INDIRA GANDHI NATIONAL OPEN UNIVERSITY

PROJECT

BCSP _ 064

Luxury Pen E-Commerce

By

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Under guidance

Of

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Maidan Garhi

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Introduction

Pen Haven(Web Based Application)

Pen haven is a web-based application, which provides interface to a user. It is an online shopping of branded pens and purchasing using C.O.D (Cash on Delivery) for increasing the trust of online world among users.

Using this web application, user find the best deals for their budget and get exclusively online deals with discount on festive season. Online shopping helps them to save their time also. The price point in online shopping is always less because there will be no intermediary in this system.

This system will help customers and small workers to gain trust on online shopping system. Using online shopping system brands also increase their chain within our country and brands also trying to provide best deals for increase customer base.

Aim & Objective

Aim

The aim of this website is to provide great value of their investment and helps them to view all the quality products according to their budget, preferences and choice of selection and save their time and money with this service.

This website is design in a simple format so new users can interact with this website is an easy way.

In addition, users can view different smartphones of various brands and find the best deal according to their need. In addition, user can check his/her cart, orders at any time.

Objective

- To shop while in the comfort of your home, without having to step out of the door.
- To register and maintain user accounts and profiles.
- To maintain proper security and confidentiality of data.
- Sell smartphones at lower prices to provide best deals.
- Provide Cash on Delivery feature to make customer comfortable.
- Create different module for user and administrator.
- Provide Secured Environment for secured data access whenever necessary.

Project Category

Web Based Application

A web application (or web app) is application software that runs on a web server, unlike computer-based software programs that are run locally on the operating system (OS) of the device.

The user through a web browser with an active internet connection accesses web applications. These applications are programmed using a client–server modeled structure—the user ("client") is provided services through an off-site server that is hosted by a third party.

Examples of commonly used web applications include web-mail, online retail sales, online banking, and online auctions.

Reason for Using PHP and MYSQL

PHP

PHP is an open source language, all the components are free to use, and distribute. PHP is a server side scripting language. It is used to generate dynamic pages content. People find it useful to develop websites and dynamic web pages. It is platform independent. PHP supports all major web servers such as Apache, Microsoft IIS and Netscape etc. All the major database such as MySQL, PostgreSQL, Oracle, Sybase, Microsoft SQL server is supported by PHP.

The main reason for using PHP language are:

- It collects form data and save data send by mail.
- It sends and receives cookies by accessing cookies variables.
- It provides add, delete and modify element function within our database.
- Through PHP, we can restrict users to access some pages of our website.
- It can encrypt data, so our data will become more secure.

MYSQL

MySQL is the most popular open source relational database management system. It is ease of the best RDBMS used to develop web based software applications. It is easy to use and fast RDBMS. There are many good reasons, which help us to develop website using this RDBMS.

- It is open source, so available free.
- It works on many operating system and with many languages including PHP, PERL, C, C++ etc.
- MySQL works very quickly and works well even with large data sets.

Tools and Platform

Hardware specification

- Processor : Intel i5 8th gen
- RAM : 4 GB
- Hard disk : 500 GB
- Display : 1920 * 1080

Software specification

- Operating System : Windows 10
- Front End : HTML, CSS
- Back End : PHP
- Text Editor : Visual Studio Code
- Database : MySQL
- Web Browser : Google Chrome
- Web Server : XAMPP (Apache)

Q. **Are you doing this project for any Industry/ Client?**

A. No

SYSTEM ANALYSIS

Analysis of the current and future roles of proposed computer system in an organization, the system analyst (usually a software engineer or programmer) examines the flow of documents, information, and material to design a system that best meets the cost, performance, and scheduling objectives

Systems analysis the process of observing systems for troubleshooting or development purpose. It is applied to information technology, where computer-based systems require defined analysis according to their makeup and design.

In IT, systems analysis can include looking at end-user implementation of a software package or product; looking in-depth at source code to define the methodologies used in building software; or taking feasibility studies and other types of research to support the use and production of a software product, among other things.

Systems analysis professionals are often called upon to look critically at systems, and redesign or recommend changes as necessary. Inside and outside of the business world, systems analysts help to evaluate whether a system is viable or efficient within the context of its overall architecture, and help to uncover the options available to the employing business or other party.

Systems analysts are different from systems administrators, who maintain systems day to day, and their roles generally involve a top-level view of a system to determine its overall effectiveness according to its design.

