

IMPLEMENTATION

5.1 SOFTWARE'S USED

Software used in the project are as follows:

- Front End tools: HTML, CSS
- Back End tools: Java servlet
- Operating System: Windows, Linux
- Browser: Mozilla Firefox, Google Chrome
- Apache Tomcat 9 server
- MySQL database

Hypertext Markup Language

Hypertext Markup Language (HTML) is the standard markup language for creating web pages and web applications. With Cascading Style Sheets (CSS) and JavaScript it forms a triad of cornerstone technologies for the World Wide Web. Web browsers receive HTML documents from a web server or from local storage and render them into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document.

HTML elements are the building blocks of HTML pages. With HTML constructs, images and other objects, such as interactive forms, may be embedded into the rendered page. It provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items. HTML elements are delineated by tags, written using angle brackets. Tags such as `` and `<input />` introduce content into the page directly. Others such as `<p>...</p>` surround and provide information about document text and may include other tags as sub-elements. Browsers do not display the HTML tags, but use them to interpret the content of the page.

HTML can embed programs written in a scripting language such as JavaScript which affect the behavior and content of web pages. Inclusion of CSS defines the look and layout of content.

Cascading Style Sheets

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language. Although most often used to set the visual style of web pages and user interfaces written in HTML and XHTML, the language can be applied to any XML document,

including plain XML, SVG and XUL, and is applicable to rendering in speech, or on other media. Along with HTML and JavaScript, CSS is a cornerstone technology used by most websites to create visually engaging webpages, user interfaces for web applications, and user interfaces for many mobile applications.

CSS is designed primarily to enable the separation of presentation and content, including aspects such as the layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple HTML pages to share formatting by specifying the relevant CSS in a separate .css file, and reduce complexity and repetition in the structural content.

Java Servlet

Servlets are the Java programs that runs on the Java-enabled web server or application server. They are used to handle the request obtained from the web server, process the request, produce the response, then send response back to the web server.

Properties of Servlets :

- Servlets work on the server-side.
- Servlets capable of handling complex request obtained from web server.

Apache Server

Apache HTTP Server, colloquially called Apache, is free and open-source cross-platform web server software, released under the terms of Apache License 2.0. Apache is developed and maintained by an open community of developers under the auspices of the Apache Software Foundation.

Apache supports a variety of features, many implemented as compiled modules which extend the core functionality. These can range from server-side programming language support to authentication schemes. Some common language interfaces support Perl, Python, Tcl, and PHP. Popular authentication modules include mod_access, mod_auth, mod_digest, and mod_auth_digest, the successor to mod_digest.

Popular compression methods on Apache include the external extension module, mod_gzip, implemented to help with reduction of the size (weight) of Web pages served over HTTP. ModSecurity is an open source intrusion detection and prevention engine for Web applications. Apache logs can be analyzed through a Web browser using free scripts, such as AWStats/W3Perl or Visitors. Virtual hosting allows one Apache installation to serve many different Web sites. For example, one machine with one Apache installation could simultaneously serve www.example.com, www.example.org.

Apache features configurable error messages, DBMS-based authentication databases, and content negotiation. It is also supported by several graphical user interfaces (GUIs).

It supports password authentication and digital certificate authentication. Because the source code is freely available, anyone can adapt the server for specific needs, and there is a large public library of Apache add-ons

MySQL Database

MySQL is a Relational Database Management System (RDBMS). MySQL server can manage many databases at the same time. In fact, many people might have different databases managed by a single MySQL server. Each database consists of a structure to hold the data and the data itself. A data-base can exist without data, only a structure, be totally empty, twiddling its thumbs and waiting for data to be stored in it.

Data in a database is stored in one or more tables. You must create the data-base and the tables before you can add any data to the database. First you create the empty database. Then you add empty tables to the database. Database tables are organized like other tables that you're used in rows and columns. Each row represents an entity in the database, such as a customer, a book, or a project. Each column contains an item of information about the entity, such as a customer name, a book name, or a project start date. The place where a particular row and column intersect, the individual cell of the table, is called a field. Tables in databases can be related. Often a row in one table is related to several rows in another table.

