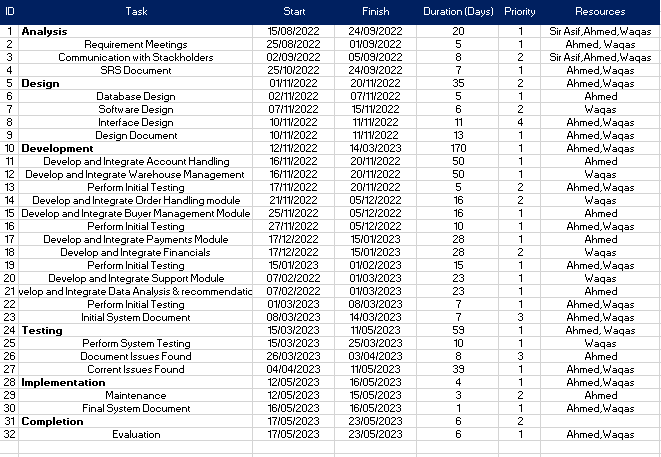
|  |  |  |
| --- | --- | --- |
| **Student Name** | **Student Registration Number** | **Responsibility/ Module / Feature** |
| Waqas Ahmad | FA19-BCS-087 | Mr. Waqas Ahmad (Module 1,3,5,7,9) |
| Ahmed Habib Pandit | FA19-BCS-094 | Mr. Ahmed Habib Pandit (Module 2,4,6,8) |

# WBS and Gantt Chart

* 1. **Work Breakdown Structure**

Table 5 shows that the work breakdown structure for Stock Logistics.

Table 5: Work breakdown structure for Proposed Project

****

* 1. **Gantt Chart**

Figure 1 shows that the Gant chart for Stock Logistics. Stack holders will follow this Gant chart.

Figure 1: Gant chart

# Mockups

* 1. **Admin side**

Figure 2 shows the mockup of Admin side of the Stock Logistics.

Graphical user interface, chart, application

Description automatically generated

Figure 2: Mockup for Admin side

* 1. **Supplier**

Figure 3 shows the mockup of supplier side of the Stock Logistics.

Graphical user interface, application

Description automatically generated

Figure 3: Mockup for Supplier

* 1. **Buyer Side**

Figure 4 shows the mockup of buyer side of the Stock Logistics.

Graphical user interface, website

Description automatically generated

Figure 4: Mockup for Buyer side

* 1. **Order Detail Screen**

Figure 5 shows the mockup of Warehouse side of the Stock Logistics.

Graphical user interface, application

Description automatically generated

Figure 5: Mockup for order detail

# References

* 1. Amazon Seller Center, <https://sellercentral.amazon.com/>, 10/21/2022**. (Web site)**
  2. UPS, <https://www.usps.com/> , 10/21/2022**. (Web site)**
  3. Maersk <https://www.maersk.com/about/vision>, 10/23/2022. (**Web site**)
  4. Recommendation system, <https://towardsdatascience.com/> , 10/21/2022**. (Web site)**

# Plagiarism Report

Graphical user interface, text, application, email

Description automatically generated