SCHEDULING

GANTT CHART

A Gantt chart, commonly used in project management, is one of the most popular and useful ways of showing activities (tasks or events) displayed against time. On the left of the chart is a list of the activities and along the top is a suitable time scale. Each activity is represented by a bar; the position and length of the bar reflects the start date, duration and end date of the activity. This allows you to see at a glance:

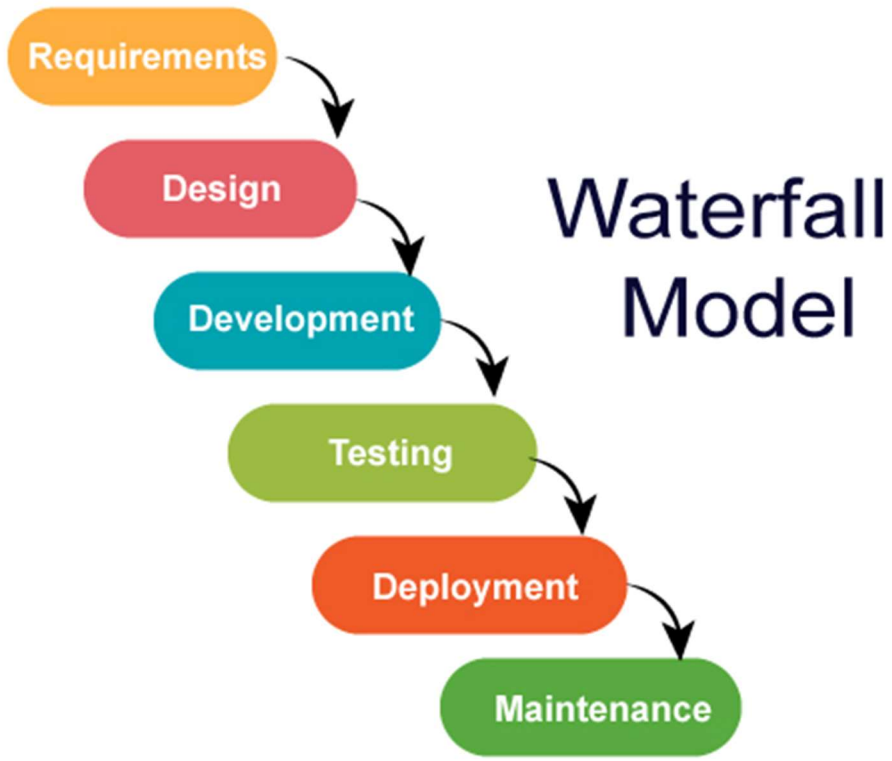
- What the various activities are
- When each activity begins and ends
- How long each activity is scheduled to last
- Where activities overlap with other activities, and by how much
- The start and end date of the whole project

To summarize, a Gantt chart shows you what has to be done (the activities) and when (the schedule)