5.2 Snapshots

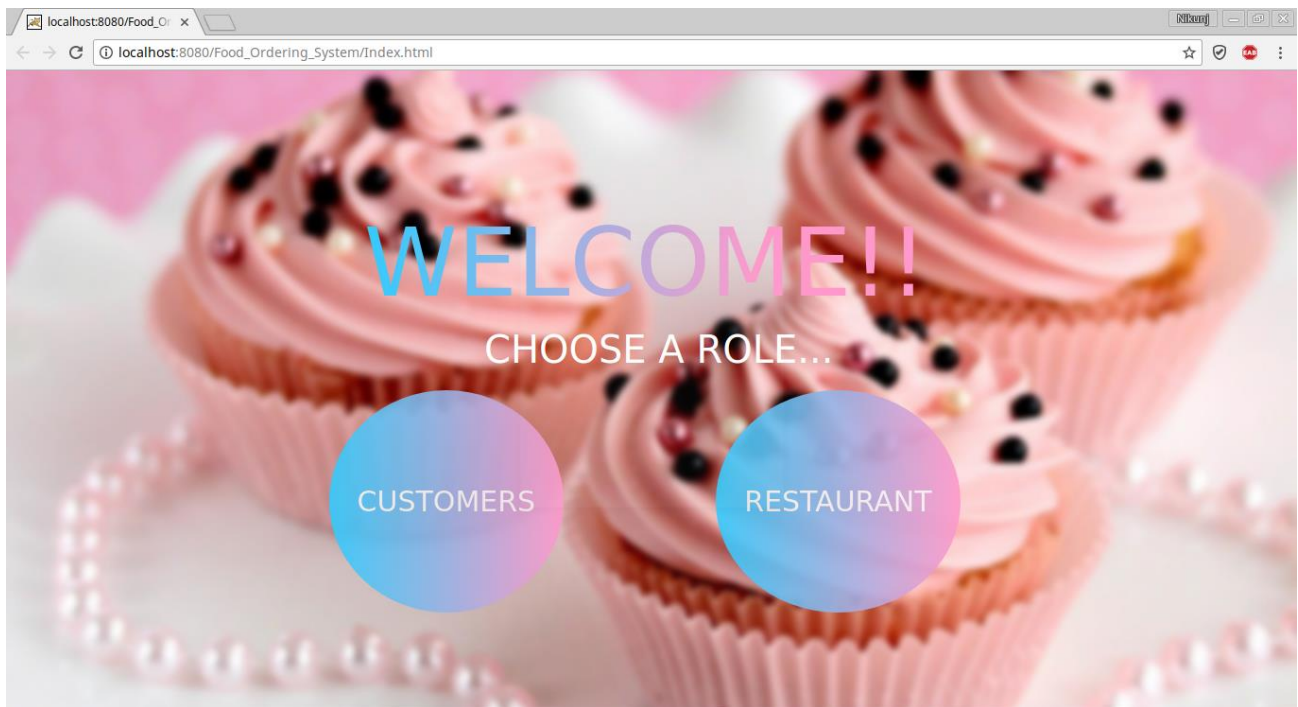


Fig 5.21 Welcome Page

This is the welcome page. Customer will go to Customer link and restaurant will go to Restaurant link.

