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Online Jewellary store

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MCA Project

Online Jewellary Store

Nowadays Internet is the fastest growing media. Initially it was just a media for publishing and sharing information which may be research information shared by universities, business information shared between various branches of an organization or advertising of some products. The explosive growth of E-Commerce has captured the public's imagination. E-Commerce refers to the process of buying or selling a product or service over an Electronic n/w

The current trend is online shopping which means a visitor at an online shopping site can select the desired item from the catalog displayed at site for purchase and he/she can pay the cost of that item through credit card (or as per the Business rule of the online shop).
Since in India the credit card culture is not yet so popular therefore other modes of payment are acceptable like demand draft, money order or so.

Introduction:

The site we are making for our project is an Online Jewelry shop which makes available all kind of jewelry to its visitors. A visitor can have a look to the catalogue along with information about ornaments and other details like prices and design details etc. If a visitor wants to purchase some jewelry, he/she has to select the jewelry and submit the same as his/her choice for purchase.

Then it will be checked whether the visitor is a registered user and currently he/she is logged on the site, if not he will be prompted for the same. Also a first time visitor has to register himself before he purchase something from the online shop. The registrants will be cross checked for authenticity of information provided by them. They will be assigned a username and password, which can be used for subsequent purchase. An invoice will be generated for visitor who has purchased something. This will be the report generated by the web application.

Tools and platforms to be used :

This project is a complete web application designed as a Web site. It maintains the information about inventory i.e. jewelry items in database and provides an Interface for user interaction.
We will use ASP as the technology at the front end. The database at the backend will be designed using MS_ACCESS. To enable communication between the technology at the front end and the database at the back end Active Data Object (ADO) will be utilized

- GUI(Graphic User Interface) : HTML, JavaScript
- Database : Oracle
- Database Connectivity : ADO
- Application : ASP

A. GUI :

HTML :

HTML stands for HyperText Markup Language, which is used for publishing information on World Wide Web. It is the format that enables the exchange of information on WWW. HTML tags are interpreted by browser. The tags are used to display information in presentable way using Tables, forms etc. This is derived from SGML (Standardized Generalised Markup Language).

JavaScript :

Javascript is scripting language used along with HTML to make the static HTML information dynamic. Basically it is a n object based language designed primarily for HTML documents. The is architecture allows JavaScript to interact with browser objects like window, document etc. Javascript runs both on client-side and the server-side. In this project client-side Javascript has been used for form validation.

B. Database :

Oracle :

The database for this project will be designed in Oracle to utilize all the advantages of RDBMS.

C. Database Connectivity :

ADO:

Although developers can use virtually any database library from within their scripts . Asp is really geared towards database access via Microsoft's ActiveX Data Objects (ADO). ADO is fairly lightweight and allows easy access to any ODBC or OLEDB complaint data sources including Microsoft Access (Jet), Microsoft SQL Server and Oracle databases. ActiveX components can be used to perform various functions, such as creating, accessing and modifying ODBC databases and to output the data to files.

ODBC :

ODBC, a C-based interface to **SQL**-based engines, provides a consistent interface for communicating with a database and for accessing database **metadata** (information about the database system vendor, how a data is stored, and so on).Individual vendors provide specific drivers or "bridges" to their particular database management system.

Another language is needed to feed **SQL** statements to a database and process results for visual display or report generation. You can run a Java program on any Java-enabled platform without even recompiling that program The Java language is completely specified and, by definition, a Java-enabled platform must support a known core of libraries. One such library is **JDBC**, which is a java version of **ODBC**, and is itself a growing standard

D. **Application** :

ASP :

Active server pages are a language independent framework designed by Microsoft for efficient coding of server side scripts, which are executed by a web server (IIS, PWS, etc) in response to a client's request for a URL. Thus the content of page is dynamic and depends on various factors at the actual time of execution of the script.
Microsoft Active Server Pages war designed specially to simplify the process of developing Web applications. Built into internet information Server (IIS) version 3.0 and later. ASP provides an easy- to-learn scripting interface along with a number of predefined objects make the script much more powerful and ease various functions such as sending and retrieving information to and from the clients.

Analysis :

The web application "Online Jewelry shop" facilitates online selection and purchase of jewelry. The requirement of application is that the person who wants to purchase some jewelry item from this online shop, should be a registered user.

The first page displayed at the website is Login page along with a link to registration page. From this login page user will logon to the site, this will result in beginning of user session at the shop.
New users can follow the registration page link where they will find a Registration form. Before they can use services provided by the site, they have to fill this registration form. When this registration form is submitted, again login page will be displayed. When user fills in the "Username" and "Password" in the login form and submits the form, it will be verified from database for authenticity. If this is a valid user information, only then the user will be able to see the home page of Jewelry shop. This home page will give links to all the services provided by the Jewelry shop.

The modules the Jewelry shop are follows :

1.Registration:
The first time visitor to the site will be provided with a link to go to a page where he can register. The registration information will then be written to the database. The registration information will consists of username, password, name, and E-Mail address etc.

2.User Verification:
A user will be initially presented with a login page where he will have to enter his username and password. These will be verified to prevent unauthorized access to the database. After the user has logged in he will be taken to the home page, where he will be provided with the options of browsing or searching the site for jewelry items.

