Store Management System

(USER MODULE AND REPORT)

Table of Contents

1.Introduction

1.1 Project Summary

1.2 Purpose of the Document

1.3 Scope

1.4 System Purpose

1.5 UserModule

1.6 Technologies to be used

1.7 Functional Requirements

1.8 Non-functional Requirements

2.**SYSTEM DESIGN**

1. Introduction

1.1 Project Summary

The Store Management System is a Application is intended to provide complete solutions for customers. It will enable a customer to browse the products and purchase them online without having to visit store physically. We have five modules those are

* User Module
* Inventory Module
* Payment Module
* Invoice Module
* Reports and sales dashboard

1.2 Purpose of the Document

The purpose of this document is to make easy to understand more about this web application and features of this application. In this document everything is in-detail about this application and it acts like a guide to the customer and also developer.

1.3 Scope

In this project user module having the user and admin and guest are the three modules.in this the number of users can be registered by using the valid user name and password.And all the members are viewing the products and purchasing the products and also give a rating to the products.Admin can having the all the rights in the project.like adding ,deleting,updating products etc..

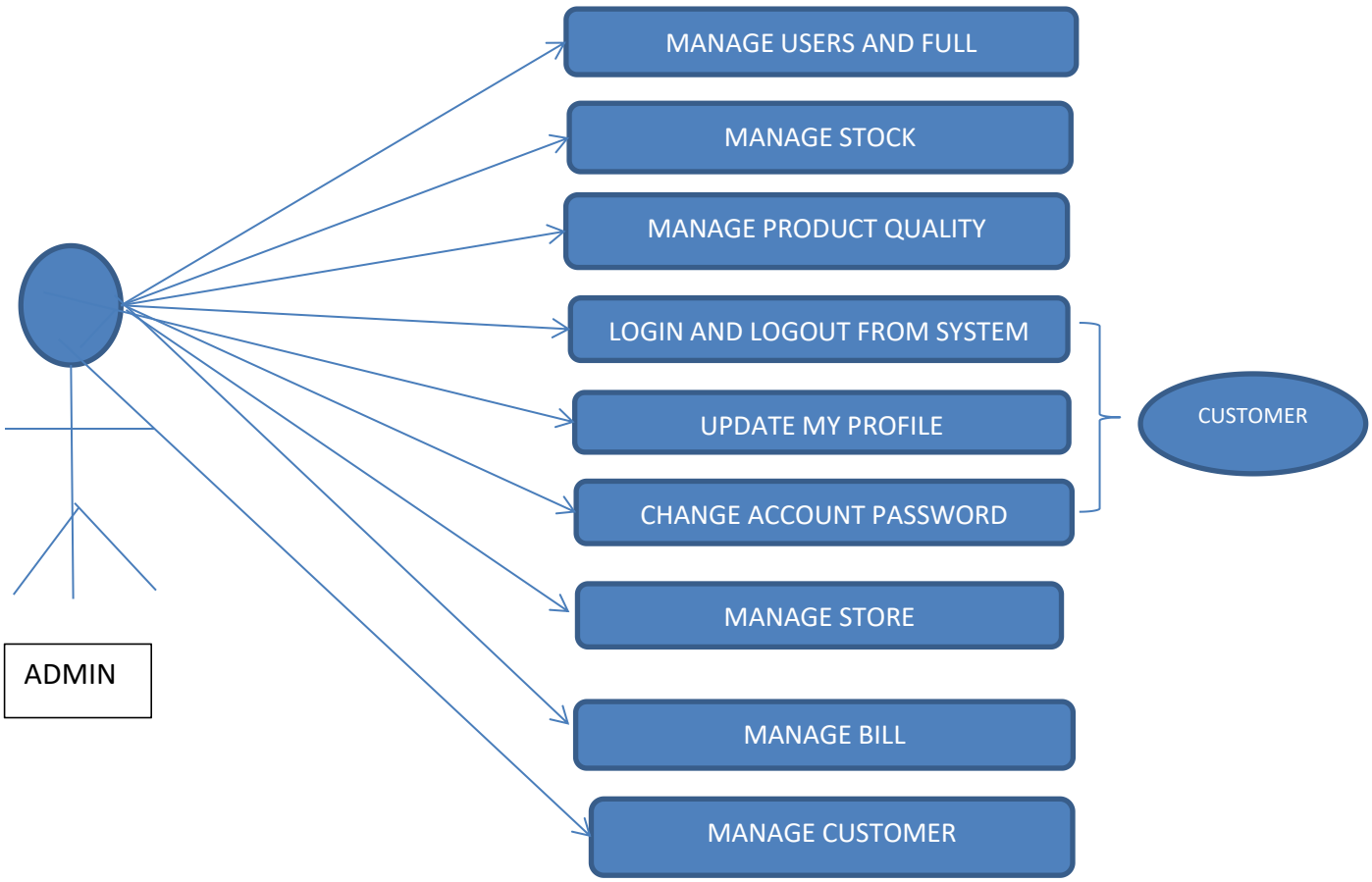
1.4 System Purpose

This Application is a virtual store where visitors come to this website and pick the product by their choice and if they want purchase them. This application is promising and trustworthy towards the customer and also online sellers can get wide range of customers. It saves time for the customers, no waiting in traffic to buy small things, no need to go to market. In this application everything in one place, user can purchase products online.