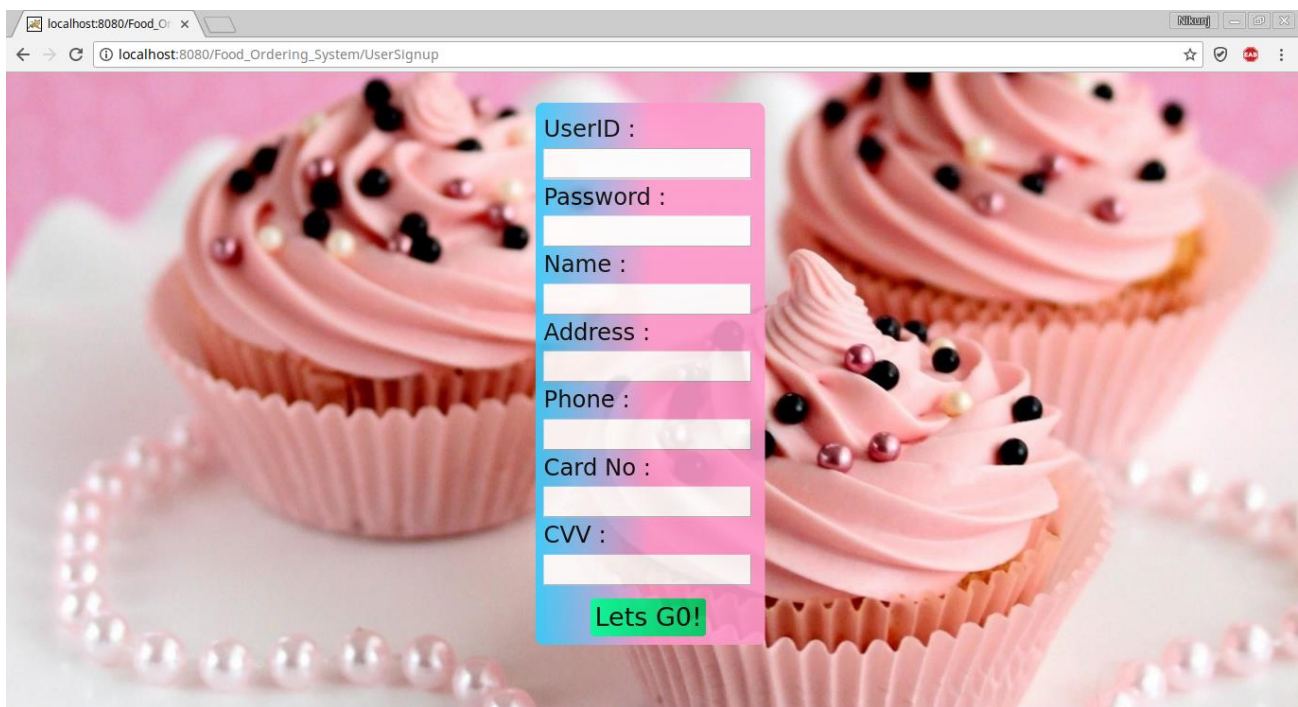


Fig 5.22 Customer SignUp Page

This is the customer signup page. CardNo and CVV are not compulsory to fill.

