**Systems Analysis and Design Project**

**Mobile Phone Retailer and Distributor**



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Contents

[Project Plan and Allocated Roles 4](#_Toc445236001)

[Requirements 5](#_Toc445236002)

[Use Case Diagrams 5](#_Toc445236003)

[Customer Main Activities 5](#_Toc445236004)

[Administrator Main Activities 6](#_Toc445236005)

[Use Case Structured Descriptions 7](#_Toc445236006)

[Login 7](#_Toc445236007)

[Create Account 7](#_Toc445236008)

[Browse Catalogue 7](#_Toc445236009)

[Search Catalogue 7](#_Toc445236010)

[Add Product to Cart 8](#_Toc445236011)

[View Cart 8](#_Toc445236012)

[Remove Product from Cart 8](#_Toc445236013)

[Edit Product Quantity in Cart 8](#_Toc445236014)

[Add Product 9](#_Toc445236015)

[Remove Product 9](#_Toc445236016)

[Edit Product 9](#_Toc445236017)

[View Orders 9](#_Toc445236018)

[Change Customer Category 9](#_Toc445236019)

[Remove User 10](#_Toc445236020)

[Return Stock 10](#_Toc445236021)

[Ship Order 10](#_Toc445236022)

[Detailed Use Case Description 11](#_Toc445236023)

[Create Order 11](#_Toc445236024)

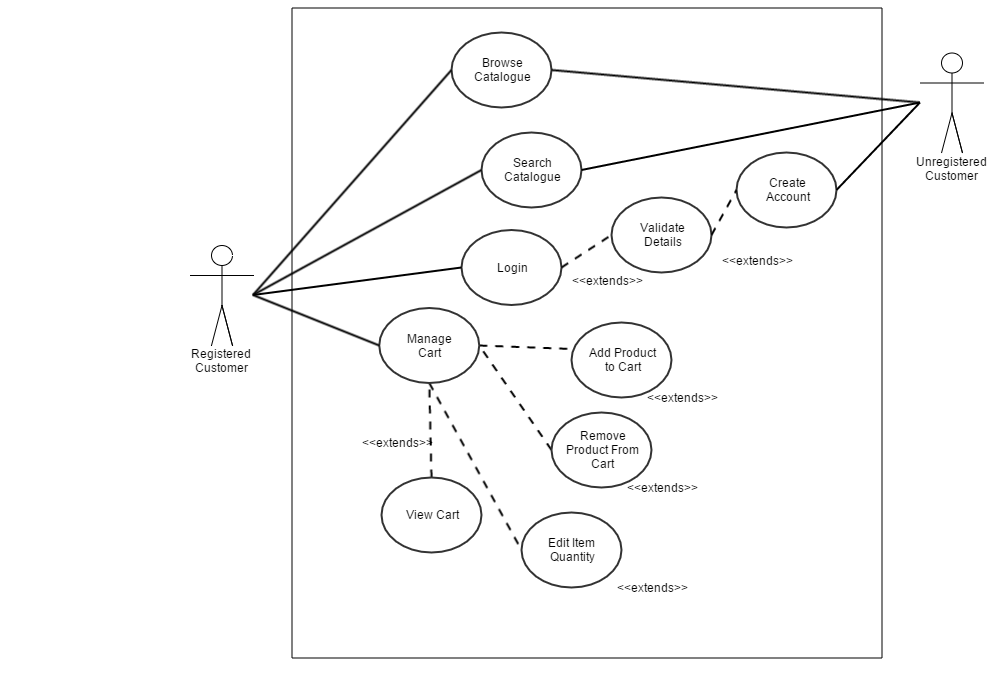
# Project Plan and Allocated Roles

|  |  |  |  |
| --- | --- | --- | --- |
| **Job** | **Job Description** | **Allocated To** | **Week** |
| Narrative | Narrative description of business scenarios | Jack | 6 |
| Presentation | Company Logo / Design Cover Page | Group | 10 |
| Software Life Cycle | Discussion of the software model used | Jack | 6 |
| Project Plan | Specifying jobs and roles | Jack | 5 |
| Requirements | Use Case Diagrams  Use Case Descriptions  Structured Use Case Description  Non-Functional Requirements  Tactics for handling Quality Attributes  Screenshots of GUI | Jack  Jack  Jack  Colm  Colm | 6  6  6  6  6  8 |
| System Architecture | Architecture Diagram with Interfaces | Group | 7 |
| Analysis Sketches | Identify Candidate Classes  Class Diagrams  Communication Diagrams  Entity Relationship Diagrams | William  William  Colm  Colm | 8  8  8  8 |
| Code | Code Implementation | Group | 7 to 12 |
| Design | Architectural Diagrams  Class Diagrams  Interaction Diagram  State Chart  Description of Patterns  Approach to Concurrency Support | Jack  Jack  William  William  Colm  Colm | 9  10  9  10  9  10 |
| Critique | Critique on quality of Analysis and Design | Group | 12 |
| References | Sources used for learning/information | Group | 12 |