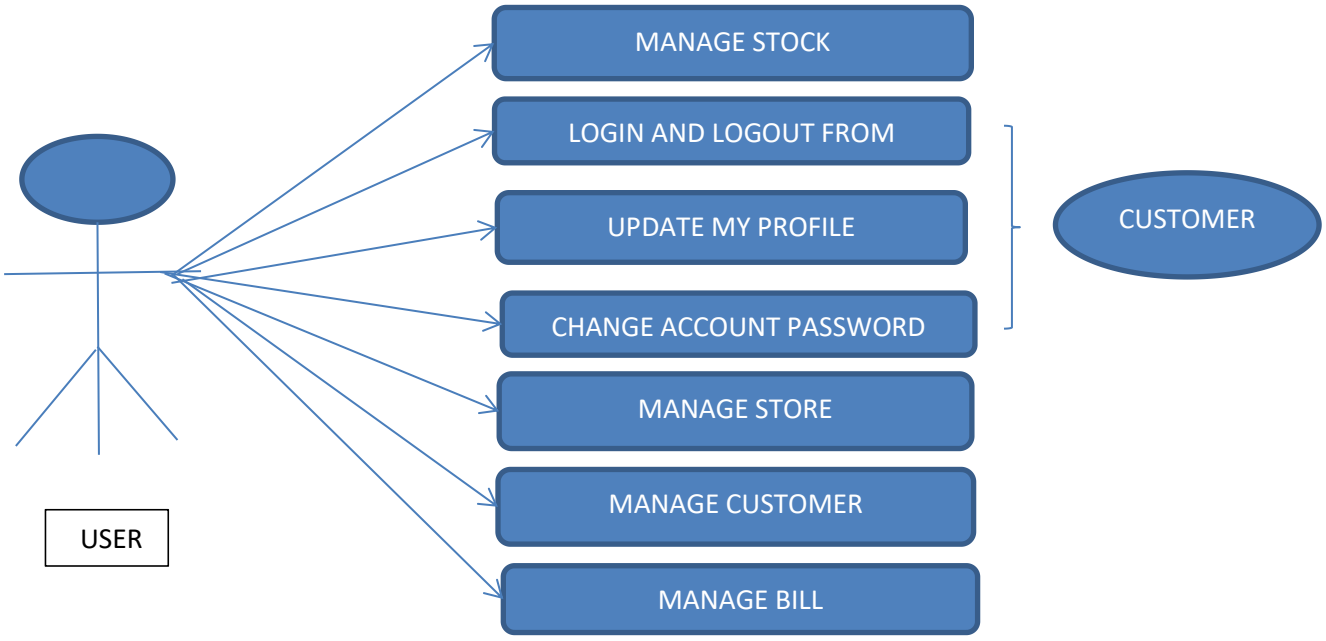
1.5 USER MODULE

In this application we have 3 types of users

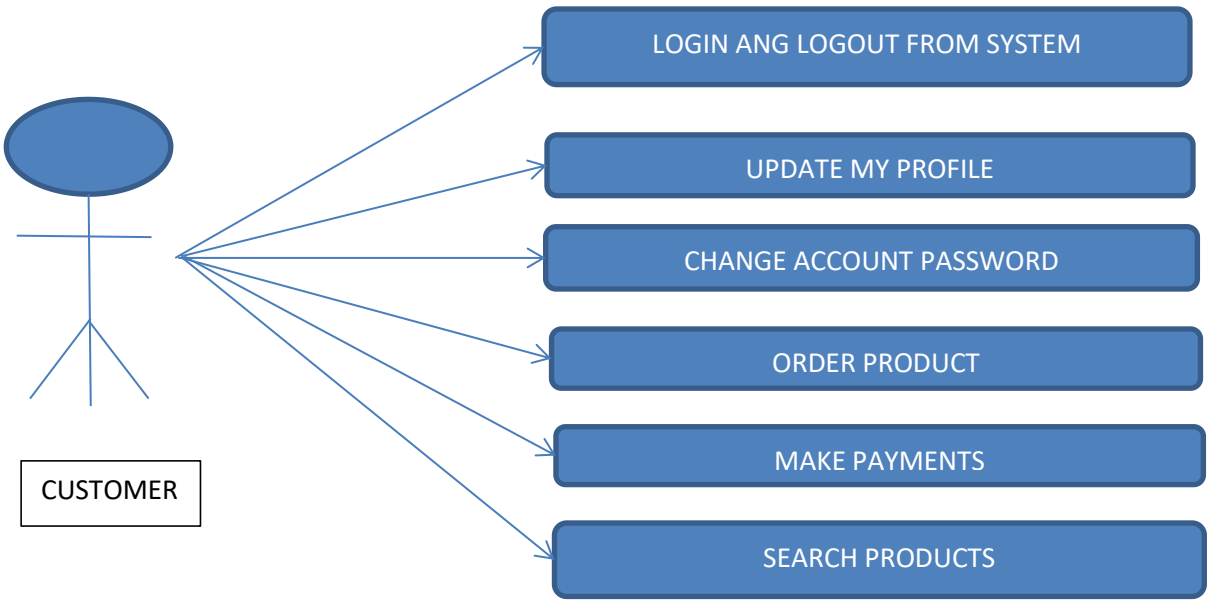
Admin: Admin logins to the system and manage all the functionalities of store management system.admin can add,edit,delete and view the records of stock ,product quality,customer ,login. Admin can manage all the details of product bill,store.Admin can alsogenerate reports of stock product,product quality,bill,customewr,store,admin can search the details of product customer ,store.Admin can apply different level of filters on report of stock bill,customer,Admin can traks the detailed information of product,product quality ,bill,customer.



User:Many number of users can be registered.And log in by using the valid username and password. A registered user can browse the products and purchase products. Registered user get availability on offers and user can change their details.



Guest:Guest also register by valid user name and password.And viewing the all the products in the store. An unregistered user can also browse the products and purchase the products but unregistered user can't avail the offers because he/she using guest mode.



1.6 Technologies to be used:

* Windows 10
* Java
* Apache Tomcat Web Server
* Oracle

1.7 Functional Requirements:

* If any product returned within the provided time then refund initiated.
* User can also view the History.

1.8 Non Functional Requirements:

* Payment Process is secured to purchasing the product.
* User Bank Account details maintained securely.

2.0 SYSTEM DESIGN

1. Class Diagram
2. UseCaseDiagram
3. Dataflowdiagram

1.ClassDiagram:

Store management system class diagram describes the structure of a SMS(store management system) classes,their attributes and operations or methods and the relationship among the objects.the main classes of the SMS are stock,product,product quality,bill,customer,store.

Classes of SMS class diagram:

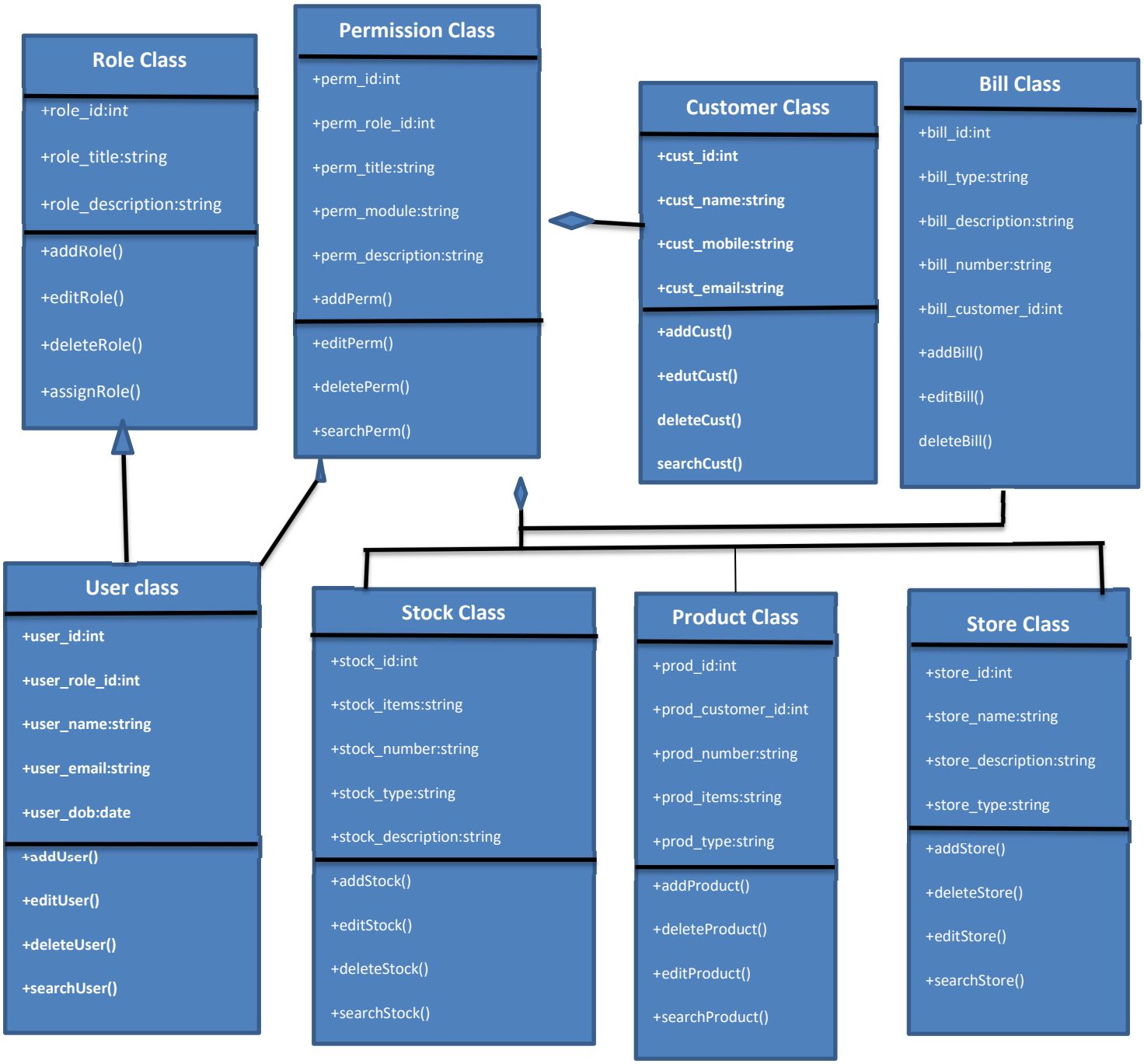
- **Stock class**: manage all the operations of stock
- **Product class**:manage all the operations of the product.
- **Product quality class**:manage all the operations of product quality.
- **Bill class**:manage all the operations of bill.
- **Customer class**:manage all the operations of customer.
- **Store class**:manage all the operations of the store.

Classes and their attributes of SMS class diagram:

- **StockAttributes**:stock-id,stock-items,stock-number,stock-type,stock-description.
- **ProductAttributes**:product id,product customer id product items,product number,product type,product description.
- **Product quality Attributes**:product quality id,quality name,quality type, quality description.
- **Bill Attributes**:bii id,bill customer id,bill number,bill type,bill receipt,bill description.
- **Customer Attributes:**customer id,name,mobile,email,username.
- **Store Attribute:**store id,name,type,description.