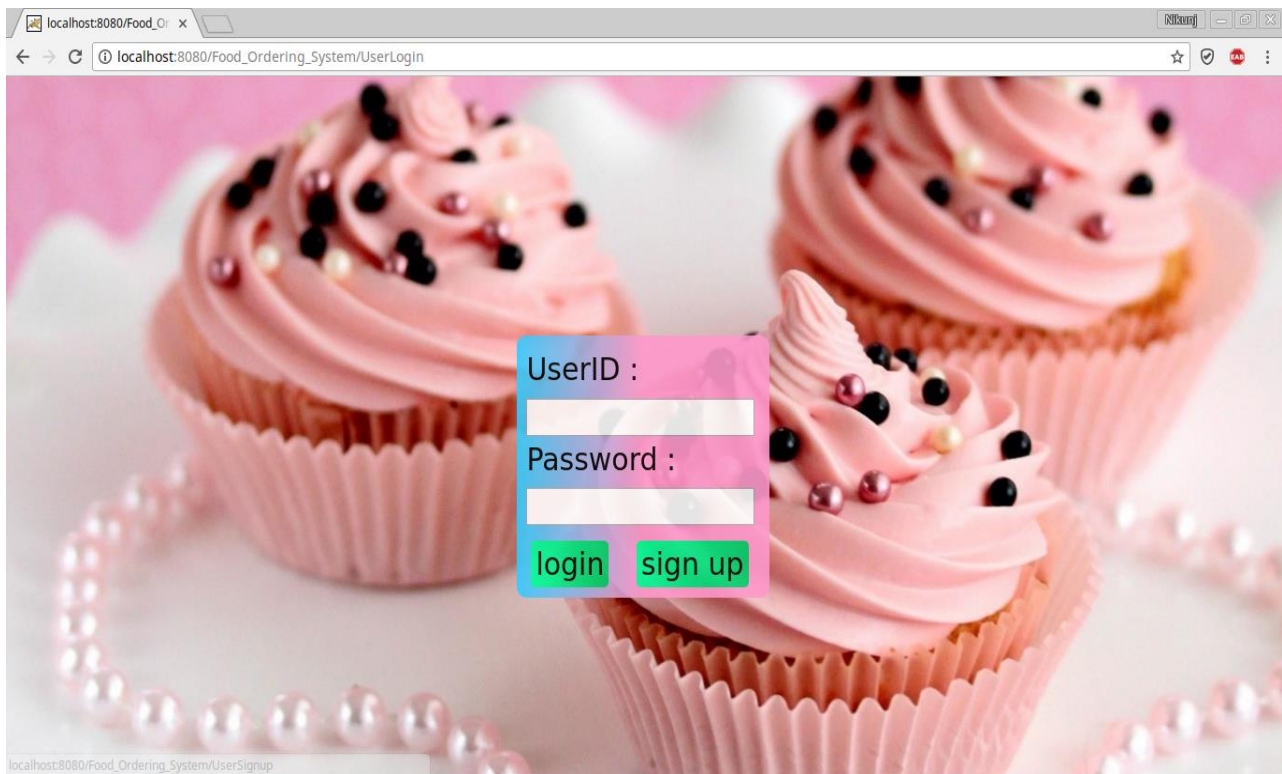


Fig 5.23 Customer Login Page

This is Customer Login Page. You have to provide your correct userid and password to login.