SOFTWARE MODEL

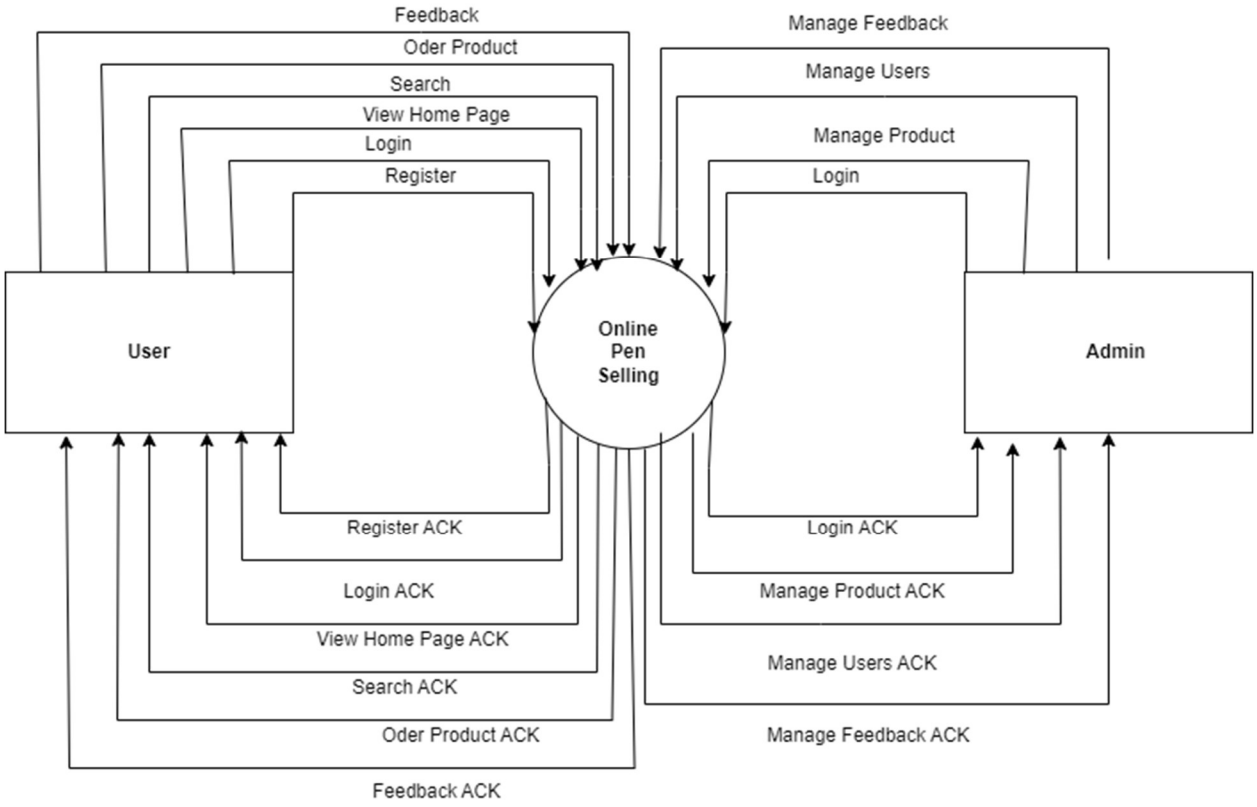
Waterfall Model

The waterfall Model is a linear sequential flow. In which progress is seen as flowing steadily downwards (like a waterfall) through the phases of software implementation. This means that any phase in the development process begins only if the previous phase is complete. The waterfall approach does not define the process to go back to the previous phase to handle changes in requirement. The waterfall approach is the earliest approach and most widely known that was used for software development.