Classes and their methods of SMS class diagram:

- **Stock methods:**addStock(),editstock(), deletestock(), updatestock(),savestock(),searchstock().
- **Product methods:**add product(),edit product(), delete product(), update product(),save product(), search product().
- **Productquality methods:**add product quality(), edit product qualit(), delete product quality(),update product quality(), save product quality(),search product quality().
- **Bill methods**:add bill(),edit bill(), delete bill(), update bill(),save bill(), search bill().
- **Customer methods:**addcustomer(),edit customer(),delete customer(), update customer(), save customer(),search customer().
- **Store methods**:add store(),edit store(),delete store(),update store(),save store(),search store().

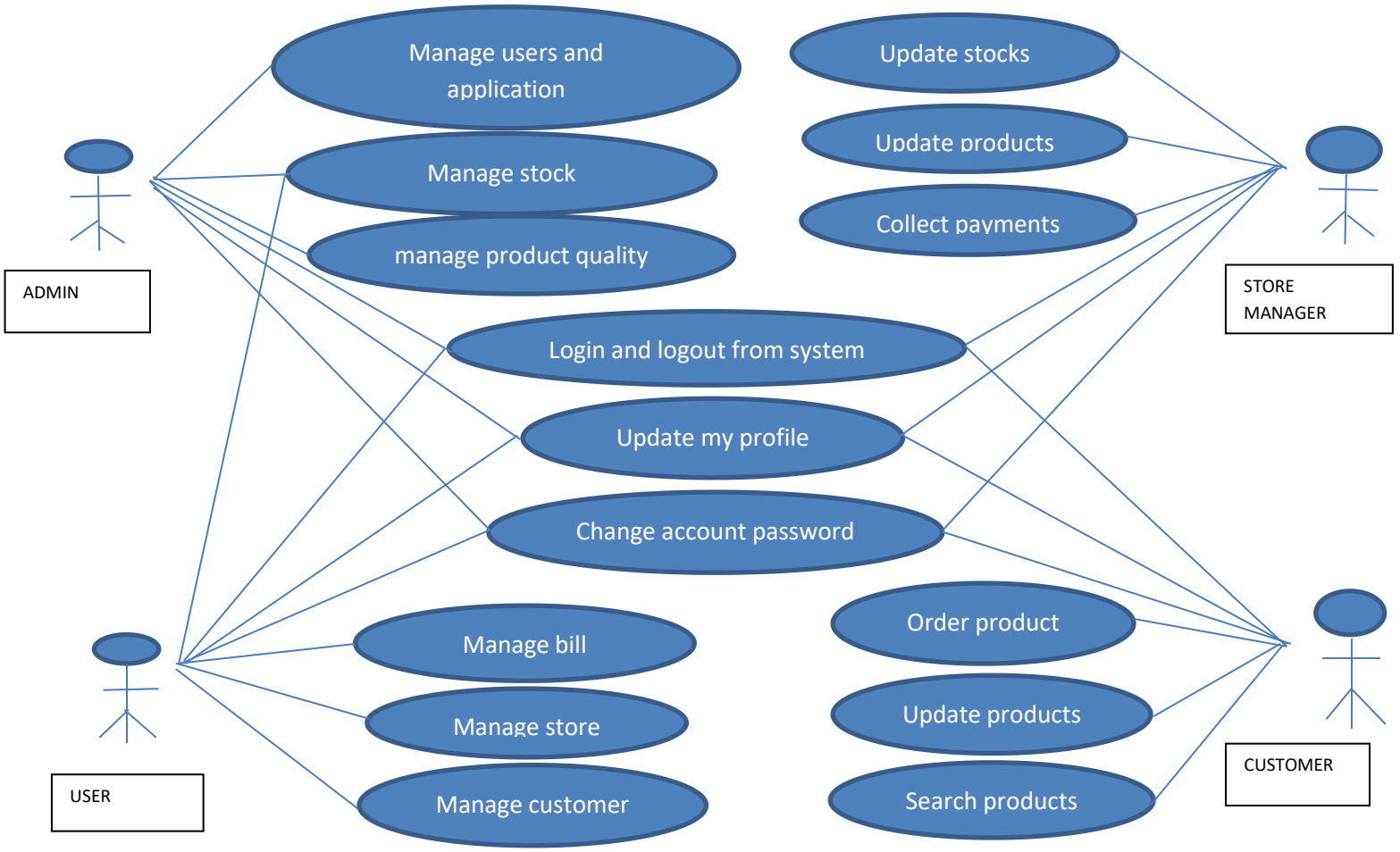

Role Class
+role_id:int
+role_title:string
+role_description:string
+addRole()
+editRole()
+deleteRole()
+assignRole()
Permission Class
+perm_id:int
+perm_role_id:int
+perm_title:string
+perm_module:string
+perm_description:string
+addPerm()
+editPerm()
+deletePerm()
+searchPerm()
Customer Class
+cust_id:int
+cust_name:string
+cust_mobile:string
+cust_email:string
+addCust()
+edutCust()
deleteCust()
searchCust()
Bill Class
+bill_id:int
+bill_type:string
+bill_description:string
+bill_number:string
+bill_customer_id:int
+addBill()
+editBill()
deleteBill()
User class
+user_id:int
+user_role_id:int
+user_name:string
+user_email:string
+user_dob:date
+addUser()
+editUser()
+deleteUser()
+searchUser()
Stock Class
+stock_id:int
+stock_items:string
+stock_number:string
+stock_type:string
+stock_description:string
+addStock()
+editStock()
+deleteStock()
+searchStock()
Product Class
+prod_id:int
+prod_customer_id:int
+prod_number:string
+prod_items:string
+prod_type:string
+addProduct()
+deleteProduct()
+editProduct()
+searchProduct()
Store Class
+store_id:int
+store_name:string
+store_description:string
+store_type:string
+addStore()
+deleteStore()
+editStore()
+searchStore()

2.USECASEDIAGRAM:

The use case diagram is grapic depiction of theinteractions among the elements of Store Management System. It represents the methodology used in system analysis to identify, clarify, and organize system requirements of Store Management System. The main actors of Store Management System in this Use Case Diagram are: Super Admin, System User, Store Manager, Customer, who perform the different type of use cases such as Stock, Manage Product, Manage Product Quality, Manage Bill, Manage Customer, Manage Store, Manage Users and Full Store Management System Operations. Major elements of the UML use case diagram of Store Management System are shown on the picture below.

The relationships between and among the actors and the use cases of Store Management System:

- **Super Admin Entity** : Use cases of Super Admin are Stock, Manage Product, Manage Product Quality, Manage Bill, Manage Customer, Manage Store, Manage Users and Full Store Management System Operations
- **System User Entity** : Use cases of System User are Stock, Manage Product, Manage Product Quality, Manage Bill, Manage Customer, Manage Store
- **Store Manager Entity** : Use cases of Store Manager are Update Products, Update Stocks, Create Invoices, Collect Payments
- **Customer Entity** : Use cases of Customer are Search Products, View Stocks, Order Products, Make Payment, Check Order History.

