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Department of Computer Science & Engineering and Information Technology

PRACTICLE FILE

OF

SOFTWARE ENGINEERING

(SE)

CS-403

Submitted BY

KULPREET SINGH CHOPRA

[CS-B (BATCH B1)]

ROLL NO:-0905CS181085

Submitted TO

MRS. PRIUSHA NARWARIYA MAM

INDEX

Name : KULPREET SINGH CHOPRA Year : 2020

Subject : SOFTWARE ENG. PRACTICAL Class : CS-B

Semester : FOURTH Roll No. : 090SCS18108S

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GOOD Choice

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EXPERIMENT-1

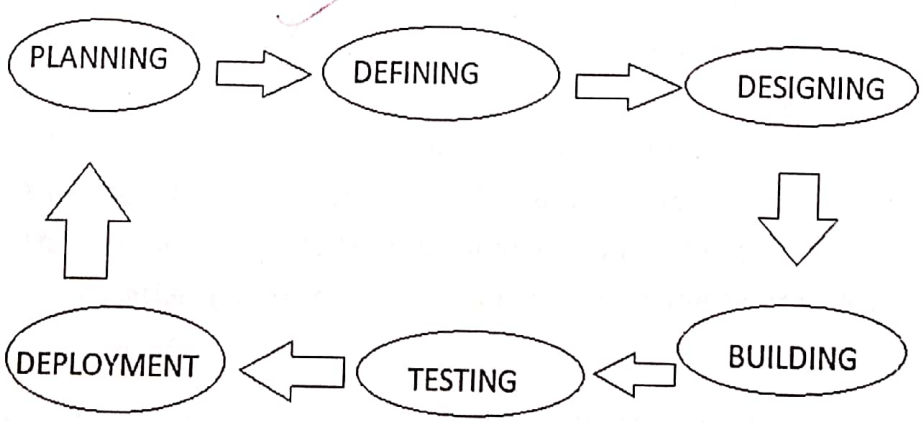
PHASES IN SOFTWARE DEVELEPMENT PROJECT (EXPLAIN SDLC)

SOFTWARE DEVELOPMENT LIFE CYCLE

SDLC is a process followed for a software project within a software organization .It consists of a detailed plan describing how to develop, maintain, replace and alter or enhance specific software. The life cycle defines a methodology for improving the quality of software and the overall development process.

The SDLC highlights different stages (phrases or steps) of the development process. The life cycle approach is used so users can see and understand what activities are involved within a given steps:-

PLANNING → DEFINING → DESIGNING → DEPLOYMENT → TESTING→ BUILDING →PLANIING



THE SDLC PROCESS

STAGE 1: PLANNING AND REQUIREMENT ANALYSIS

Requirement is performed by the senior member of the team with input from the customer, the sales department, market surveys and domain experts in the industry. This information is then used to plan the basic project approach and to conduct product feasibility study in the economical operations and technical areas.

Planning for quality assurance requirements and identification of the risks associated with project is also done in the planning stage. The outcome of technical feasibility study is to define the various technical approaches that can be followed to implement the project successfully with minimum risks.

STAGE 2: DEFINING REQUIREMENTS

Once the requirement analysis is done the next stage is to clearly define and document the product requirements and get them approved from the customer or the market analysis. This is done through on SRS (Software REQUIREMENT SPECIFICATION) document which consists of all the product requirements to be designed and developed during the project life cycle.

STAGE 3: DESIGN THE PRODUCT ARCHITECTURE

SRS is reference for product architects to come out with the best architecture for the product to be developed .Based on the requirements specified in SRS. Usually more than one design approach for the product architecture is proposed and document in a DDS. – DESIGN DOCUMENT SPECIFICATION A design approach clearly defines all the architecture modules of the product along with its communication and data flow representation with the external and third party modules.

STAGE 4: BUILDING OR DEVELOPINF THE PRODUCT

In this SDLCA the actual development starts and the product is build. The programming code is generated as per DDS during this stage. If the design is performed in a detailed and organized manner, code generation can be accomplished without much hassle. Developers must

follow the coding guidelines defined by their organization and programming tools like compilers, interpreters, debuggers, etc. are used to generate the code.

Different high level programming language such has C, C++, PASCAL, JAVA and PHP are used for coding.

STAGE 5: TESTING THE PRODUCT

This stage refers to the testing only stages of the product defects are reported, tracked, fixed and retested, until the product reaches the quality standards defined in the SRS.

STAGE 6: DEPLOYMENT IN THE MARKET AND MAINTENANCE

Once the product is tested and ready to be deployed it is released formally in the appropriate market. Sometimes product deployment happens in stages as per the business strategy of the organization. The product may first be released in a limited segment and tested in the real business environment.

Then based on the feedback, the product may be released as it or with suggested enhancements in the targeting market segment.