3.Catalogue: The catalog section maintains the information about jewel ries of different metals or stone like gold, silver, diamond, pearl etc and different type like necklace, rings, ear-rings etc.

To view the information about jewelry, one has to select the matter i.e whether the person want to go for gold, silver, diamond, pearl or metal oxidizes jewelry. Now within that material, the user has to select the type of jewelry like he/she wants to view the designs of necklace or rings or something else. The selection will result in display of various patterns available in that type of jewelry. The detail information about jewelry will be displayed when user clicks on that Jewelry item which includes the type of material used (i.e. if gold then caret value) and price.

Also there will be a link to "Shopping Cart" in which user can add the selected jewelry for purchase. This shopping cart will be submitted to the Invoice generation logic for preparing bill. The mode of payment valid at this Jewelry shop are through credit card, demand draft.

4.Search :

This service will facilitate the user to find out jewelry item by specifying some keyword about the jewelry. The user is supposed to specify the material of jewelry and the type of jewelry item.

The result of search will be links to the jewelry articles satisfying the search criteria. By following these links, one may get information about the particular jewelry item.

In case if search criteria is not satisfied by any of the item in the jewelry shop, a message will be displayed.

5.Shopping Cart:

When the user wants to buy a jewelry from the site, he will have to add it to the shopping cart. The link to "add the item to the cart" will be given next to each of the jewelry item and on the catalog page.

After the user has added a jewelry item to the cart he will have the option to either continue shopping or to check out. If he follows the "Continue Shopping" link he will be taken back to the page where he was before he came to the "View Cart" page. From here onwards he will be able to select more jewelry items to add to the cart. If the user wishes to check out he will taken to a page where he is asked to fill in his details such as credit card information, address, etc.

6.User check out:

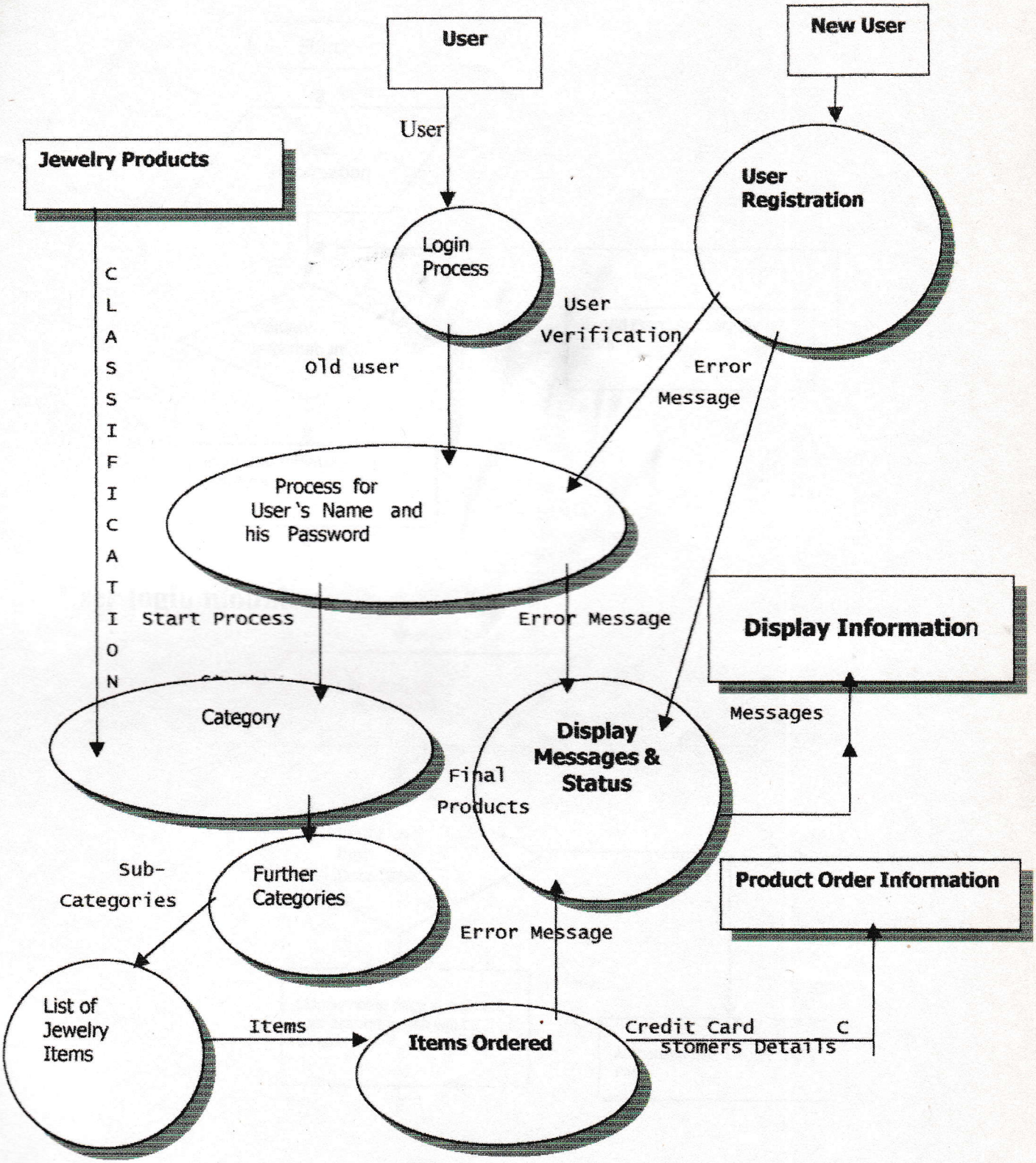
The user , if he wishes to check out will be taken to a page where he is asked to fill in his details such as credit card information, address, etc.