# Requirements

# Use Case Diagrams

## Customer Main Activities

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## Administrator Main Activities

# Use Case Structured Descriptions

## Login

|  |  |
| --- | --- |
| **ACTOR’S ACTION** | **SYSTEM RESPONSE** |
| 1. Customer selects Login from initial screen. | 1. Login form is displayed. |
| 1. Customer enters Username and password and clicks ‘Login’ button. | 1. Login details entered correctly, customer is logged in. |
| **ALTERNATIVE ROUTE** | |
| 3a. Customer enters wrong login details. | 4a. Login details are incorrect, error message with ‘Unable to Login’ is shown. |

## Create Account

|  |  |
| --- | --- |
| **ACTOR’S ACTION** | **SYSTEM RESPONSE** |
| 1. Customer selects ‘Create Account’ from initial screen. | 1. Register form is displayed. |
| 1. Customer enters Username, email address and desired password and clicks ‘Login’ button. | 1. Login details entered correctly, ‘Account created successfully.’ message is shown. |
| **ALTERNATIVE ROUTE** | |
| 3a. Desired username is already taken. | 4a. Customer is unable to create account, error message with ‘Username already taken, please choose another.’ is shown. |

## Browse Catalogue

|  |  |
| --- | --- |
| **ACTOR’S ACTION** | **SYSTEM RESPONSE** |
| 1. Customer selects ‘Browse Catalogue’ from initial screen. | 1. Catalogue is displayed. |
| 1. Customer clicks on a product in the catalogue. | 1. Product info page is shown. |

## Search Catalogue

|  |  |
| --- | --- |
| **ACTOR’S ACTION** | **SYSTEM RESPONSE** |
| 1. Customer selects ‘Search Catalogue’ from initial screen. | 1. Search Catalogue screen is displayed. |
| 1. Customer enters search query in text box. | 1. Search results are shown. |
| **ALTERNATIVE ROUTE** | |
| 3a. Search results not found. | 4a. Message ‘No results found.’ shown. |

Non-Functional Requirements:

* Search should not take longer than 5 seconds.

## Add Product to Cart

|  |  |
| --- | --- |
| **ACTOR’S ACTION** | **SYSTEM RESPONSE** |
| 1. Customer selects ‘Add Product to Cart’ on Product Info screen. | 1. Product is added to cart successfully with message ‘Product added to cart’ shown. |
| **ALTERNATIVE ROUTE** | |
| 3a. Product is out of stock. | 4a. Message ‘Sorry, this product is not in stock.’ is shown. Product is not added to cart. |

## View Cart

|  |  |
| --- | --- |
| **ACTOR’S ACTION** | **SYSTEM RESPONSE** |
| 1. Customer selects ‘View Cart’ on initial screen. | 1. Cart and its contents are shown on screen. |
| **ALTERNATIVE ROUTE** | |
| 3a. Cart is empty. | 4a. Message ‘Your cart is empty.’ is shown. |

## Remove Product from Cart

|  |  |
| --- | --- |
| **ACTOR’S ACTION** | **SYSTEM RESPONSE** |
| 1. Customer selects ‘Remove product from Cart’ on View Cart screen. | 1. Product is removed from cart successfully with message ‘Product removed from cart’ shown. |

## Edit Product Quantity in Cart

|  |  |
| --- | --- |
| **ACTOR’S ACTION** | **SYSTEM RESPONSE** |
| 1. Customer selects ‘Edit Product Quantity’ on View Cart screen. | 1. Product quantity is updated successfully and new quantity is shown on View Cart Screen. |
| **ALTERNATIVE ROUTE** | |
| 3a. There is not enough stock to fulfil quantity change. | 4a. Error message ‘Sorry there are not enough products in stock’ is shown. |

## Add Product

|  |  |
| --- | --- |
| **ACTOR’S ACTION** | **SYSTEM RESPONSE** |
| 1. Administrator selects ‘Add Product’ on the administrator screen. | 1. ‘Add Product’ page is shown. |
| 1. Administrator enters Product name, price and stock. | 1. Product details are updated successfully, product is added to the catalogue. |