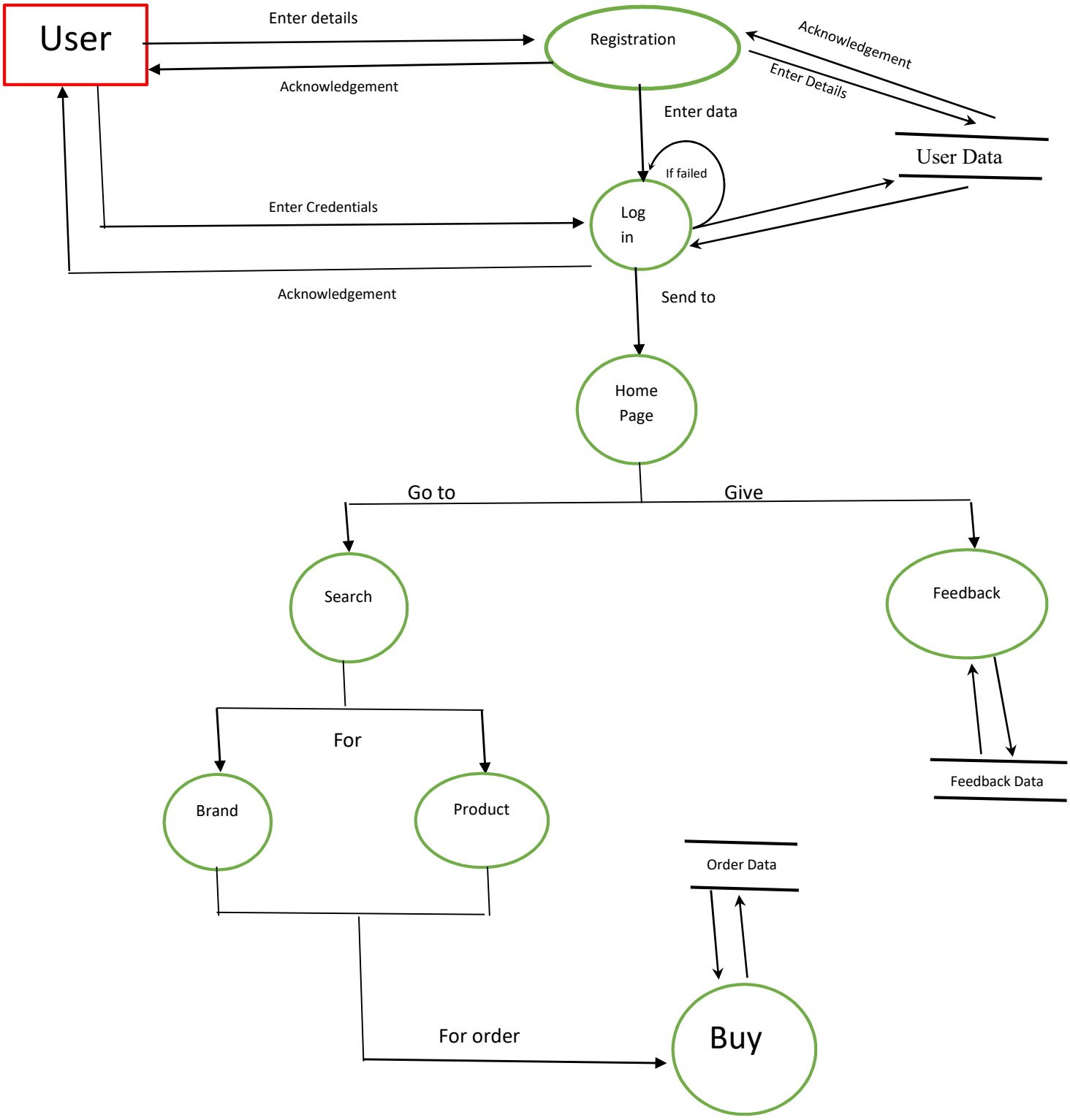


Data Flow Diagram

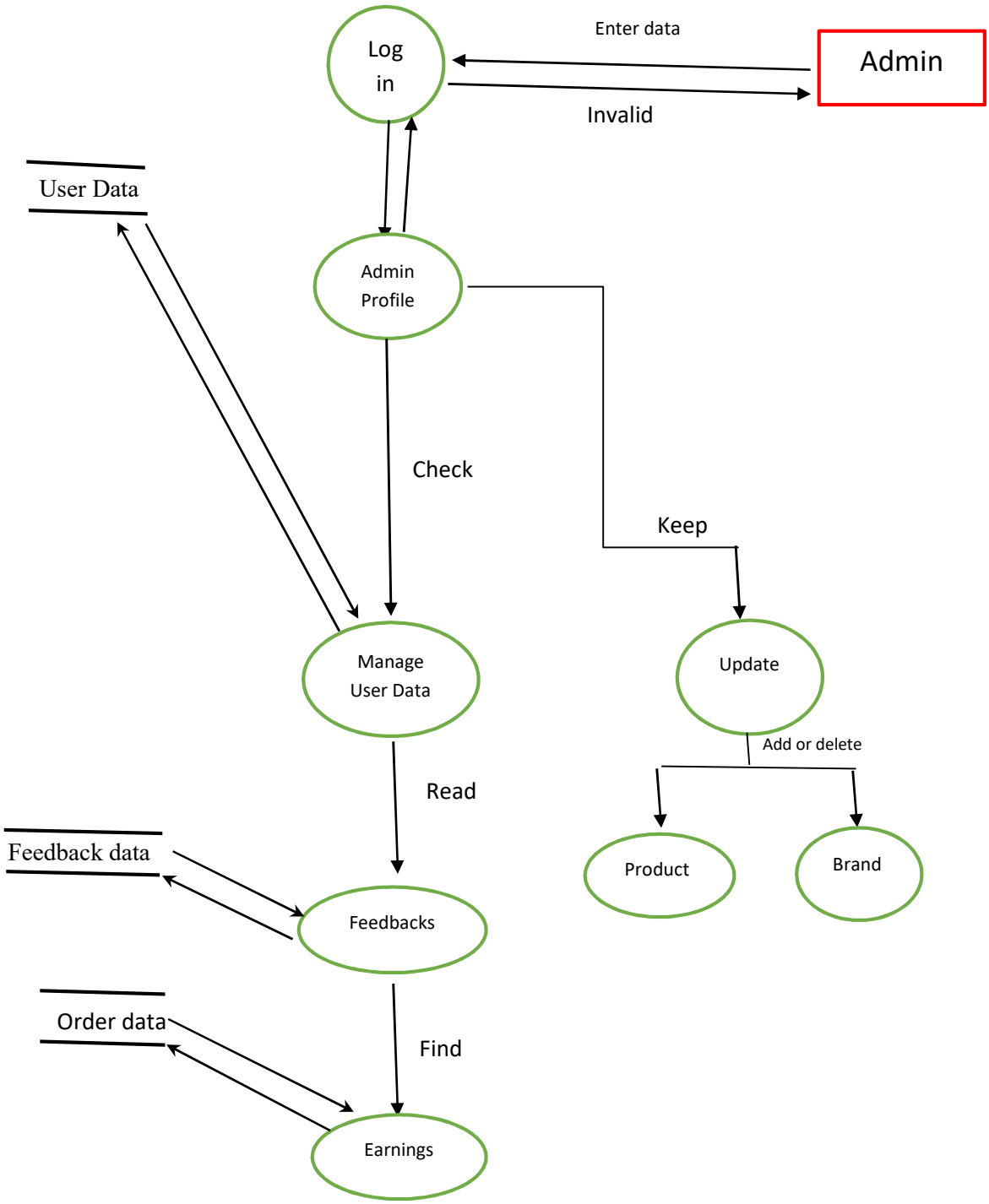
Zero Level DFD



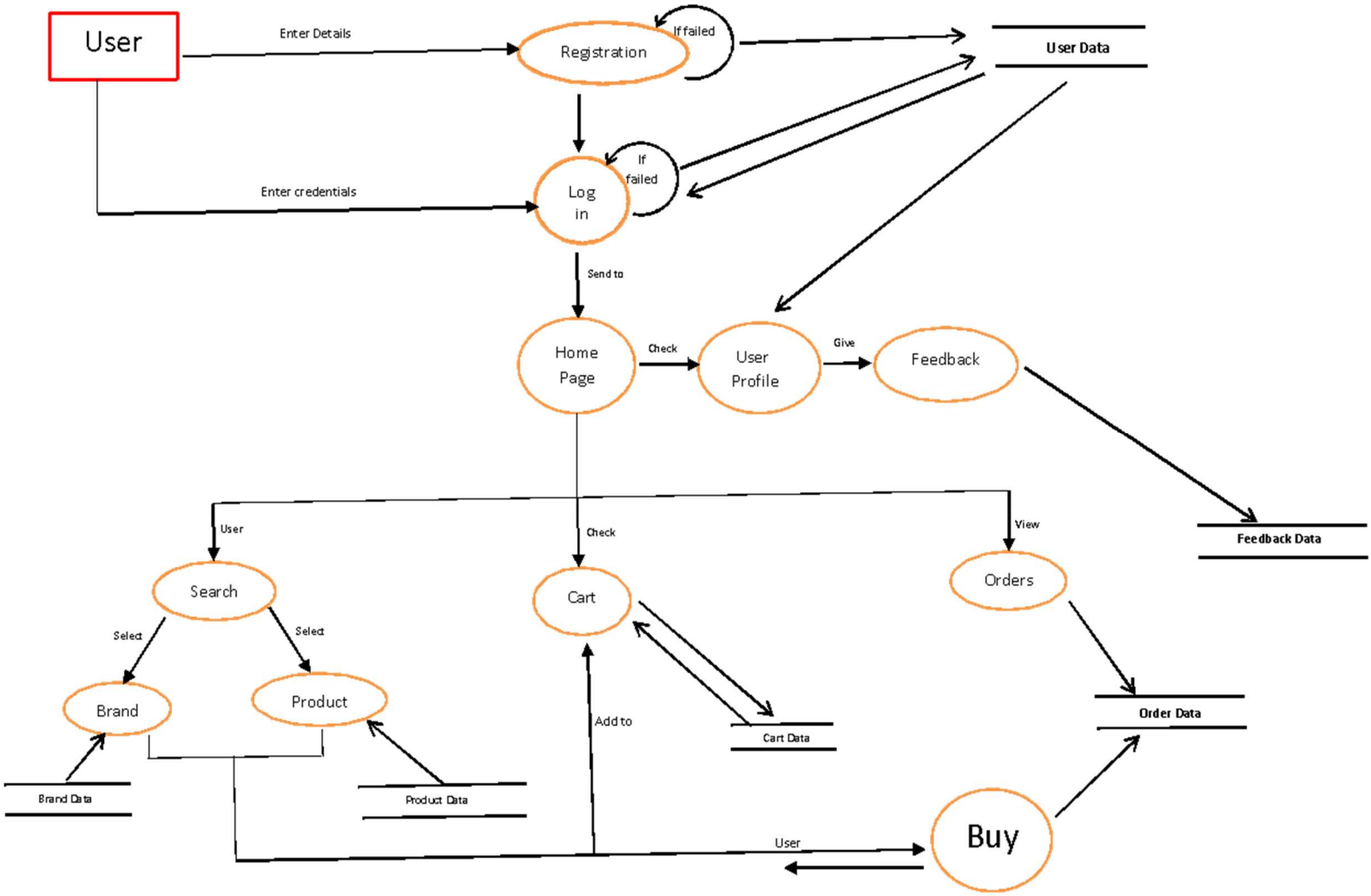
1.1 1st level User DFD



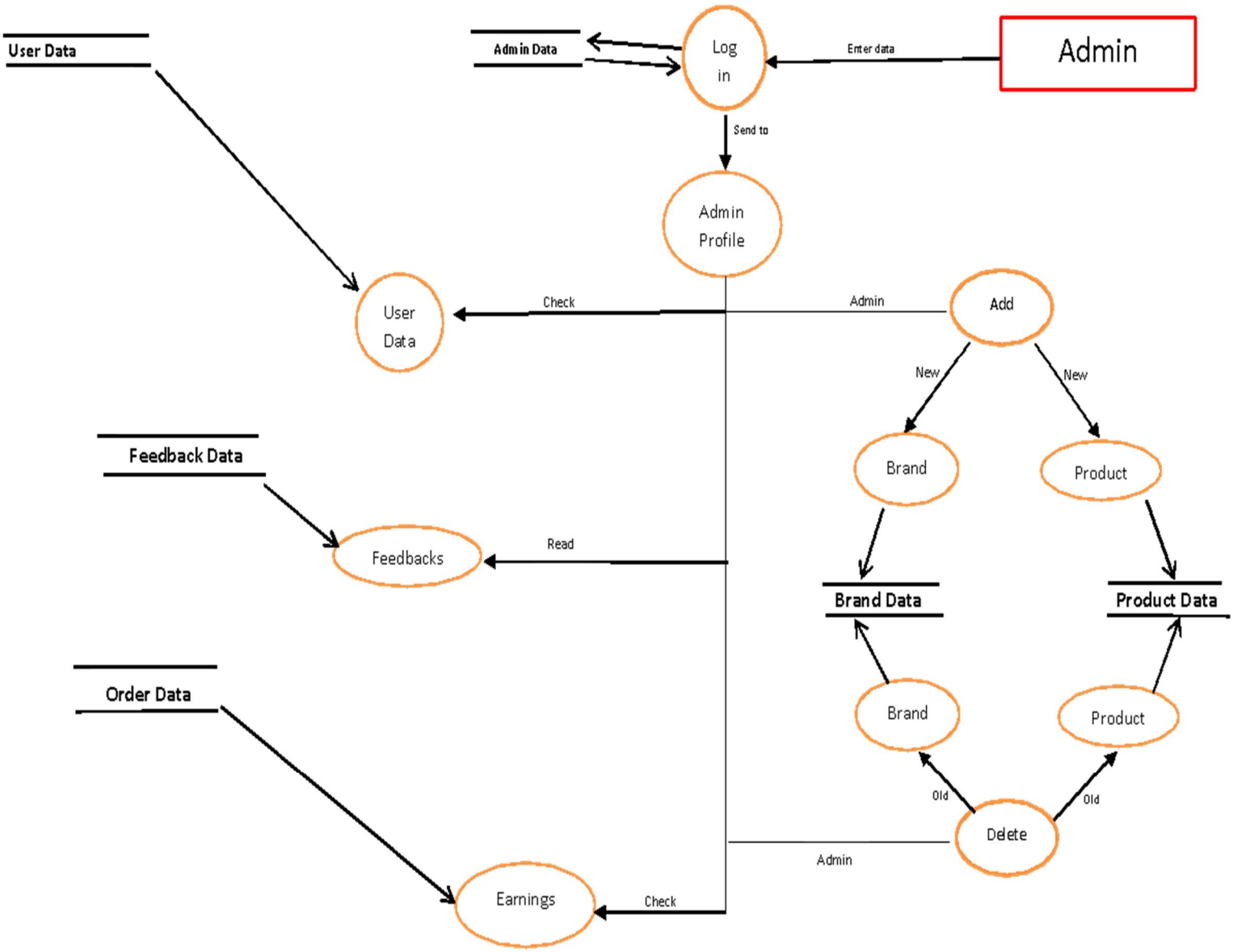
1.2 1st Level Admin DFD



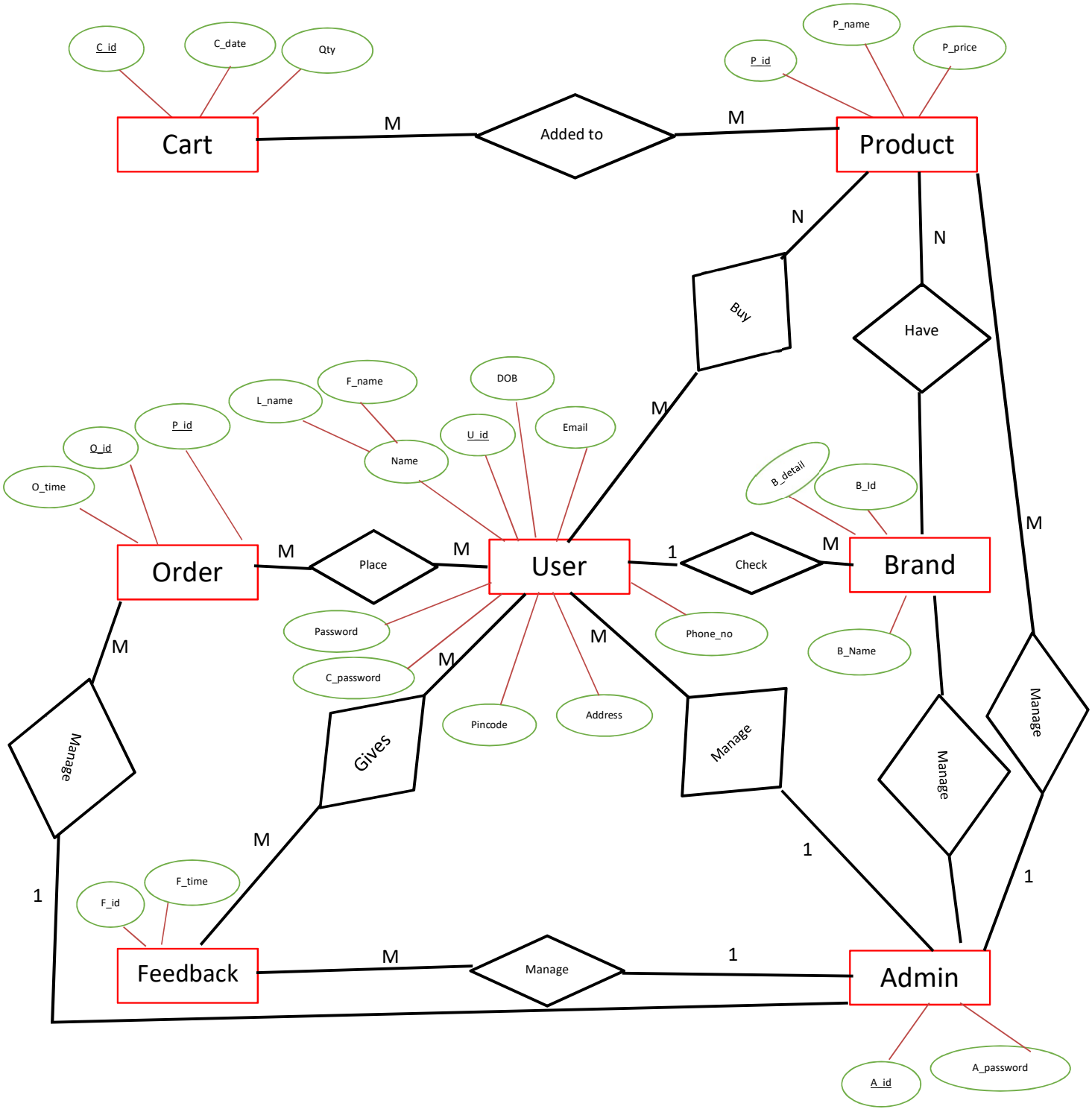
2nd Level User DFD



2nd Level Admin DFD



Entity Relationship Diagrams (ER-Diagrams)



DATABASE DESIGN

Admin Login Table

S.No	Field Name	Data type	Constraint	Description
1	A_id	Varchar(10)	Primary Key	It store admin id
2	A_password	Varchar(20)	Not Null	It store password

User Registration Table

S.No	Field Name	Data type	Constraint	Description
1	U_id	Varchar(10	Primary Key	User id generate by system
2	F_name	Varchar(20)	Not Null	First Name of user
3	L_name	Varchar(20)	Not Null	Last Name of user
4	Email	Varchar(30)	Not Null	Email address of user
5	Password	Varchar(20)	Not Null	For security purpose