His name and e-mail address will be retrived from the database of the site and he will have no option of changing these fields. The details about the products that he has purchased will then be stored in a temporary database. This database will be deleted when the products are delivered to the user .

7. Confirm Credit card Information :

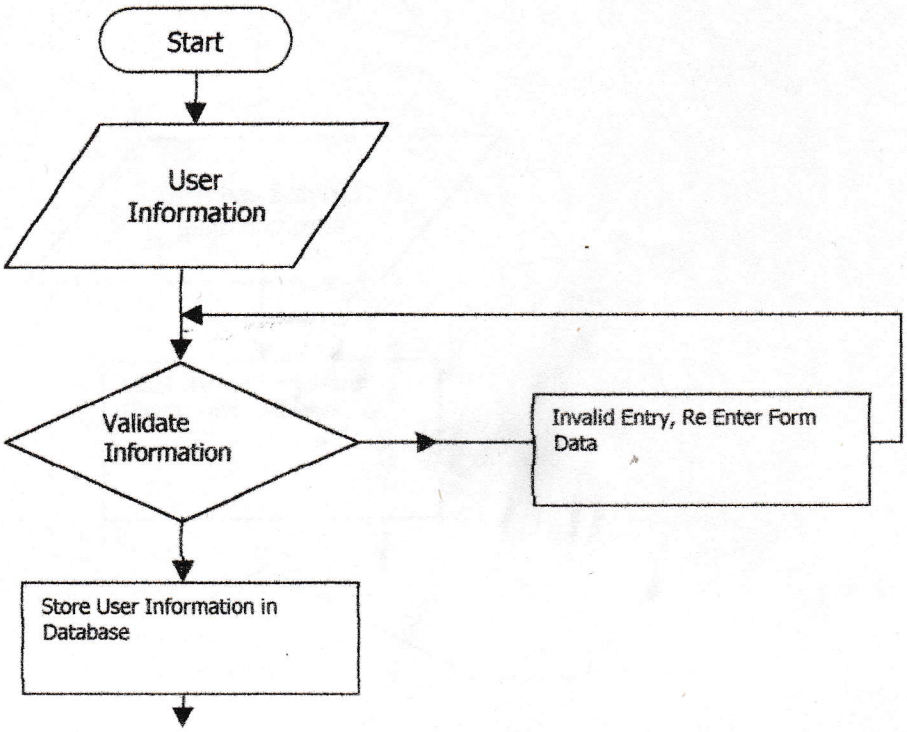
When user wants to check out from the site, his/her session is checked for whether the shopping cart has some jewelry item. If yes user is asked to enter credit card number so that the amount can be deducted from his account. The credit card is verified through MTS(Merchant Transaction Server) account.

The data flow diagram for this project is :

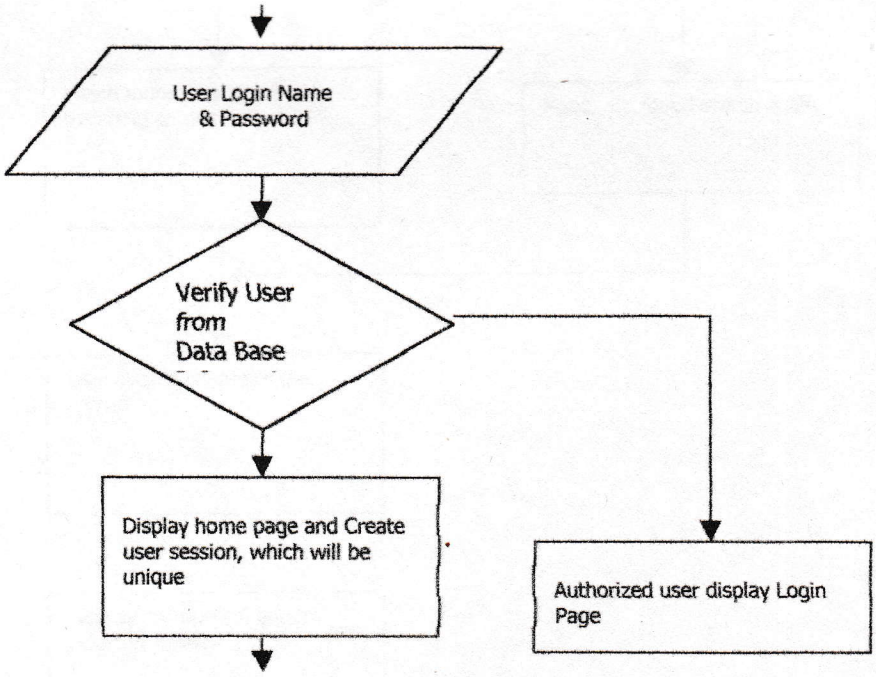


The flow charts for various modules of this process are :