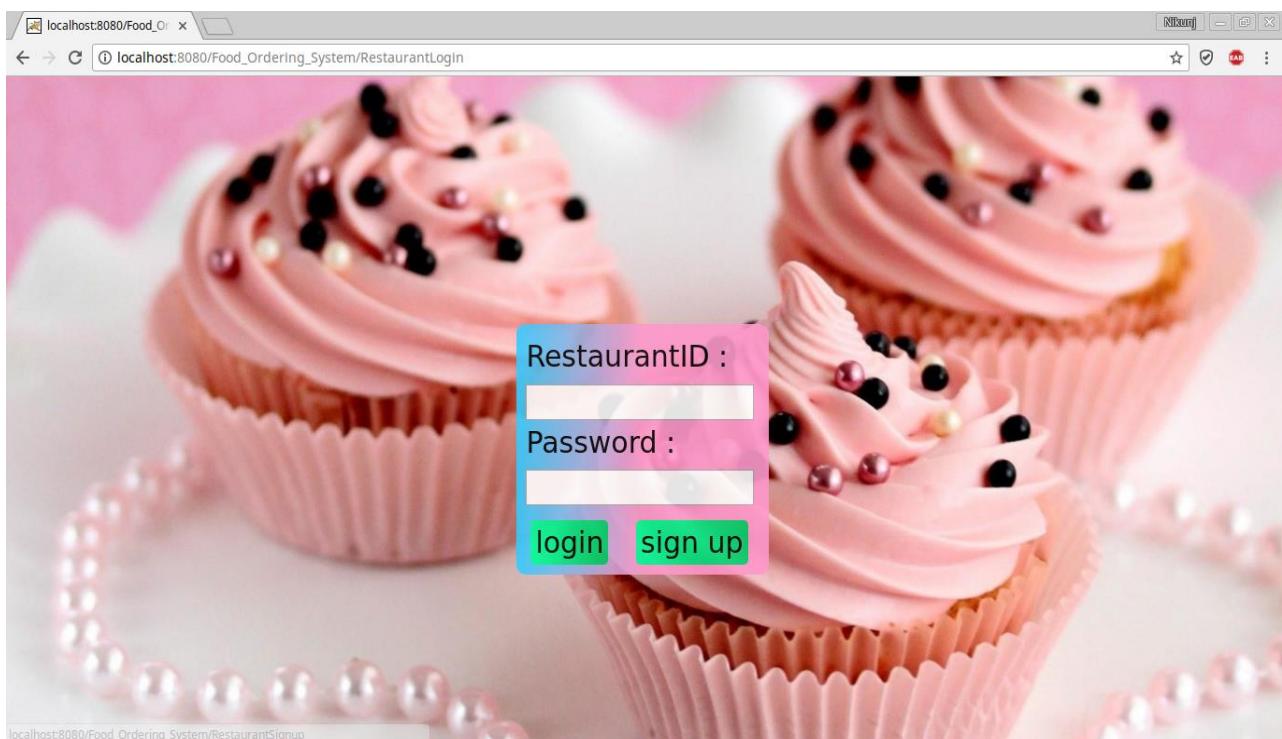
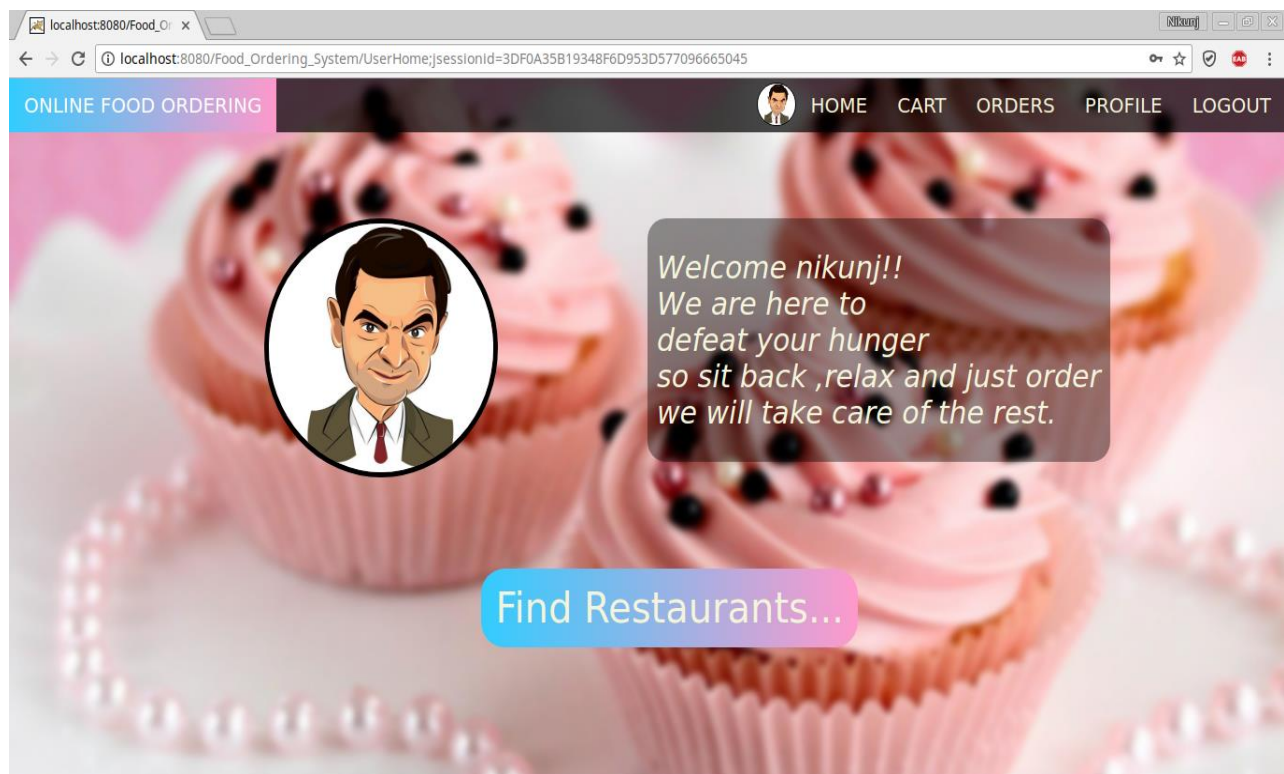