6	C_password	Varchar(20)	Not Null	For rechecking password
7	Phone_no	Big Int	Not Null	Contact number of user
8	Address	Varchar(30)	Not Null	Address of the user
9	Pincode	Int	Not Null	Pin code of user address
10	D_O_B	Date Time	Not Null	User's date of birth

Login Table

S.No	Field Name	Data type	Constraint	Description
1	U_id	Varchar(10)	Foreign Key	User id
2	Password	Varchar(20)	Not Null	Password of user

Brand Table

S.No	Field Name	Data type	Constraint	Description
1	B_id	Varchar(10)	Primary Key	Id of brand
2	B_name	Varchar(20)	Not Null	Name of brand
3	B_details	Varchar(50)	Not Null	Details of brand

Product Table

S.No	Field Name	Data type	Constraint	Description
1	P_id	Varchar(10)	Primary Key	Id of products
2	P_name	Varchar(20)	Not Null	Name of product
3	P_price	Varchar(20)	Not Null	Price of product
4	B_id	Varchar(10)	Foreign Key	Id of brand
5	B_name	Varchar(20)	Not Null	Name of brand

Cart Table

S.No	Field Name	Data type	Constraint	Description
1	C_id	Varchar(10)	Primary Key	Id of cart
2	Product_id	Varchar(10)	Foreign Key	Id of product
3	P_name	Varchar(10)	Not Null	Name of product
4	Qty	Int	Not Null	Quantity of product
5	P_price	Int	Not Null	Price of product

Order Table

S.No	Field Name	Data type	Constraint	Description
1	O_id	Varchar(10)	Primary Key	Id of order
2	P_id	Varchar(10)	Foreign Key	Id of product
3	U_id	Varchar(10)	Foreign Key	Id of user
4	F_name	Varchar(20)	Not Null	First name of user
5	Email	Varchar(30)	Not Null	Email of user
6	P_name	Varchar(20)	Not Null	Name of product
7	P_price	Int	Not Null	Price of product
8	O_time	Date Time	Not Null	Time of order
9	B_name	Varchar(20)	Not Null	Name of brand
10	Address	Varchar(30)	Not Null	Address of user
11	P_qty	Int	Not Null	Quantity of product
12	Pincode	Int	Not Null	Pin code of user address

Feedback Table

S.No	Field Name	Data type	Constraint	Description
1	F_id	Varchar(10)	Primary Key	Id of feedback
2	U_id	Varchar(10)	Foreign Key	Id of user
3	F_name	Varchar(20)	Not Null	First name of user
4	F_time	Time	Not Null	Time of feedback
5	Email	Varchar(30)	Not Null	Email of user

INPUT TO THE SYSTEM

User modules

Registration

- Login
- Search product
- User information
    - View detail
    - Add detail
- My cart
    - Add to cart
    - Remove cart item
- Feedback
- About us
- Contact us
- Logout

Admin modules

- Admin login
- User Data
- Brand Update
    - Add Brand
    - Remove Brand
- Product Update

- Add Product
- Remove Product

- Check earnings
- Feedbacks
- Logout

MODULE DESCRIPTION

1. User modules

1. **Registration**
   Allow user to give his/her personal information to the website server to become a member to this system.

2. **Login:**
   After Registration user can login to the system with the help of user id generated by the system or email and password.