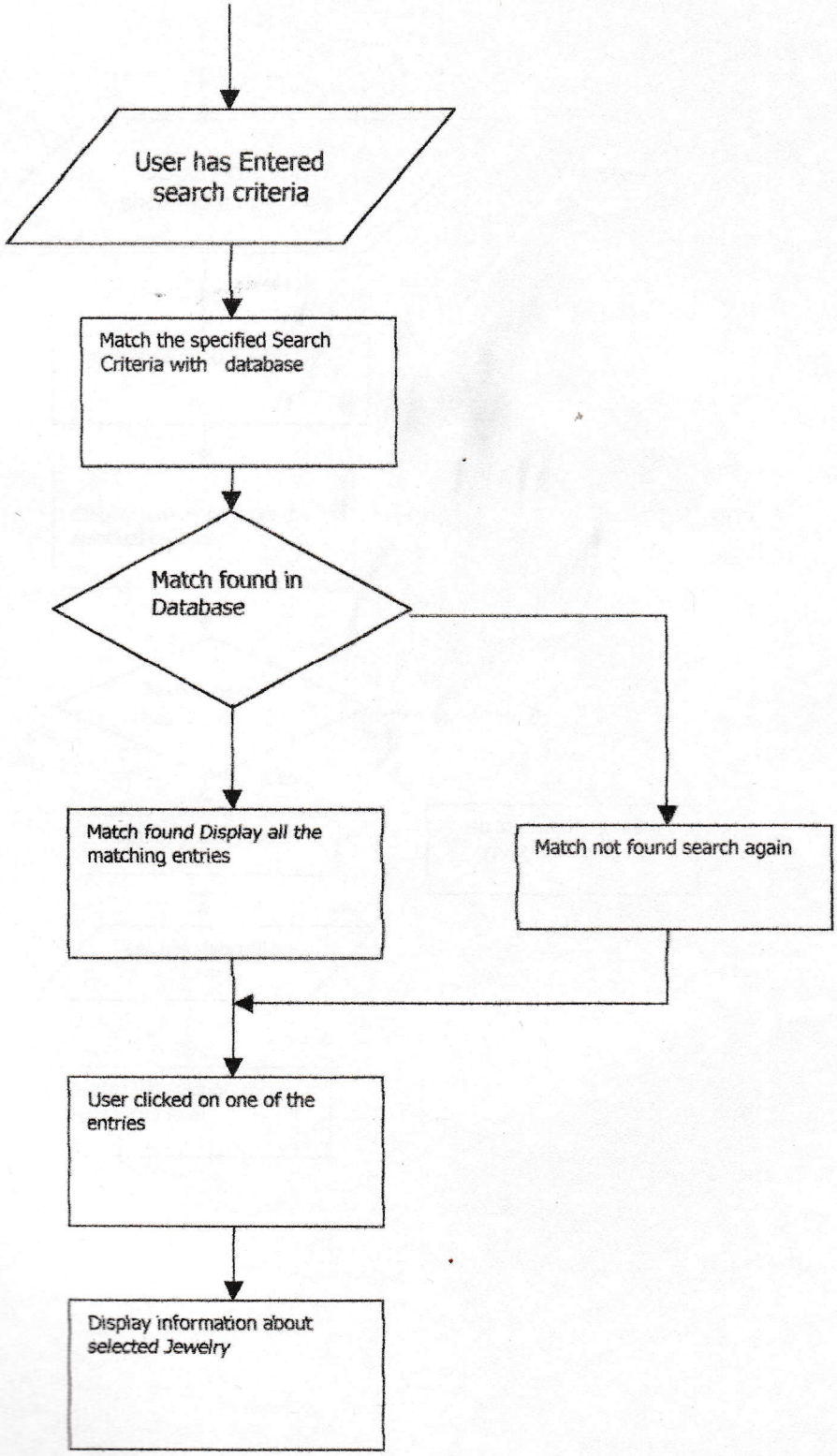
User Registration module :



