Name :- Dibyendu Mukhopadhyay
Class :- BCSE-IV Group :- A3   **RollNo.** :- 001710501077
Subject - Internet Technology Lab

Assignment No. :- **04**

Problem Statement

Deadline: December14,15,16, 2020 (respective classes)
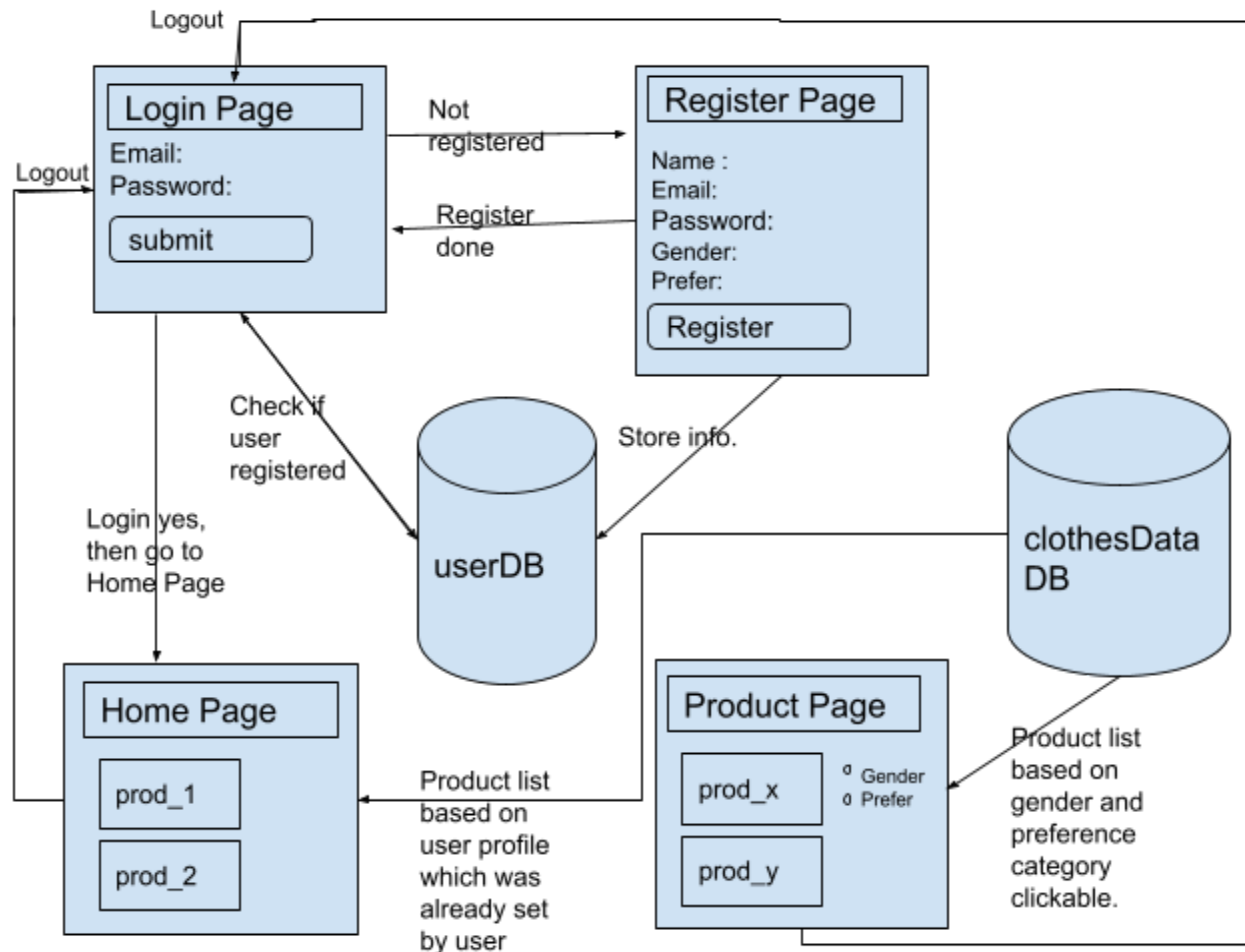Assignment 4:

Design an online apparel store using servlets. The store keeps records for its items in a database where some items may be discounted and some other items should be displayed as "new arrivals". A user may search for a specific item. By default, when a user signs in, based on his/her profile (male/female etc.), show him/her preferred set of clothing. Users will be divided into two groups: some users looking for discounted items mainly, some others looking for new arrivals. So, depending on their preference already set in the database, their shopping experience would be different.