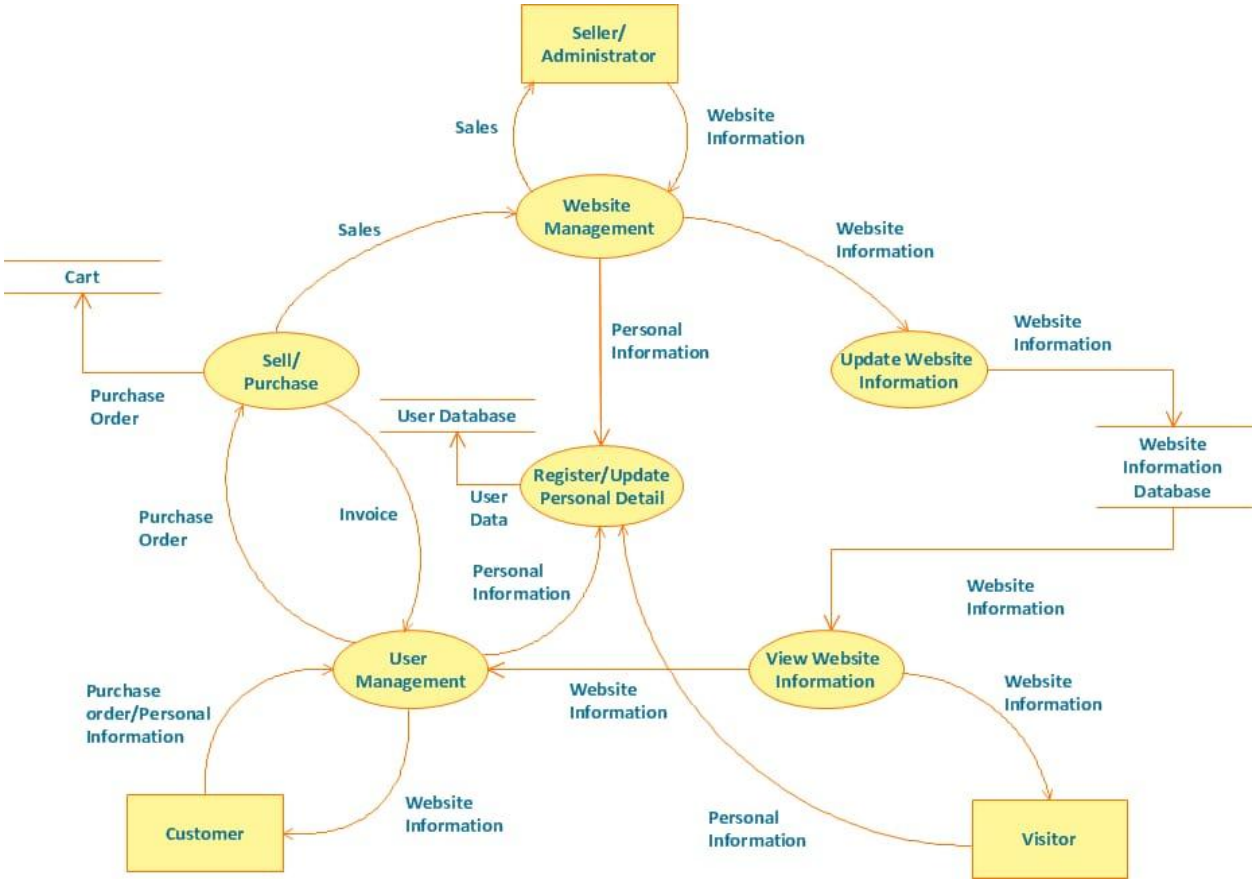

Manage users and application
Manage stock
manage product quality
Update stocks
Update products
Collect payments
ADMIN
STORE MANAGER
Login and logout from system
Update my profile
Change account password
Manage bill
Manage store
Manage customer
Order product
Update products
Search products
USER
CUSTOMER

3.DataFlowDiagram:

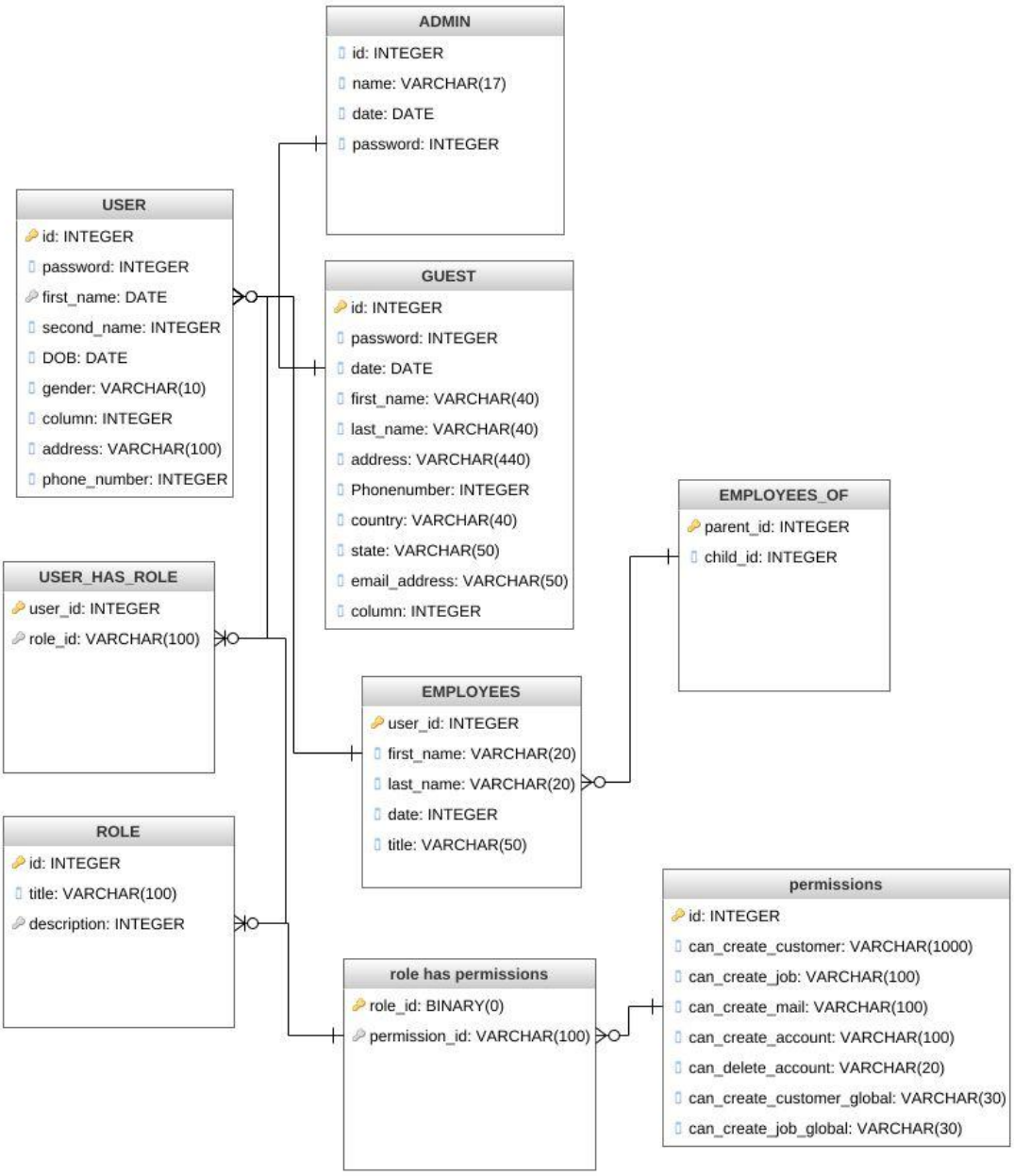
Structured-systems analysis and design method uses data flow diagrams to represent the process of data flowing through a system. Talking about this might be useless without a proper example of DFD for online store (Data Flow Diagram).

This DFD example shows all the distinctness that a diagram can bring into a scattered data structure. Data flow diagrams are used to show how data is processed within some business processes. Making DFD is a common practice for business process modeling and analysis. This diagram represents the online store business flow. It describes inputs and outputs within online selling process and depicts the interactions between its participants.

This DF diagram can be used by system analysts to create an overview of a business, to study and discover its inherent strengths and weak points.


Seller/
Administrator
Sales
Website
Information
Website
Management
Sales
Website
Information
Cart
Personal
Information
Website
Information
Sell/
Purchase
Update Website
Information
Purchase
Order
User Database
Website
Information
Database
Register/Update
Personal Detail
User
Data
Purchase
Order
Invoice
Personal
Information
Website
Information
User
Management
View Website
Information
Website
Information
Purchase
order/Personal
Information
Website
Information
Customer
Personal
Information
Visitor

DATABASE DIAGRAM:



Project summary

This project is about creating a sales and dashboard for a SMS application. It shows the catalogue of various things available for purchase in the store, and all the sales report.

Purpose

To show the whole store sales report at detail. Where one can know how much sales has happened till date. To make easy business solutions.

Goals

- To offer all sales reports with a high degree of accuracy. To offer all sales reports with a high degree of accuracy.
- To figure out how many sales were made based on the number of customers that came in and placed orders.