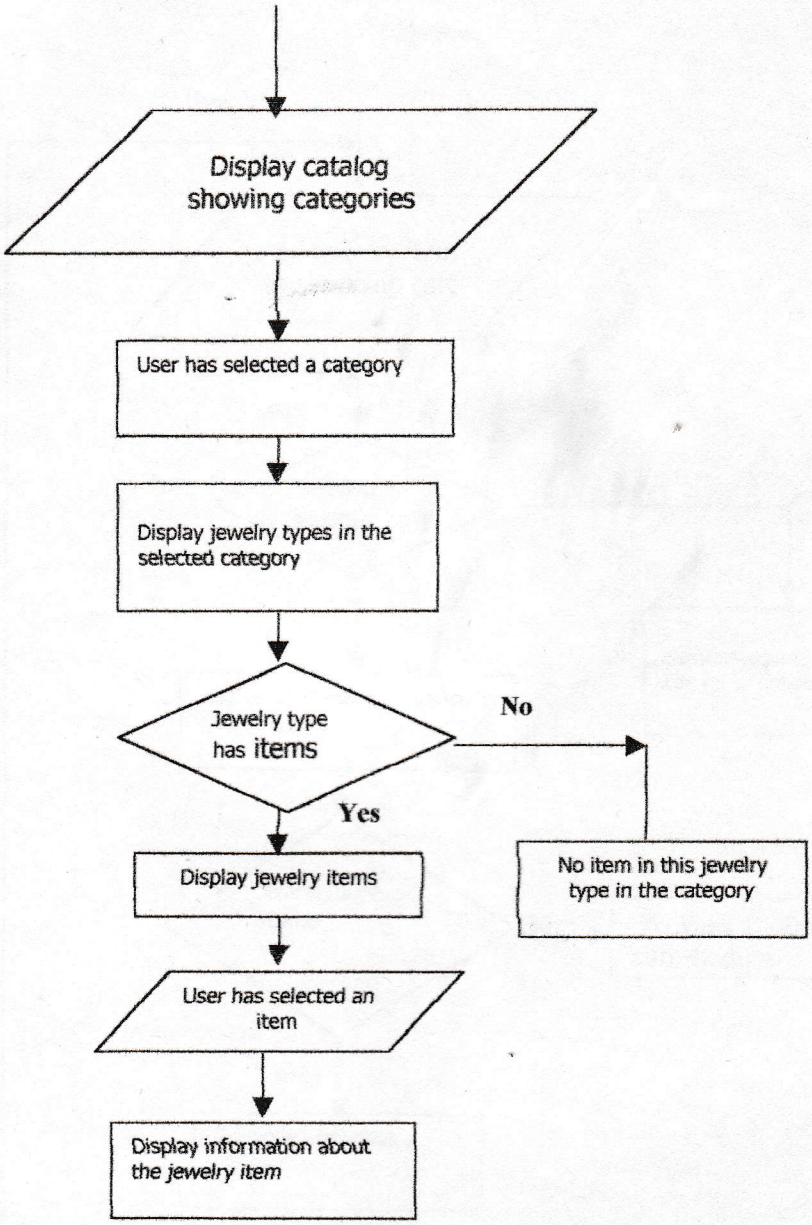
User login module :



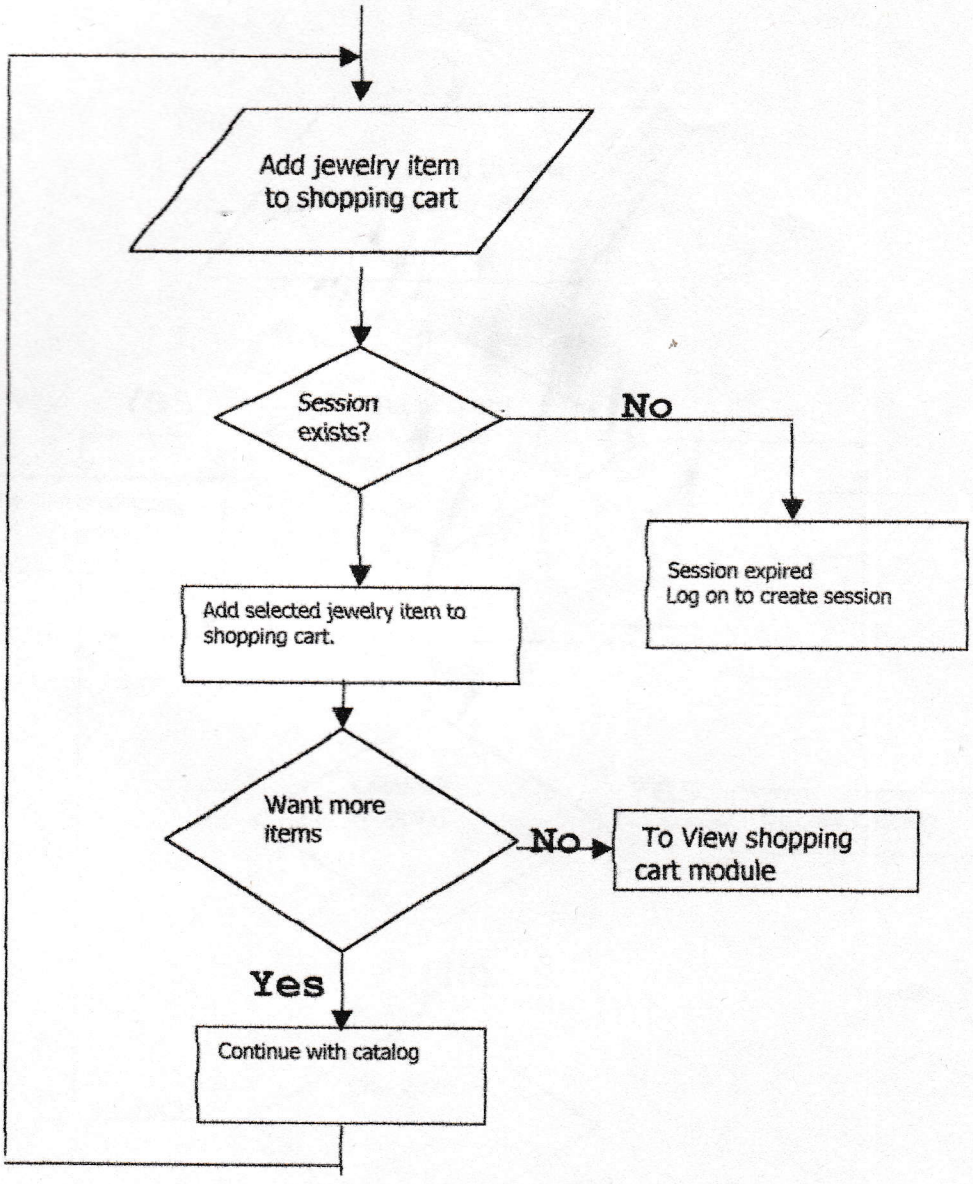
Search Module :