You may apply the concept of session and cookies for tracking user behaviour. You may use SessionListener and/or ServletContextListener. Database connectivity code should not be hardcoded in any servlet.

Solution Approach:-

The aim of this assignment is to provide a MVC structure to organize the web application, so called "**Apparel Stores**".

Design diagram of the problem :-

When the user opens the web application, at first, the user will get a login page and he/she will have to login the page and If the user gets an error while checking the user database then it must be that the user has not registered . So, the user will have to redirect the register page and fill in the list of information. After filling, the list of information will go to the database for future purposes such as unique email and password for login the page ,and gender(Male/ Female) and preference(discounted/ most arrival) for the set of clothes listed in the home in order to enrich the user experience with the **concept of session**.

After that, if the user wishes to see the other products, then the user can click the product page and the new website will show up. The user can choose based on the given category such

male/female/most arrival/discounts. The database will give the browser the available product as a list where users can see the set of clothes. If not found, the product page will give the message that the current product is not available based on the above category.

While doing so, if the user wishes to logout, it is available to logout and it can be done by simply **invalidating the session.**

In this mode, JSP pages are used for the presentation layer, and servlets for processing tasks. The servlet acts as a controller, which is responsible for processing requests and creating any beans needed by the JSP page. The controller is also responsible for deciding which JSP page to forward the request. The JSP page retrieves objects created by the servlet and extracts dynamic content for insertion within a template.

<u>Salient Features</u>:-

1. The user registered and the list of information goes to MySQL where it is useful for the future.
2. The list of clothes details are viewed in JSP with html/css design and the clothes data passed from the controller.
3. When a client request is made, the service method is called and passed a request and response object. The servlet then determines whether the request is a GET or POST operation. It then calls one of the following methods: doGet or doPost. The doGet method is called if the request is GET and doPost is called if the request is POST. Both doGet and doPost take request (HttpServletRequest) and response (HttpServletResponse).
4. Redirecting the next website works with the help of **sendRedirect()** method or **RequestDispatcher .**
5. Users can search by applying the category and the data will be listed as per user's request.
6. An admin creates the model which is responsible for holding and deleting the data, that collaborates with MySQL with the help of a database API called jdbc.
7. A servlet controller helps to fetch data from DB, then processes the other logic and passes the data to view in web applications.

Input/Output:-

1. MySQL Script in MySQL workbench

```sql
CREATE DATABASE  IF NOT EXISTS `app_store` ;
USE `app_store`;

--
-- Table structure for table `clothesData`
--
DROP TABLE IF EXISTS `clothesData`;
CREATE TABLE `clothesData` (
 `id` int NOT NULL,
 `image` varchar(45) DEFAULT NULL,
 `prefer` varchar(45) NOT NULL,
 `gender` varchar(45) NOT NULL,
 `price` int NOT NULL,
 `ctype` varchar(255) DEFAULT NULL,
 PRIMARY KEY (`id`)
);
--
-- Table structure for table `user`
--
DROP TABLE IF EXISTS `user`;
CREATE TABLE `user` (
 `fname` varchar(45) NOT NULL,
 `lname` varchar(45) NOT NULL,
 `email` varchar(45) NOT NULL,
 `password` varchar(45) NOT NULL,
 `gender` varchar(45) NOT NULL,
 `prefer` varchar(45) NOT NULL,
 PRIMARY KEY (`email`)
) ;
```

2. User
   a. When user opens website and will see the sign in page
      Website :- **http://localhost:8081/shopServlet/login_register.jsp**

SIGN IN!

Your Email

Your Password

Submit

Hello.... Welcome to the Apparel Store

Note:- The store keeps records for its items in our data where some items may be discounted and some other items should be displayed as "new arrivals". You may search for a specific item. By default, when you sign in, based on your profile such as gender male/female, show you preferred set of clothing. In product store, you will be able to look for discounted items mainly, as well as look for new arrivals. So, depending on your preference already available in our store, your shopping experience would be different from other site.

New Member?

