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**Use Case for Add Product**

Name: Adding a new product into the system

Actor: Owner/Manager

Goal: Add Item to the inventory database

Preconditions: System idles at main menu

Summary: Actor can input an item with descriptions of said item to further identify it

Steps:

|  |  |
| --- | --- |
| **Actor** | **System** |
| 1. Choose command “Add Product”  Main screen: | 2. Display “Add Product” screen  “Add Product” screen: |
| 3. Input data then click “Add” button  “Add Product” screen with data: | 4. Hide “Add Product” screen and display “Add Product Successfully” screen:  “Add Product Successfully” screen: |
| 5. Click on “OK” button:  Goes back to “Add Product” screen  Click “Cancel” | 6. Display “Main” screen  “Cancel” goes back to “Main Menu” |

Postconditions: System ends back at the Main Menu to await further input

**Use Case for “Add Customer”**

Name: Adding a new customer into the system

Actor: Owner/Manager

Goal: Add customer to the record database

Preconditions: System idles at main menu

Summary: Actor can input a customer with identifiers of said customer

Steps:

|  |  |
| --- | --- |
| Actor | System |
| Choose command “Add Customer”  Main Screen: | Display “Add Customer” Screen  “Add Customer” Screen: |
| Input data then hit “Add”  “Add Customer” screen: | Hide “Add Customer” screen and display successful add screen  Successful Add screen: |
| Click OK  Goes back to “Add Customer” Screen  Click Cancel: | Goes back to “Main Menu”  Main Menu: |

Postconditions: System is back at main menu and idles until more input is added.

**User case for Adding Purchase**

Name: Adding a new purchase into the system

Actor: Owner/Manager, employee

Goal: Add purchase to the record database

Preconditions: System idles at main menu

Summary: Actor can input a purchase with identifiers of said purchase

Steps:

|  |  |
| --- | --- |
| Actor | System |
| Choose command “Add Purchase” | Display “Add Purchase” Screen |
| Input data then hit “Add” | Displays Successful Add |
| Click “OK”  Goes back to “Add Purchase” screen  Click Cancel | Goes to “main menu” |

Postconditions: System returns to main menu and idles until further instruction.

**Logical Design of Database**

Products(**productid**, Barcode, name, expiration date, price, tax rate, quantity, supplier, manufactured date)

Customers(**customerid**, name, address, phone, payment info)

Purchase(**purchaseid**, *customerid*, *productid*, date time, quantity, price, tax, total cost)

Customerid

Name

Address

Phone

Payment info

buy

Products

Customers

Price

Quantity

Name

ProductId

**Physical Design of Database**

CREATE TABLE "Customers" (

"customerID" INTEGER NOT NULL,

"Name" TEXT,

"Address" TEXT,

"Phone" TEXT,

PRIMARY KEY("customerID")

);

CREATE TABLE "Products" (

"productID" INTEGER NOT NULL,

"Name" TEXT,

"Price" INTEGER,

"Quantity" INTEGER,

PRIMARY KEY("productID")

);

CREATE TABLE "Purchases" (

"purchaseID" INTEGER NOT NULL UNIQUE,

"customerID" INTEGER,

"productID" INTEGER,

"Price" INTEGER,

"Quantity" INTEGER,

"Cost" INTEGER,

"Tax" INTEGER,

"Total" INTEGER,

"Date" TEXT,

PRIMARY KEY("purchaseID"),

FOREIGN KEY("customerID") REFERENCES "Customers"("customerID"),

FOREIGN KEY("productID") REFERENCES "Products"("productID")

);

**Exceptional Use Cases**

Add Product Error “Duplicate Product ID”:

Name: Adding a new product into the system with duplicate Product ID

Actor: Owner/Manager

Goal: System warns Actor about duplicate Product ID

Preconditions: System idles at main menu

Summary: System sends an error message to User explaining the reason for error, in this case, duplicate Product ID.

Steps:

|  |  |
| --- | --- |
| Actor | System |
| Click “Add Product”  Main screen: | Pops up “Add Product” Screen  Add Product Screen: |
| Adds duplicate Product ID | Error Message is displayed  Back to Add Product Screen |
| Re-enter different info |  |

Postconditions: System allows for actor to complete process as normal then exits back to main menu to idle.

Add Customer Error “Duplicate Customer ID”:

Name: Adding a new customer into the system with duplicate Customer ID

Actor: Owner/Manager

Goal: System warns Actor about duplicate customer ID

Preconditions: System idles at main menu

Summary: System sends an error message to User explaining the reason for error, in this case, duplicate customer ID.

Steps:

|  |  |
| --- | --- |
| Actor | System |
| Click “Add customer”  Main screen: | Pops up “Add Customer” Screen  Add customer screen: |
| Enters in duplicate customer ID | Error Message displayed  Back to Add Customer screen |
| Re-enter different info |  |

Postconditions: System allows for actor to complete process as normal then exits back to main menu to idle.

Add Purchase Error “Duplicate Purchase ID”:

Name: Adding a new customer into the system with duplicate Customer ID

Actor: Owner/Manager

Goal: System warns Actor about duplicate customer ID

Preconditions: System idles at main menu

Summary: System sends an error message to User explaining the reason for error, in this case, duplicate customer ID.

Steps:

|  |  |
| --- | --- |
| Actor | System |
| Click “Add Purchase”  Main screen: | Pops up “Add Purchase” Screen  Add Purchase screen: |
| Add duplicate Purchase ID | Error Message is Displayed  Back to Add Purchase |
| Re-enter different info |  |

Postconditions: System allows for actor to finish process as normal and then exits to main menu to idle.