Project 1

User Stories:

- As a user, I want to add a new product into the system.  
- As a user, I want to add a new customer into the system.  
- As a user, I want to record a purchase from a customer into the system.

Exception Case: User attempts to add duplicate product, customer, or purchase into system.

**Use Case 1: Add a New Product**

Related Use Cases: Generalization of:

* Adding a new “Thing” into the system.

Steps:

|  |  |
| --- | --- |
| Actor Actions | System Responses |
| 1. Choose ‘Add New Product’ Button.   Home Screen: | 1. Display ‘New Product’ GUI   New Product Screen: |
| 1. Key in required information into fields.   Filled Out Screen: |  |
| 1. Choose ‘Add’ Button | 1. System Displays Confirmation Screen.   Confirmation Screen: |
|  |
|  | 1. Screen closes and returns to home screen.   Home Screen: |

**Use Case 2: Add a New Customer**

Related Use Cases: Generalization of:

* Adding a new “Thing” into the system.

Steps:

|  |  |
| --- | --- |
| Actor Actions | System Responses |
| 1. Choose ‘Add New Customer…’ Button. | 1. Display ‘New Customer’ GUI |
| 1. Key in required information into fields. |  |
| 1. Choose ‘Add’ | 1. System displays confirmation screen |
|  | 1. Screen closes and displays home screen |
|  |  |

**Use Case 3: Record a New Transaction**

Related Use Cases: Generalization of:

* Adding a new “Thing” into the system.

Steps:

|  |  |
| --- | --- |
| Actor Actions | System Responses |
| 1. Choose ‘Add New Transaction’ Command. | 1. Display ‘Add Transaction’ GUI |
| 1. Key in required information into fields. |  |
| 1. Choose ‘Add’ | 1. System displays confirmation screen |
|  | 1. Screen closes and returns to home screen |

**Database Design and Creation**

Products:

* Name, ProductID, Price, quantity.

Customers:

* Name, address, CustomerID, phone.

Relationships:

* Purchase: PurchaseID, *CustomerID*, ProductID, Price, Quantity, Cost, Tax, Total, Date

Products(­ProductID, Name, Price, Quantity).

Customers(CustomerID, Name, Address, Phone,).

Purchases(PurchaseID, *CustomerID*, ProductID, Price, Quantity, Cost, Tax, Total, Date)

E-R-Diagram:

For readability and neatness, all attributes were placed into the text boxes beneath.

Purchase

CustomerID, Name, Address, Phone.

Products

CUSTOMER

PurchaseID, *CustomerID*, ProductID, Quantity, Price, Cost, Tax, Total Date)

­ProductID, Name, Price, Quantity

SQL Code and Input:

1. Products:

CREATE TABLE Products (

ProductID int not null primary key,

Name varchar(100),

Price int,

Quantity int,

)

1. Customers:

CREATE TABLE Customers (

CustomerID int not null primary key,

Name varchar(100),

Address varchar(100),

Phone int,

)

1. Purchases:

CREATE TABLE Purchases (

PurchaseID int not null primary key,

CustomerID int not null foreign key,

Quantity int,

ProductID int not null,

Cost int,

Tax int,

Total int,

Date varchar(200)

)

SQL Data Entry:

1. Product entry:

INSERT INTO Products (­ProductID, Name, Price, Quantity)

VALUES (1, “Cat”, 20.0, 15.0)

INSERT INTO Products (­ProductID, Name, Price, Quantity)

VALUES (2, “Dancing Rat”, 12.99, 5.0)

INSERT INTO Products(ProductId, Name, Price, Quantity)

VALUES (3,"Pickles",3.99,40.0)

INSERT INTO Products(ProductId, Name, Price, Quantity)

VALUES (4,"Hotdog Buns",4.99,15.0)

INSERT INTO Products(ProductId, Name, Price, Quantity)

VALUES (5,"Nails",7.99,10.0)

1. Customer Entry:

INSERT INTO Customers (CustomerID, Name, Address, Phone)

VALUES (1,"Horton","1414 Street",49172384)

INSERT INTO Customers(CustomerId, Name, Address, Phone)

VALUES (2,"Jens Kidman","77 Umaea Drive",14102102)

INSERT INTO Customers(CustomerId, Name, Address, Phone)

VALUES (3,"C. Schuldinger","173 Tampa Circle",277893212)

INSERT INTO Customers(CustomerId, Name, Address, Phone)

VALUES (4,"J. Duplantier","193 Paris Ave",111252686)

INSERT INTO Customers(CustomerId, Name, Address, Phone)

VALUES (5,"V. Amelia","675 Bergenwerth Dr",667895555)

1. Purchase Entry:

INSERT INTO Purchases

VALUES (1,1,20,2,40.0,3.6,43.6,"Wed Oct 9 17:11:12 CDT 2019")

INSERT INTO Purchases

VALUES (2,1,2,12.99,3,38.97,3.51, 42.48"Wed Oct 9 17:11:12 CDT 2019")

INSERT INTO Purchases

VALUES (3,2,2,12.99,1.0,12.99,1.1691,14.1591,"Wed Oct 16 17:11:12 CDT 2019")

INSERT INTO Purchases

VALUES (4,2,3,3.99,1.0,3.99,0.35910000000000003,4.3491,"Wed Oct 16 17:11:12 CDT 2019")

INSERT INTO Purchases

VALUES (5,3,4,4.99,2.0,9.98,0.8982,10.8782,"Wed Oct 16 17:11:12 CDT 2019")

INSERT INTO Purchases

VALUES (6,3,5,7.99,1.0,7.99,0.7191,8.7091,"Wed Oct 16 17:11:12 CDT 2019")

INSERT INTO Purchases

VALUES (7,4,1,20.0,1.0,20.0,1.7999999999999998,21.8,"Wed Oct 16 17:11:12 CDT 2019")

INSERT INTO Purchases

VALUES (8,4,3,3.99,1.0,3.99,0.35910000000000003,4.3491,"Wed Oct 16 17:11:12 CDT 2019")

INSERT INTO Purchases

VALUES (9,5,2,12.99,1.0,3.99,0.35910000000000003,4.3491,"Wed Oct 16 17:11:12 CDT 2019")

INSERT INTO Purchases

VALUES (10,5,5,7.99,1.0,3.99,0.35910000000000003,4.3491,"Wed Oct 16 17:11:12 CDT 2019")