1. List of products sold
2. List of quantity sold against each product.
3. List of quantity and total sales against each product
4. List of quantity sold against each product and against each store.
5. List of quantity sold against each Store with total turnover of the store.
6. List of products which are not sold
7. List of customers who have not purchased any product.

Here we will take customers, products, sales tables and use above operations to know the information.

```
CREATE TABLE IF NOT EXISTS `customers` (
  `c_id` int(1) DEFAULT NULL,
  `customer` varchar(4) DEFAULT NULL
) ENGINE=MyISAM DEFAULT CHARSET=utf8;
```

```
--
-- Dumping data for table `customers`
--

INSERT INTO `customers` (`c_id`, `customer`) VALUES
(1, 'Rabi'),
(2, 'Raju'),
(3, 'Alex'),
(4, 'Rani'),
(5, 'King'),
(7, 'Ronn'),
(8, 'Jem'),
(9, 'Tom');

-- --------------------------------------------------------

--
-- Table structure for table `products`
--

CREATE TABLE IF NOT EXISTS `products` (
  `p_id` int(1) DEFAULT NULL,
  `product` varchar(12) DEFAULT NULL,
  `price` int(2) DEFAULT NULL
) ENGINE=MyISAM DEFAULT CHARSET=utf8;

--
-- Dumping data for table `products`
--

INSERT INTO `products` (`p_id`, `product`, `price`) VALUES
(1, 'Hard Disk', 80),
(2, 'RAM', 90),
(3, 'Monitor', 75),
```

```
(4, 'CPU', 55),
(5, 'Keyboard', 20),
(6, 'Mouse', 10),
(7, 'Motherboard', 50),
(8, 'Power supply', 20);
```

```
-- --------------------------------------------------------

--
-- Table structure for table `sales`
--

CREATE TABLE IF NOT EXISTS `sales` (
  `sale_id` int(1) DEFAULT NULL,
  `c_id` int(1) DEFAULT NULL,
  `p_id` int(1) DEFAULT NULL,
  `product` varchar(7) DEFAULT NULL,
  `qty` int(1) DEFAULT NULL,
  `store` varchar(3) DEFAULT NULL
) ENGINE=MyISAM DEFAULT CHARSET=utf8;

--
-- Dumping data for table `sales`
--


INSERT INTO `sales` (`sale_id`, `c_id`, `p_id`, `product`, `qty`, `store`) VALUES
(1, 2, 3, 'Monitor', 2, 'ABC'),
(2, 2, 4, 'CPU', 1, 'DEF'),
(3, 1, 3, 'Monitor', 3, 'ABC'),
(4, 4, 2, 'RAM', 2, 'DEF'),
(5, 2, 3, 'Monitor', 3, 'ABC'),
(6, 3, 3, 'Monitor', 2, 'DEF'),
(7, 2, 2, 'RAM', 3, 'ABC'),
(8, 3, 2, 'RAM', 2, 'DEF'),
(9, 2, 3, 'Monitor', 2, 'ABC');

-- --------------------------------------------------------
```

Now we will use some operations of sql and fetch output:

1.List of products sold

```
SELECT product,p_id  FROM `sales` group by product
```

product	p_id
CPU	4
Monitor	3
RAM	2

2. List of quantity sold against each product.

```
SELECT product,p_id,sum(qty)  FROM `sales` group by product
```

product	p_id	sum(qty)
CPU	4	1
Monitor	3	12
RAM	2	7

3. List of quantity and total sales against each product

```
SELECT a.product,a.p_id,sum(qty), sum(qty*price)  FROM `sales`

 a LEFT JOIN products b on a.p_id = b.p_id group by product
```

product	p_id	sum(qty)	sum(qty*price)
CPU	4	1	55
Monitor	3	12	900
RAM	2	7	630

4. List of quantity sold against each product and against each store.

```
SELECT product , store , sum(qty)   FROM sales group by product, store
```

product	store	sum(qty)
CPU	DEF	1
Monitor	ABC	10
Monitor	DEF	2
RAM	ABC	3
RAM	DEF	4

5.List of quantity sold against each Store with total turnover of the store.

```
SELECT  a.store, sum(qty) total_qty,

sum(b.price * ( a.qty )) AS total_price  FROM sales a

 LEFT JOIN products b ON a.p_id = b.p_id GROUP BY store
```

store	total_qty	total_price
ABC	13	1020
DEF	7	565

6. List of products which are not sold

```
SELECT a.product , a.p_id   FROM products  a

LEFT JOIN sales  b on a.p_id=b.p_id  WHERE b.sale_id is null
```

product	p_id
Hard Disk	1
Keyboard	5
Mouse	6
Motherboard	7

7. List of customers who have not purchased any product.

```
SELECT a.customer, a.c_id from customers a


LEFT JOIN sales b  on a.c_id=b.c_id WHERE b.sale_id IS NULL
```

customer	c_id
King	5
Ronn	7
Jem	8
Tom	9

Here we will calculate monthly sales using SQL

```
create table sales(order_date date,sale int);


mysql>select * from sales;
+------------+------+
| order_date | sale |
+------------+------+
| 2020-01-01 |   10 |
| 2020-01-02 |   12 |
| 2020-01-03 |   15 |
```

```
| 2020-01-04 |   11 |
| 2020-01-05 |   13 |
| 2020-01-06 |    9 |
| 2020-01-07 |   21 |
| 2020-01-08 |   10 |
| 2020-01-09 |   10 |
| ...        |   ...|
```

```
insert into sales(order_date,sale)
      values('2020-01-01',10),('2020-01-02',12),('2020-01-03',15),
      ('2020-01-04',11),('2020-01-05',13),('2020-01-06',9),
      ('2020-01-07',21),('2020-01-08',10),('2020-01-09',10),
      ('2020-01-10',2),('2020-01-11',16),('2020-01-12',12),
      ('2020-01-13',10),('2020-01-14',18),('2020-01-15',15),
      ('2020-01-16',12),('2020-01-17',10),('2020-01-18',18),
      ('2020-01-19',14),('2020-01-20',16),('2020-01-21',12),
      ('2020-01-22',21),('2020-01-23',13),('2020-01-24',15),
      ('2020-01-25',20),('2020-01-26',14),('2020-01-27',16),
      ('2020-01-28',15),('2020-01-29',10),('2020-01-30',18);
```

```
select year(order_date),month(order_date),sum(sale)
     from sales
     group by year(order_date),month(order_date)
     order by year(order_date),month(order_date);
+------------------+-------------------+-----------+
| year(order_date) | month(order_date) | sum(sale) |
+------------------+-------------------+-----------+
|             2020 |                 1 |       408 |
```

```
|             2020 |                 2 |       320 |
|             2020 |                 3 |       540 |
```

The above query uses SUM function which will help you sum the total sales every month.

```
select year(order_date),month(order_date),count(sale)
     from sales
     group by year(order_date),month(order_date)
     order by year(order_date),month(order_date);
```

```
+------------------+-------------------+-----------+
| year(order_date) | month(order_date) | sum(sale) |
+------------------+-------------------+-----------+
|             2020 |                 1 |        18 |
|             2020 |                 2 |        10 |
|             2020 |                 3 |        21 |
|              ... |               ... |       ... |
```

```
create table sales(product varchar(255),order_date date,sale int);


mysql> insert into sales values('A','2020-01-01',20),('B','2020-0
1-02',25),
('B','2020-01-03',15),('A','2020-01-04',30),('A','2020-01-05',20);


mysql> select * from sales;
```

```
+---------+------------+------+
| product | order_date | sale |
+---------+------------+------+
|    A    | 2020-01-01 |   20 |
|    B    | 2020-01-02 |   25 |
|    B    | 2020-01-03 |   15 |
|    A    | 2020-01-04 |   30 |
|    A    | 2020-01-05 |   20 |
+---------+------------+------+


mysql> select product, year(order_date),month(order_date),sum(sal
e)
          from sales
          group by product, year(order
```

```
select * from sales;
+---------+------------+------+
| product | order_date | sale |
+---------+------------+------+
|    A    | 2020-01-01 |   20 |
|    B    | 2020-01-02 |   25 |
|    B    | 2020-01-03 |   15 |
|    A    | 2020-01-04 |   30 |
|    A    | 2020-01-05 |   20 |
+---------+------------+------+
select product, year(order_date),month(order_date),sum(sale)
          from sales
          group by product, year(order_date),month(order_date)
          order by product, year(order_date),month(order_date);
```

```
+---------+------------------+-------------------+-----------+
| product | year(order_date) | month(order_date) | sum(sale) |
+---------+------------------+-------------------+-----------+
| A       |             2020 |                 1 |        70 |
| B       |             2020 |                 1 |        40 |
| ...     |              ... |               ... |       ... |
```