3. **Search**
   In Search box, user can search for various products and brands also and select best smartphone according to his/her need.

4. **User Information**
   User can check their information at any time. User view his/her profile and add new information of their profile.

5. **My cart**

User can add products to their cart. In this cart user can view their cart product any time and order them as per their convenience and delete items from cart.

6. **Feedback**
   User can give some helpful feedback to us about our website and service. We also ensure that they did not face any problem after their precious feedback.
7. **About us**
   In this section user can find information about the makers of the website and some other information about our system.
8. **Contact us**
   User can find our details like company number, email and helpline.
9. **Logout**
   User log out from our system with this module.

2. Admin Modules

- **Admin Login**
  Allow admin to login to the system by his/her unique admin Id and password.

- **User Data**
  Admin can view all the user base of their system and check all the basic information other than their password.

- **Brands update**
  Admin can add and remove Brands from the database.

- **Product update**
  Admin can add and remove Products from the database.

- **Check Earnings**
  Admin can view all the earnings from this module.

- **Feedbacks**
  Admin can read all the feedbacks receive from users.

- **Logout**
  Admin can logout from the system with the help of this module.

Output from the System

- **User Data**
  In this Admin can check all the register user details, except their private data like their password and security question.

- **Feedback Data**
  In this Admin can check all the feedbacks regarding to our website and admin try to solve their queries also.

- **Cart Details**
  Information related to user cart also store in cart table in our database.

- **Order Details**
  Information related to user orders and purchasing is also store in our database.

Testing

Testing is the process of running a system with the intention of finding errors. Testing enhances the integrity of a system by detecting deviations in design and errors in the system. Testing aims at detecting error-prone areas. This helps in the prevention of errors in a system. Testing also adds value to the product by conforming to the user requirements.

Software testing can be state as the process of validating and verifying that a computer program/application/product:

- Meets the requirements that guided its design and development
- Works as expected
- Can be implement with the same characteristics
- Satisfies the needs of stakeholders

Software testing, depending on the testing method employed, can be implement at any time in the software development process.

TESTING METHODS

System testing is the stage of implementation. This is to check whether the system works accurately and efficiently before live operation commences. Testing is vital to the success of the system. The candidate system is subject to a variety of tests: on line response, volume, stress, recovery, security and usability tests. A series of tests are perform for the proposed system is ready for user acceptance testing. The Testing Steps are:

Black- Box Testing

The technique of testing without having any knowledge of the interior workings of the application is called black box testing. The tester is oblivious to the system architecture and does not have access to the source code. Typically, while performing a black-box test, a tester will interact with the system's user interface by providing inputs and examining outputs without knowing how and where the inputs are worked upon.

White-Box Testing

White-box testing is the detailed investigation of internal logic and structure of the code. White-box testing is also called glass testing or open-box testing. In order to perform white-box testing on an application, a tester needs to know the internal workings of the code. The tester needs to have a look inside the source code and find out which unit/chunk of the code is behaving inappropriately.

Unit Testing

Unit testing focuses efforts on the smallest unit of software design. This is known as module testing. The modules are tested separately. The test is carried out during programming stage itself. In this step, each module is found to be working satisfactory as regards to the expected output from the module

Integration Testing

Data can be lost across an interface. One module can have an adverse effect on another, sub functions, when combined, may not be linked in desired manner in major functions. Integration testing is a systematic approach for constructing the program structure, while at the same time conducting test to uncover errors associated within the interface. The objective is to take unit tested modules and builds program structure. All the modules are combined and tested as a whole.

Output Testing

After performing the validation testing, the next step is output testing of the proposed system, since no system could be useful if it does not produce the required output in a specific format. The output format on the screen is found to be correct. The format was designed in the system design time according to the user needs. For the hard copy also; the output comes as per the specified requirements by the user. Hence, output testing did not result in any correction for the system.

User Acceptance Testing

User acceptance of a system is the key factor for the success of any system. The system under consideration is tested for the user acceptance by constantly keeping in touch with the prospective system users at the time of developing and making changes whenever required.

This is done in regard to the following point:

a) Input Screen Design

b) Output Screen Design

c) Format of reports and other outputs.

FUTURE SCOPE

We always try to make it simple and more user friendly. As by increasing some coding, we can improve its functionality. Online payment system is not available for users, which should be improve in near future. Until now, it does not have the facility of back of database. We also try to add some discount on payment via some specific bank credit card and add feature of EMI for convenience of customer.

For security issue we also try to make it more secure than before at every aspects and also try to give some additional for our premium members. For make it more beneficial, we also try to add compare feature for comparing two or more similar product for grab the best deal among them. We also give platform to give feedback on every product of our website as review.

For affiliate marketing, we also add feature for customer to gain some profits by selling our products. There will be endless possibilities for making our website more comfortable among users.

References

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- Head First SQL: Your Brain on SQL by Lynn Beighley
- IGNOU: Introduction to Software Engineering

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