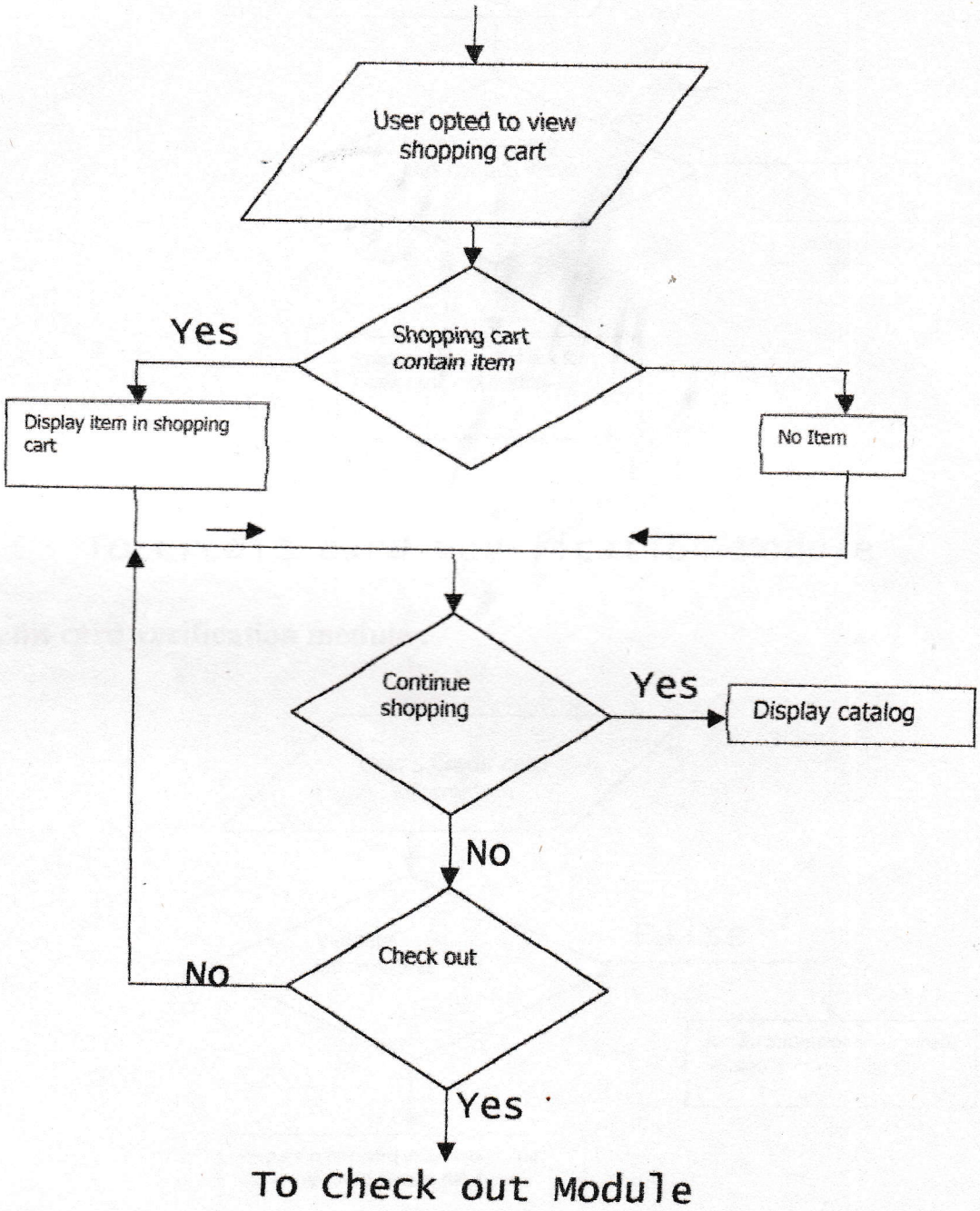
Catalogue :


Display catalog showing categories
User has selected a category
Display jewelry types in the selected category
Jewelry type has items
No
Yes
No item in this jewelry type in the category
Display jewelry items
User has selected an item
Display information about the jewelry item