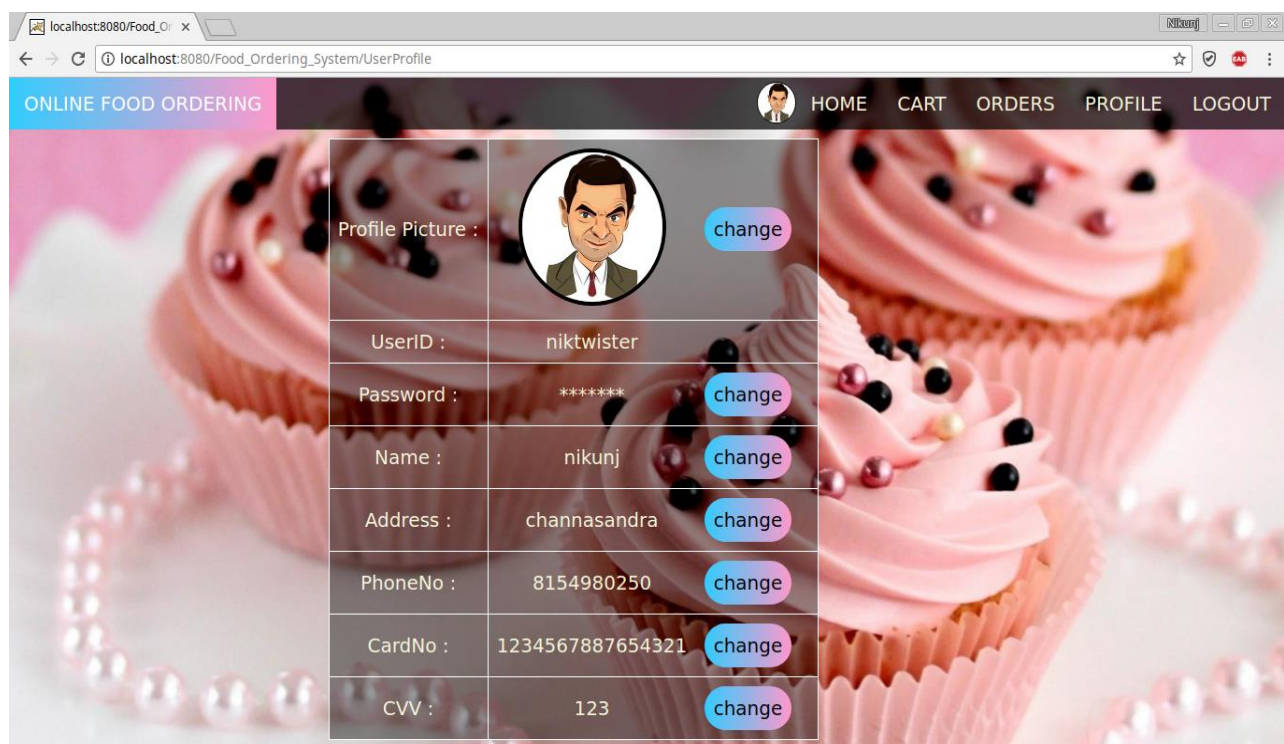