## Remove Product

|  |  |
| --- | --- |
| **ACTOR’S ACTION** | **SYSTEM RESPONSE** |
| 1. Administrator selects ‘Remove Product’ on the administrator screen. | 1. List of products currently in catalogue is shown. |
| 1. Administrator selects product to remove. | 1. Product is removed successfully, catalogue is updated successfully. |

## Edit Product

|  |  |
| --- | --- |
| **ACTOR’S ACTION** | **SYSTEM RESPONSE** |
| 1. Administrator selects ‘Edit Product’ on the administrator screen. | 1. List of products currently in catalogue is shown. |
| 1. Administrator selects product to edit. | 1. Product edit page is shown. |
| 1. Administrator edits product. | 1. Product is updated successfully. |

## View Orders

|  |  |
| --- | --- |
| **ACTOR’S ACTION** | **SYSTEM RESPONSE** |
| 1. Administrator selects ‘View Orders’ on the administrator screen. | 1. List of all Orders is shown. |

## Change Customer Category

|  |  |
| --- | --- |
| **ACTOR’S ACTION** | **SYSTEM RESPONSE** |
| 1. Administrator selects ‘View Customers’ on administrator screen. | 1. List of all customers is shown. |
| 1. Administrator selects customer to update. | 1. Customer details screen is shown. |
| 1. Administrator selects change customer category | 1. Customer category is updated correctly. |

## Remove User

|  |  |
| --- | --- |
| **ACTOR’S ACTION** | **SYSTEM RESPONSE** |
| 1. Administrator selects ‘View Customers’ on administrator screen. | 1. List of all customers is shown. |
| 1. Administrator selects customer to remove. | 1. Customer details screen is shown. |
| 1. Administrator selects ‘Remove Customer’ | 1. Message ‘Are you sure you would like to remove customer?’ is shown. |
| 1. Administrator selects ‘Yes’. | 1. Customer is removed and customer list is updated successfully. |
| **ALTERNATIVE ROUTE** | |
| 7a. Administrator selects ‘No’. | 8a. Customer is not removed from system and the administrator is brought back to customer details screen |

## Return Stock

|  |  |
| --- | --- |
| **ACTOR’S ACTION** | **SYSTEM RESPONSE** |
| 1. Administrator selects ‘Return Stock’ on administrator screen. | 1. Return Stock screen is shown. |
| 1. Administrator selects supplier from drop-down to return stock to. | 1. Supplier is selected successfully. |
| 1. Administrator selects product to return to supplier. | 1. Product is selected successfully; available stock to return is shown. |
| 1. Administrator selects quantity of stock to return, selects ‘Return Stock’. | 1. Message ‘Stock returned successfully’ is shown. |
| **ALTERNATIVE ROUTE** | |
| 7a. Administrator selects ‘No’. | 8a. Customer is not removed from system and the administrator is brought back to customer details screen |

## Ship Order

|  |  |
| --- | --- |
| **ACTOR’S ACTION** | **SYSTEM RESPONSE** |
| 1. Administrator selects ‘View Orders’ on the administrator screen. | 1. List of all Orders is shown. |
| 1. Administrator selects Order to Ship. | 1. Order details screen is shown. |
| 1. Administrator selects ‘Ship Order’. | 1. Message ‘Order shipped successfully’ is shown. |
| **ALTERNATIVE ROUTE** | |
| 1. Product on order is not in stock. | 1. Message ‘Product is not in stock, order cannot be shipped’ is shown. |

# Detailed Use Case Description

## Create Order

|  |  |  |
| --- | --- | --- |
| **USE CASE: CREATE ORDER** | | |
| **DESCRIPTION:** | | User creates an order for their desired products. |
| **PRE-CONDITIONS:** | | * User must be logged in. * User must have products in their cart. * Desired products must be in stock. |
| **SUCCESS END CONDITION:** | | A new order is created successfully. |
| **FAILED END CONDITION:** | | Order is not created. |
| **ACTORS:** | | Customer. |
| **TRIGGER:** | | User clicks ‘Confirm Order’. |
| **FLOW** | | |
| **DESCRIPTION** | **STEP NUMBER** | **ACTION** |
|  | **1** | ‘Create Order’ procedure called by the user through the site GUI. |
|  | **2** | User permissions and credentials are verified by the system. |
|  | **3** | Order is created and order information is saved. |
| **EXTENSION** | **STEP NUMBER** | **BRANCHING ACTION** |
|  |  |  |
| **VARIATION** | **STEP NUMBER** | **BRANCHING ACTION** |
|  | **1** |  |
|  | **2** |  |