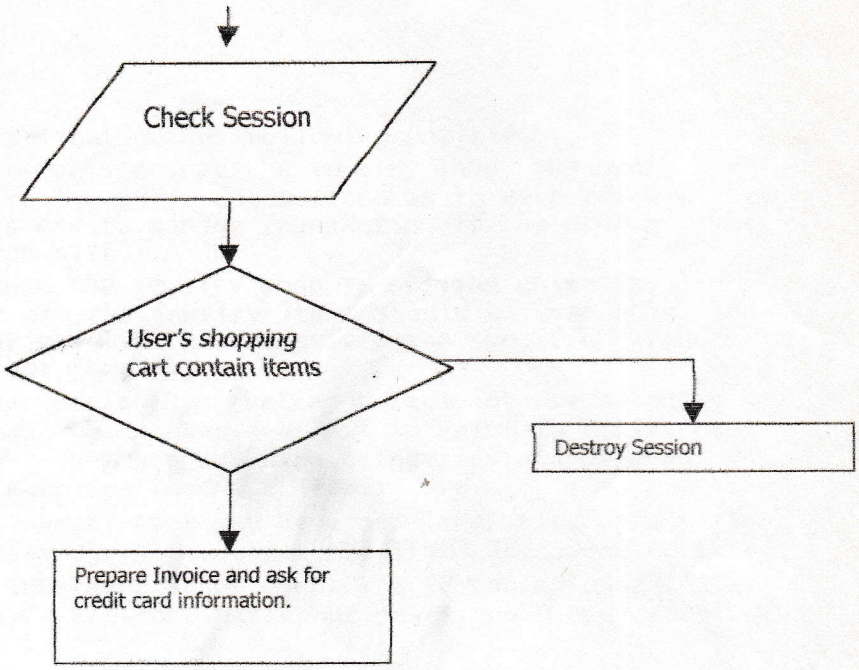
Shopping Cart :



View Shopping cart :

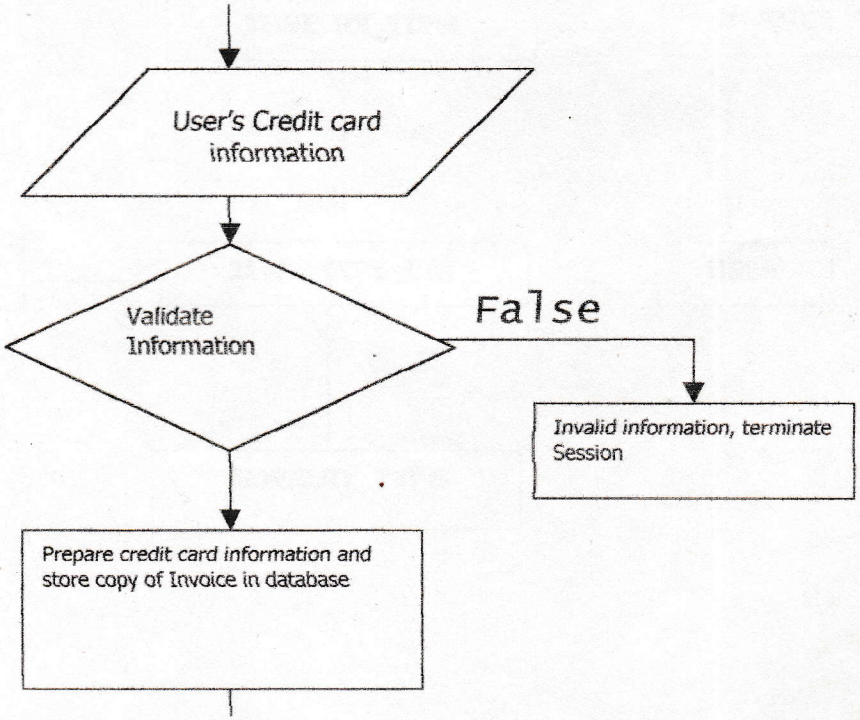


Check out module :



To Credit card verification Module

Credit card verification module :