Have An Account

b. When a user registers the page if not already registered.
   Website : **http://localhost:8081/shopServlet/login_register.jsp**

REGISTER FORM

First Name   Last Name

Your Email

Password   Comfirm Password

Gender

○ Men   ○ Women

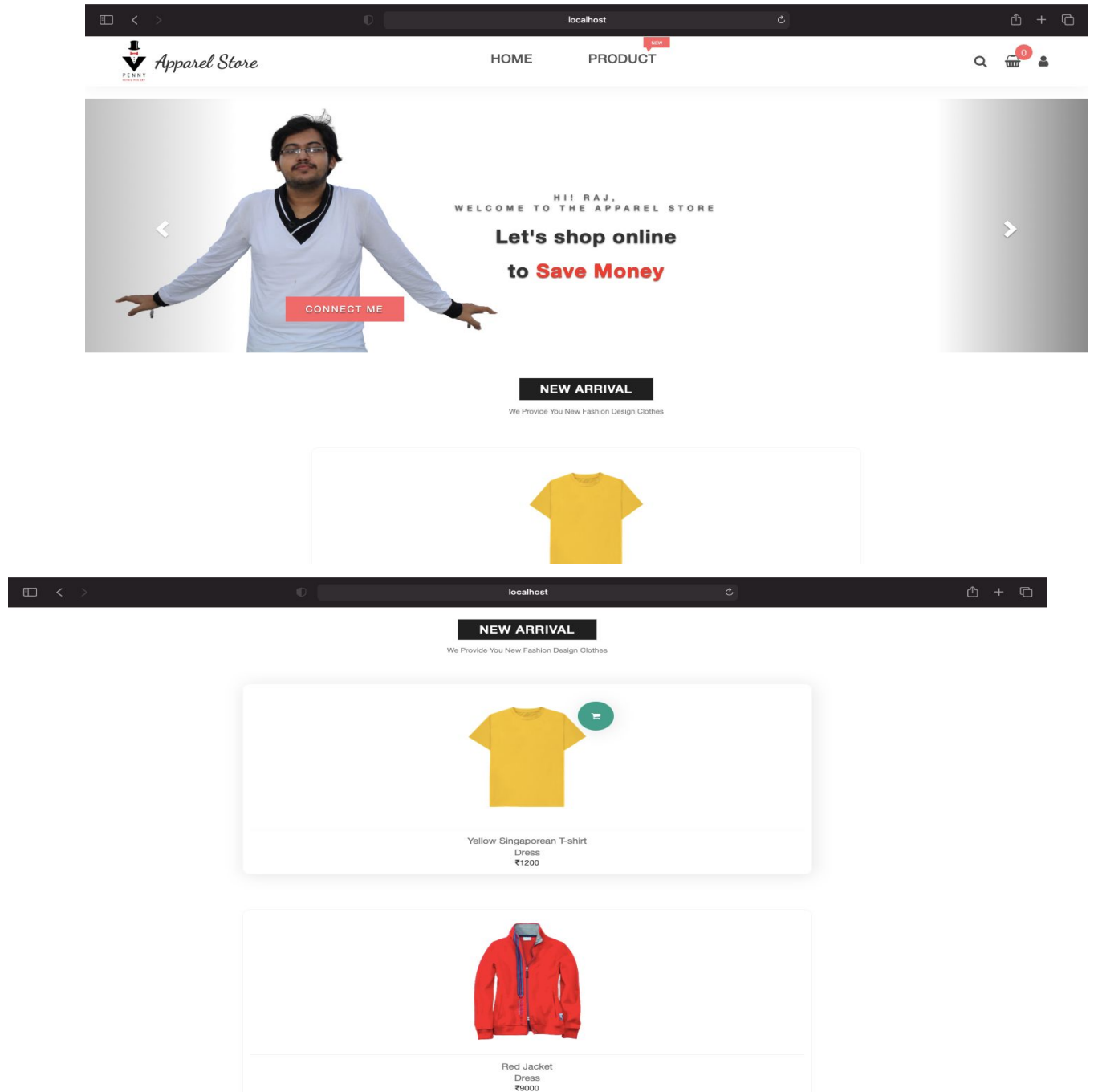Select Your Preference

Discounts ▲▼

☐ I agree to the Terms and Conditions

Register

Hello.... Welcome to the Apparel Store

Note:- The store keeps records for its items in our data where some items may be discounted and some other items should be displayed as "new arrivals". You may search for a specific item. By default, when you sign in, based on your profile such as gender male/female, show you preferred set of clothing. In product store, you will be able to look for discounted items mainly, as well as look for new arrivals. So, depending on your preference already available in our store, your shopping experience would be different from other site.

New Member?

Have An Account

3. User Home Page
   Website : **http://localhost:8081/shopServlet/Login**
   After login, this is the home page of the user. The clothes are given based on the user's profile information

4. User Product Page

Website : **http://localhost:8081/shopServlet/product.jsp**
The clothes will be listed based on the applied category. By default, Men and New
Arrival will be listed.