Fig 5.24 Restaurant Login Page

This is Restaurant Login Page. Restaurant operator has to enter the correct restaurantid and password.

**Fig 5.25** User Home Page

This is user home page.From here the user can find restaurants, check their cart, check previous orders.

**Fig 5.26** User Profile Page

This is user profile page. Here they can change their profile pic, password, name, address, phoneno...

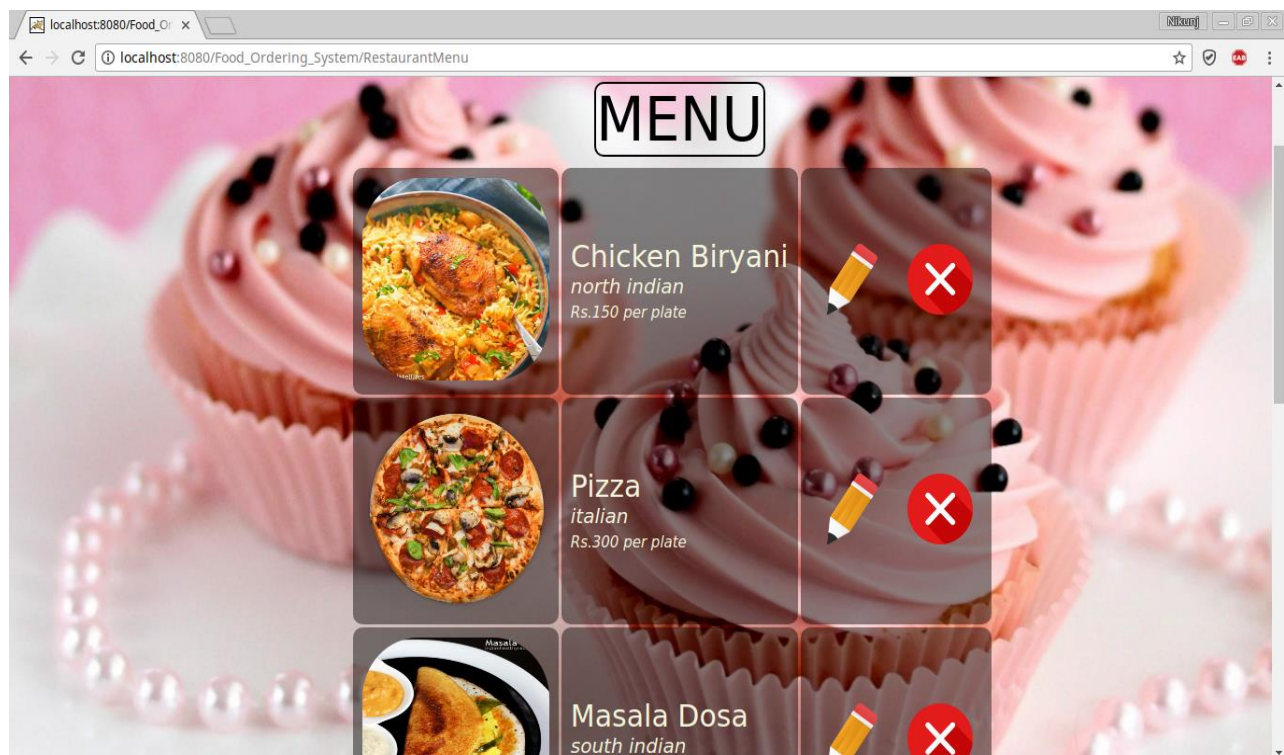


Fig 5.27 Restaurant Menu Page

The restaurant owner can add, remove or edit the items in their Menu.

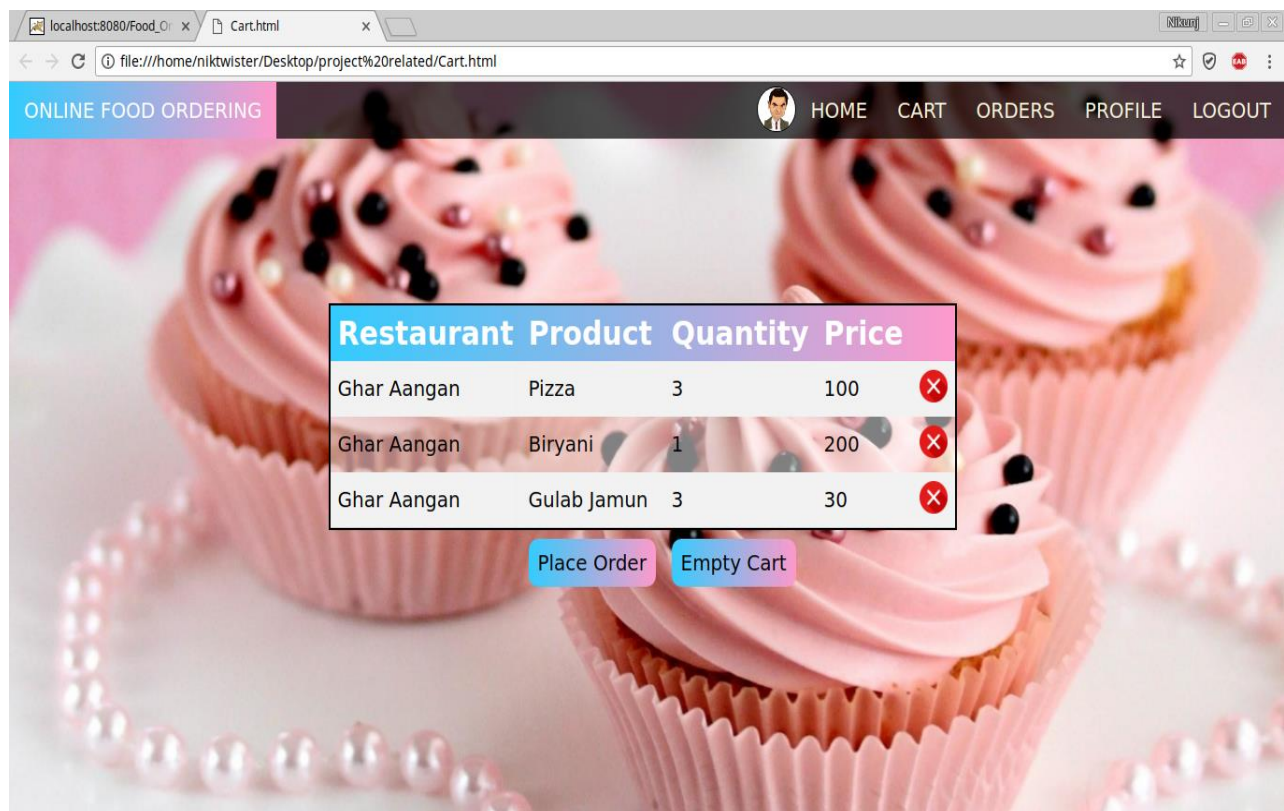


Fig 5.28 User's cart

This is user's cart. They can remove an item from their cart, empty the cart or place order.