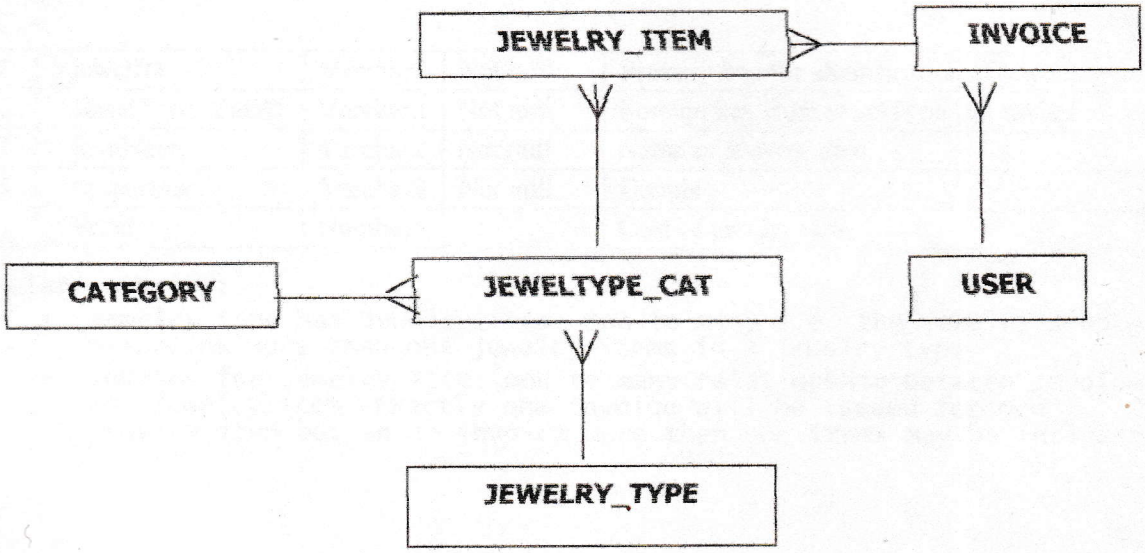


Database Design

The database for this application has following entities :

- **User** : Once a user registers at the jewelry shop, the user information will be stored in database so as to keep track of user for further visits and to manage transaction if the user purchase a jewelry item from site.
- **Jewelry item** : Since the jewelry shop is selling an entity, information about all the jewelry items should be available for all kind of operations like when user views a specific category for specific type of jewelry.
- **Category** : All the jewelry_type belong to atleast one category hence while maintaining database we have to maintain a list of jewelry type as per the category. The categories are defined according to the material used for jewelry.
- **Jewelry_Type** : A jewelry item may be a necklace, ring or ear-ring, anklets etc. Jewelry_Type categorise the items according to this.
- **JewelryType_Cat**: Intersection of JEWELRY_TYPE table and CATEGORY table. In this table the combination of jeweltypeID and categoryID will be unique.

The Entity Relationship diagram for above database tables is as follows:



The tables along with their fields are as follows:

User :

1.	# userID	Varchar2	Not null	Primary key for identification of users
2	FirstName	Varchar2	Not null	First name of user
3.	LastName	Varchar2	Not null	Last name of user
4.	Address	Varchar2	Not null	Postal address of user
5	City	Varchar2		City
6.	Phone	Number		Phone no. of user
7.	Fax	Number		Fax no. of user
8.	Mobile	Number		mobile no. of user
9.	Email_ID	Varchar2	Not null	User's email address
10	dob	date	Not null	User's date of birth
11	userName	Varchar2	Not null	Login name for user
12	password	Varchar2	Not null	Password for user's account

Relationships : one to many relationship with invoice. It might be possible that a user purchase a few jewelry items in more than one sessions. In such cases one invoice per session will be created for the user.

Jewelry Item :

1.	# jewelID	Varchar2	Not null	Primary key for identification of jewelry item
2	JewelType_CatID	Varchar2	Not null	Foreign key from jewelType_cat table
3.	itemName	Varchar2	Not null	Name of jewelry item
4.	properties	Varchar2	Not null	Details
5.	Price	Number		Cost of jewelry item

Relationships :

- Jewelry_type has Jewelry_item: One to many i.e. the jewelry shop maintains more than one jewelry items in a jewelry type.
- Invoice for Jewelry_Item: one to many relationship between Invoice and Jewelry item. Exactly one invoice will be issued for one jewelry item but in an invoice more then one items may be includes

Category

1.	# Category ID	Varchar2	Not null	Primary key for identification of Category 0f jewelry
2	Category	Varchar2	Not null	Name of category

Relationships : Category ***has*** Jewelry_Type which is one to many relationship.

Jewelry Type :

1.	#jewelTypeID	Varchar2	Not null	Primary key for identification of jewelry type
2	description	Varchar2	Not null	Description of jewelry type(necklace or ring or…)

Relationships :Jewelry_Type has JewelryType_Cat, this is one to many relationship.

JewelType Cat :

1.	*jewelTypeID	Varchar2	Not null	Foreign key from JEWEL_TYPE table
2.	*categoryID	Varchar2	Not null	Foreign key from CATEGORY table

Relationship :

- JEWELTYPE and JEWELTYPE_CAT : One to many relationship which resulted due to the efforts in resolving many to many relationship between JEWELTYPE and JEWELTYPE_CAT.
- CATEGORY and JEWELTYPE_CAT: One to many relationship which resulted due to the efforts in resolving many to many relationship between CATEGORY and JEWELTYPE_CAT.

Report :_

This web application generates a report for user. When user submits the shopping cart in which he has added jewelry item, an invoice will be generated for user, which will have an Invoice no., date of purchase and names of items and their price along with information about user who has purchased the item. It will show total amount to be credited from user's account.

The report "Invoice to user will be printed in the format drawn below :

Format of Invoice

Sanskriti Online Jewellers				
Invoice no. : **Date of purchase :** **Mode of Payment :**		**Customer's Name :** **Address :** **E-Mail ID :**		
Sr.No.	**Item's Desription**	**Quantity**	**Unit Price (Rs.)**	**Amount (Rs)**
Amount			**Total**	
Total Amount in Words :				

Scope of future application :

The site is a general approach to the development of a commercial web site, which can also be extended to the other areas of web. This project will be developed using Java which will provide security and advantages of server side processing.