You can calculate percentage growth month by month using the following SQL.

```
create table monthly_sales(month int,sale int);
mysql> insert into monthly_sales(month,sale) values(1,20),
(2,30),(3,25),(4,45),(5,25);
mysql> select * from monthly_sales;
+-------+------+
| month | sale |
+-------+------+
| 1     |   20 |
| 2     |   30 |
| 3     |   25 |
| 4     |   45 |
| 5     |   25 |
+-------+------+
```

```
select month, sale,
    if(@last_entry = 0, 0, round(((sale - @last_entry) / @last_en
try) * 100,2)) "growth rate",
    @last_entry := sale
```

```
    from
    (select @last_entry := 0) x,
    (select month, sum(sale) sale
    from   monthly_sales
    group by month) y;
+-------+------+-------------+---------------------+
| month | sale | growth rate | @last_entry := sale |
+-------+------+-------------+---------------------+
| 1     |   20 |           0 |                  20 |
| 2     |   30 |       50.00 |                  30 |
| 3     |   25 |      -16.67 |                  25 |
| 4     |   45 |       80.00 |                  45 |
| 5     |   25 |      -44.44 |                  25 |
+-------+------+-------------+---------------------+
```

SQL Query to Compare Product Sales By Month

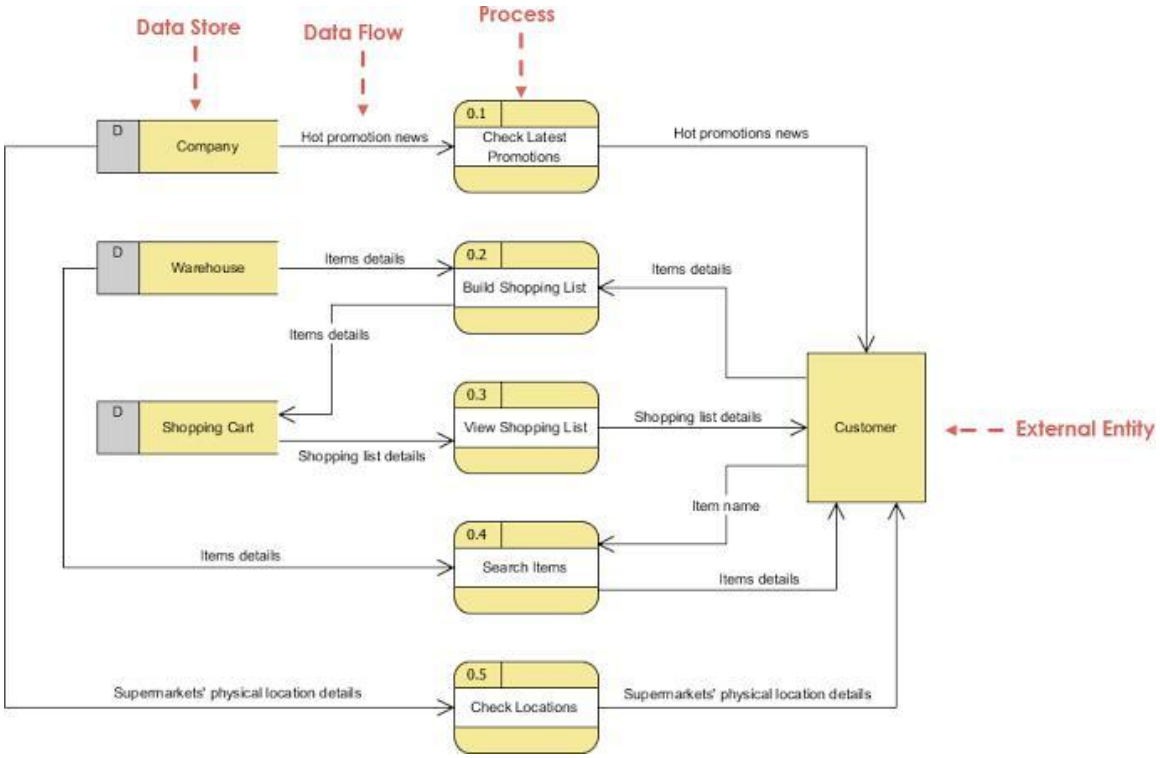
```
create table sales(product varchar(255),order_date date,sale int);


mysql> insert into sales values('Pen','2020-01-01',20),('Paper','
2020-01-02',25),
('Paper','2020-01-03',15),('Pen','2020-01-04',30),('Paper','2020-
01-05',20)
...;


mysql> select * from sales;
+---------+------------+------+
| product | order_date | sale |
```

```
+---------+------------+------+
| Pen     | 2020-01-01 |   20 |
| Paper   | 2020-01-02 |   25 |
| Paper   | 2020-01-03 |   15 |
| Pen     | 2020-01-04 |   30 |
```

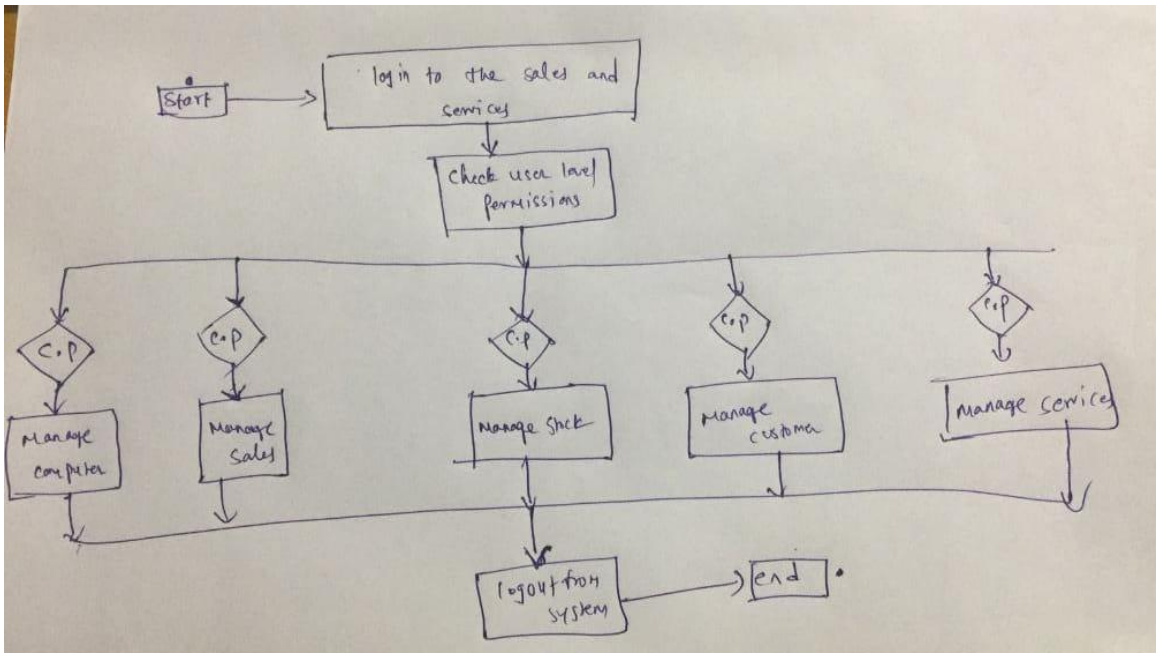
```
SELECT date_format(order_date,'%b-%y') as order_date,
       sum(IF(product='Pen', sale, NULL)) AS Pen,
       sum(IF(product='Paper', sale, NULL)) AS Paper
       FROM sales
       GROUP BY year(order_date),month(order_date),date_format(or
der_date,'%b-%y')
       ;
+------------+------+-------+
| order_date | Pen  | Paper |
+------------+------+-------+
| Jan-20     |  200 |   320 |
| Feb-20     |  250 |   220 |
| Mar-20     |  230 |   290 |
| Apr-20     |  190 |   210 |
| May-20     |  210 |   230 |
| Jun-20     |  320 |   120 |
| Jul-20     |  330 |   220 |
| Aug-20     |  210 |   260 |
| Sep-20     |  120 |   220 |
| Oct-20     |  280 |   120 |
| Nov-20     |  290 |   280 |
| Dec-20     |  200 |   320 |
```