5.3 Queries, Trigger and Procedure Used

Important queries used in the project are:

- "select u.restaurant_id,u.product_id,u.quantity,u.price,r.name,p.name
from "+username+"cart u,restaurant r,product p
where u.restaurant_id = r.restaurant_id and u.product_id = p.product_id "

This query was used to list out the items in the user's cart. And also to fetch restaurant_id and product_id which will be sent to DeleteFromCart servlet .

- "select *
from restaurant
where restaurant_id=?"

This query was used to fetch the information to be displayed on Restaurant Profile page.

- "select p.product_id,p.name,c.name,s.price,p.image
from serves s , product p , category c
where s.product_id = p.product_id and p.category_id = c.category_id and
s.restaurant_id = ?""

This query was used to list out the menu of a particular restaurant in RestaurantMenu servlet.
In the menu : *product name,price,image,category* are displayed.

- " update restaurant set "+attribute+"=? where restaurant_id='"+restaurantid+"'"

This query was used in LogicChangeRestaurantProfile servlet to update a restaurant profile attribute like password or name or address...

- "update serves set price=? where restaurant_id=? and product_id=?"

This query was used in ChangeProduct servlet , to update the price of an item in a particular restaurant's menu.

- "insert into product(name,category_id) values(?,?)"

This query was used to insert a new product in the database.Used in LogicAddNewProduct servlet.

- "select max(product_id) from product"

product_id attribute in product table increments automatically....therefore fetching the max product_id will give us the product_id of the last item inserted.Used inLogicAddNewProduct servlet.

- "delete from "+username+"cart"

This Query is used to empty the cart for a particular user after the order is placed.Used in EmptyCart servlet.

- "delete from serves where restaurant_id=? and product_id=?"

This query was used in DeleteMenuProduct servlet , to delete a particular item from a restaurant's menu.

- "select p.product_id,p.name,p.image,c.category_id,c.name
from product p,category c where p.category_id = c.category_id and
p.product_id NOT IN(select product_id from serves where restaurant_id =?)"

When the restaurant wants to add an existng product into it's menu then this Query is used to display the list of all the products(along with their info) not already present in restaurant's menu.Used in AddExistingProduct servlet.

- " select * from customer where cust_id=? and card_no=? and cvv=? "

This query was used to verify whether the cvv and card_no provided during payment where valid or invalid in LogicPlaceOrder servlet.

- **Procedure used :**

```
DELIMITER //
```

```
CREATE PROCEDURE checkLogin
(IN username_submitted VARCHAR(50), IN password_submitted VARCHAR(100),
OUT admit BOOLEAN)

BEGIN
DECLARE password_fetched VARCHAR(100) DEFAULT '';

DECLARE login_cursor CURSOR FOR
select password from customer where cust_id = username_submitted;

DECLARE CONTINUE HANDLER
FOR NOT FOUND SET admit = false;

OPEN login_cursor;

FETCH login_cursor INTO password_fetched;

IF ( password_fetched = BINARY password_submitted AND password_submitted != '' )
THEN
SET admit = true;
ELSE
SET admit = false;
END IF;

CLOSE login_cursor;
END //
```

```
DELIMITER ;
```

This Procedure is used during the customer Login . As soon as the user enter the username and password , this procedure is called to check whether that user exist or not and if exist , then whether the password provided is correct or not.

- **Trigger used :**

DELIMITER //

```
CREATE TRIGGER setDeliveryMan BEFORE INSERT
ON orders
FOR EACH ROW
BEGIN
    SET @current_ord_no = NEW.ord_no;
    select max(del_man_id) into @max_del_man_id from delivery_man;
    SET @rand_del_man_id = RAND() * @max_del_man_id + 1;
    SET NEW.del_man_id = @rand_del_man_id ;
END //
```

DELIMITER ;

This Trigger is used to randomly assign one of the delivery men while placing an order. It makes use of RAND() function which returns a decimal number between 0 and 1.