**Assignment Plan**

**Assignment** : - Create web - based application for e-commerce site

**Problem statement :** -

Create web-based application which provides facilities like user-registration, login and users can buy the different products from different categories from the list of the products .after addition of products user will able to check-out and he/she able to see the list of chosen products with quantity and total amount .

**Users** : - Customers.

**Database Schema**:-

**2)User\_credentials** : -

|  |  |  |  |
| --- | --- | --- | --- |
| UserId(pk) | UserName(unique) varchar | Password varchar | UserType varchar |

**1) Customers** : -

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CustId int(fk-user) | Name varchar | Address varchar | e-mail varchar | Contact int(10) |

**3) Products** :-

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Prod\_id int(pk) | ProdName vachar | Category varchar | Avai\_quantity int | Price int |

**4) Cart :-**

|  |  |
| --- | --- |
| CartId int(pk) | UserId int(fk -user) |

**5) Order\_Details :-**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| OrderDetail\_id(pk) | Prod\_id int(fk-product) | CartId int(fk-cart) | reqQuantity int | Price int |

**6) OrderHistory :-**

|  |  |  |  |
| --- | --- | --- | --- |
| OrderHistoryId int(pk) | userId int(fk - user) | OrderPrice int | Date datetime |

( tables will be modified if required)

**Application flow : -**

- initially, if user is not registered , will registered first and create unique username and password and login ,else he/she will able to login.

- All information provided for registration will be validate on the client and server side .

- if information validated correctly , then password will be hashed and record will save.

- at user's dashboard , there'll be list of products with their name , price and category .

- User will able to filter the products list with attributes like name , category and price.

- User will able to sort the product list by product name and category

- user will able choose products with as per required quantity and add to cart if available quantities are more than required quantity.

- The final price of order will be generated runtime as product get added or removed for the cart.

- Product list will be updated each time cart get updated

- after checkout , he/she will able to see the cart containing list of selected products with final bill amount . where he can update or delete products from the list.

- after placing order final order \_details will generated at orderHistory table.

**Technology going to use** : -

**Front - end :-** HTML5, CSS, JavaScript

**Backend : -** Spring MVC

**Database : -** MySQL

**Algorithms :-**

**Encryption** : - BcryptPasswordEncryption for password encryption .

**Design pattern : -**

**Singleton** : - for using database connection object through-out application.

**Factory** : - Selection of products

( rest of the design patterns and algorithms will going to decide at actual implementation )