SYSTEM DESIGN:

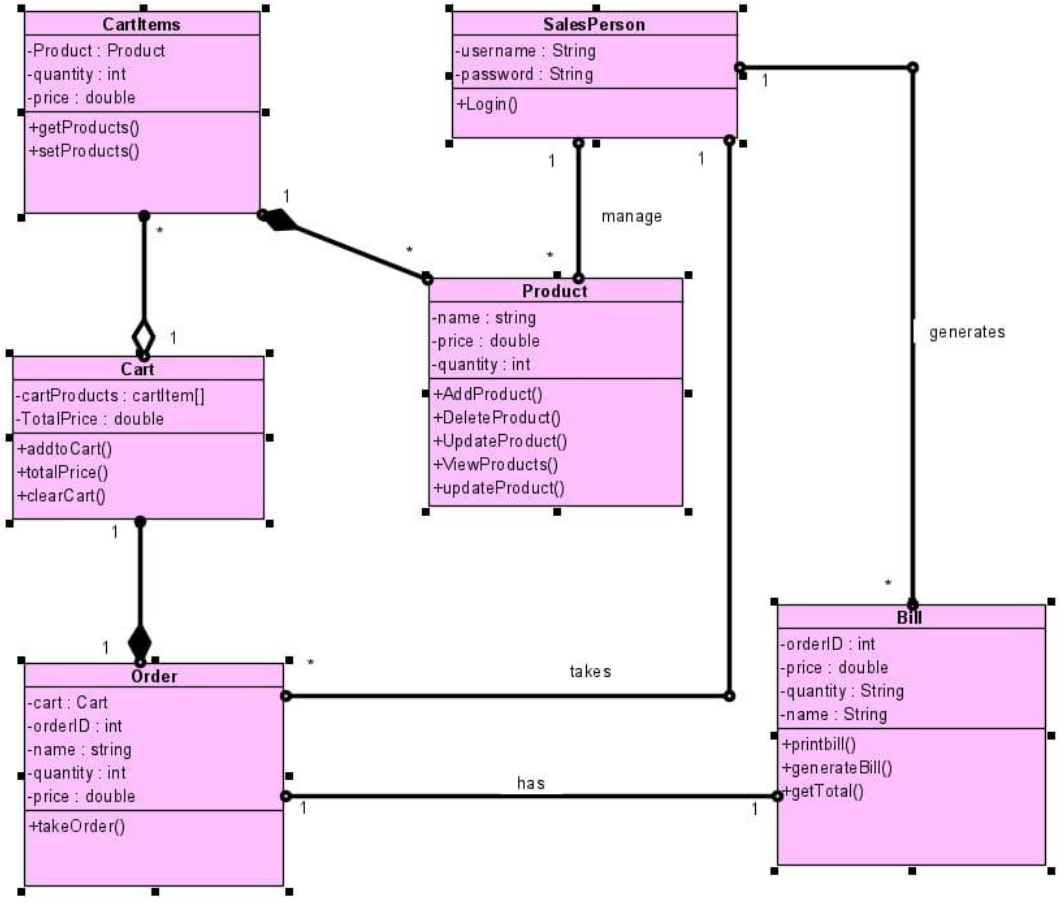
DATA FLOW DIAGRAM:



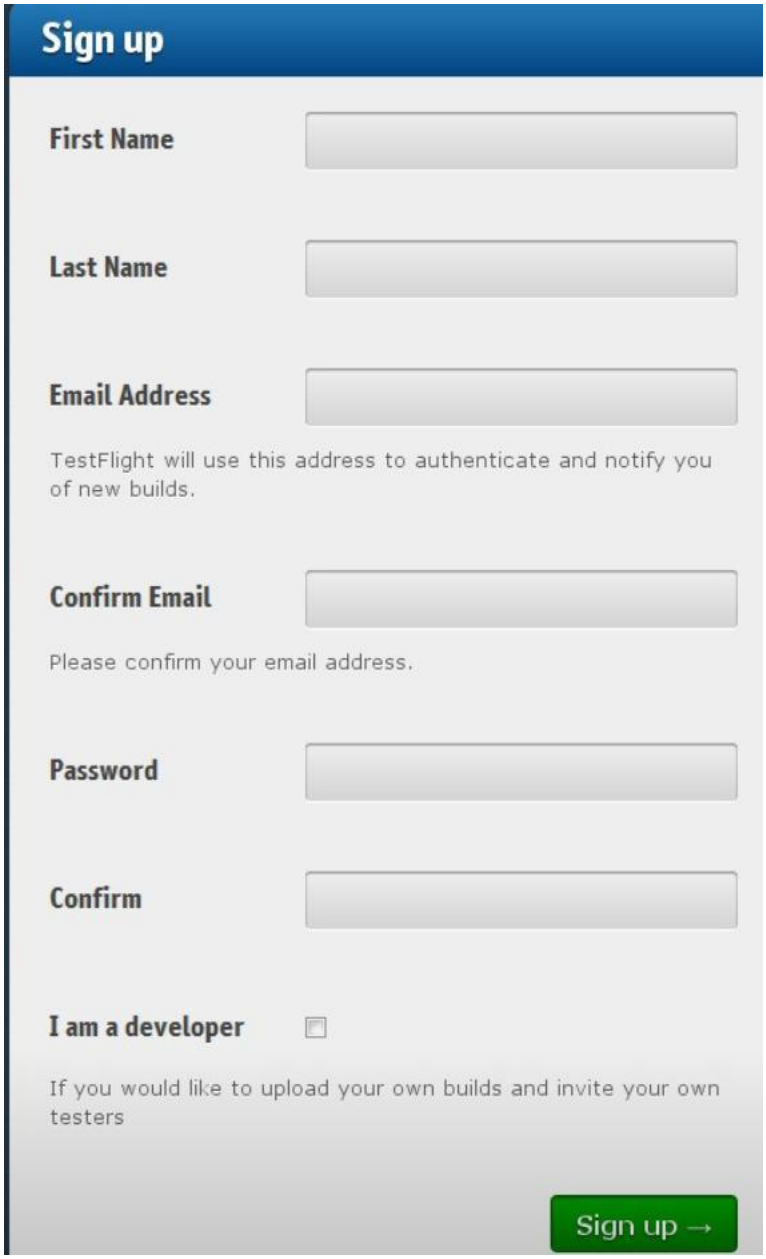
USE CASE DIAGRAM:

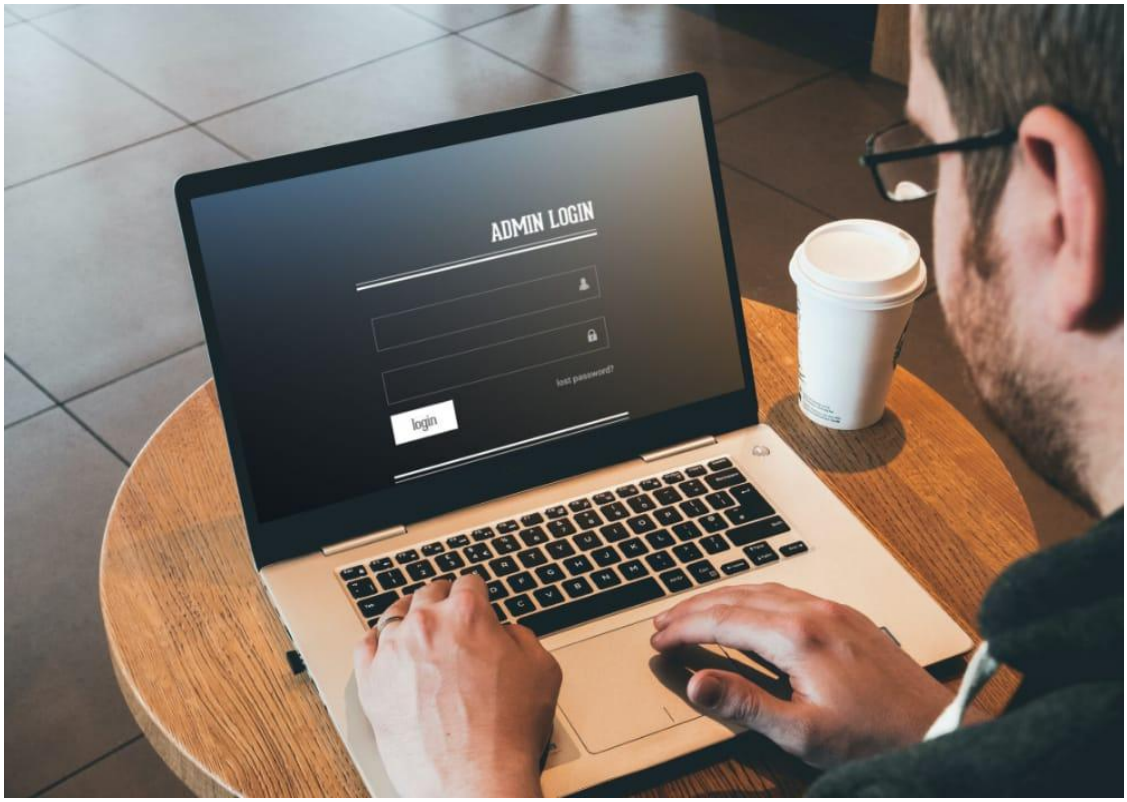


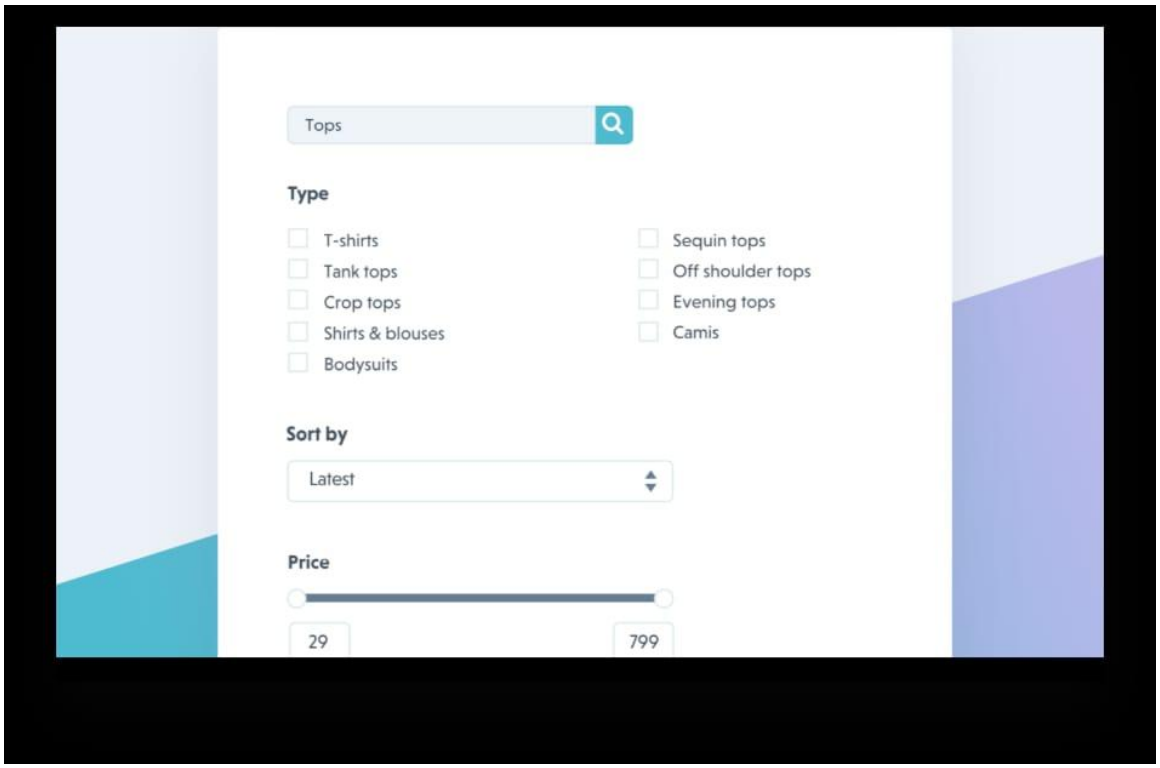
CLASS DIAGRAM:

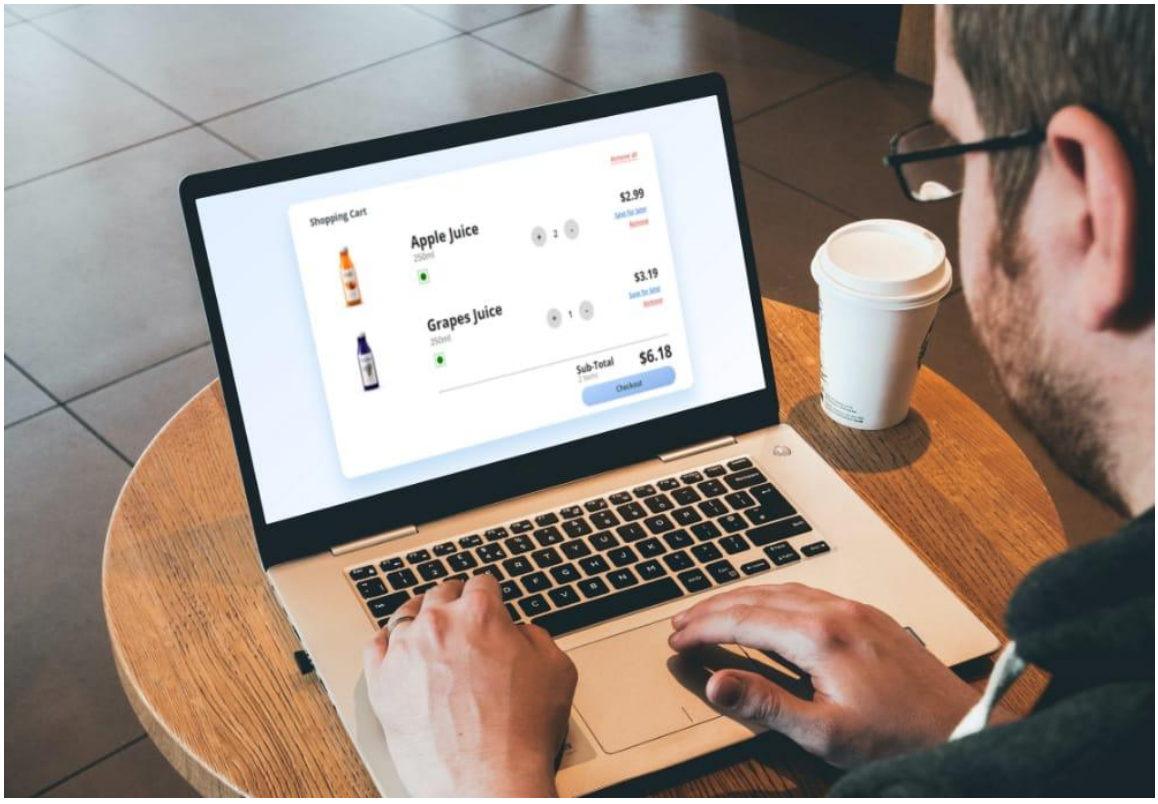


MOCKUP SCREENS:


Sign up
First Name
Last Name
Email Address
TestFlight will use this address to authenticate and notify you of new builds.
Confirm Email
Please confirm your email address.
Password
Confirm
I am a developer
If you would like to upload your own builds and invite your own testers
Sign up →


ADMIN LOGIN
lost password?
login


Tops
Type
T-shirts
Tank tops
Crop tops
Shirts & blouses
Bodysuits
Sequin tops
Off shoulder tops
Evening tops
Camis
Sort by
Latest
Price
29
799


Shopping Cart
Apple Juice
$2.99
Grapes Juice
$3.19
Sub-Total
$6.18
Checkout