After the product is released in the market, its maintenance is done for the existing customer base.

4/02/2020

EXPERIMENT-2

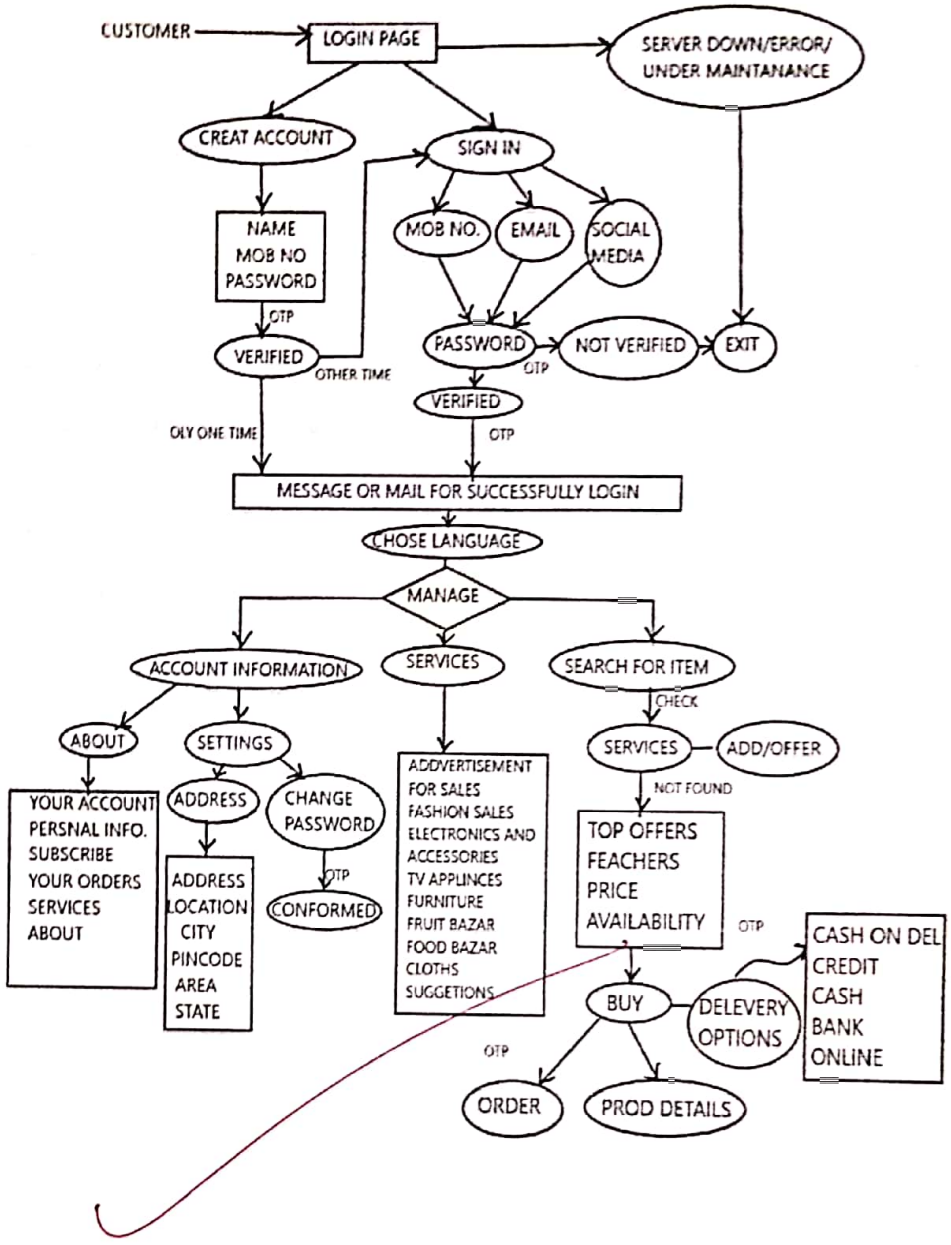
ANALYSIS REPORTOFPROJECT

ABSTACT

Our project "ONLINE BAZAR" is basically an "ONLINE MARKETING APP"which deals with the online customer requirements and its services. "ONLINE BAZAR" web services offers a broad set of global cloud based products including storage, database, analytics, networking, mobile developer tools, management tools, IOT , security and enterprise applications on demand available in seconds with "pay as you go pricing". This web application generally deals with the online customer and clients (one who singed in this app) and deals with new offers and items.

"ONLINE BAZAR" application also helps customers to purchase items online and provide soft delivery options. It's basically includes cloud and marketing chain system in it and the data and information related to deals with BIG BAZAR. The basic use and importance of this web application is to purchase any items available in BIG BAZAR without going there, means "ONLINE MARKETTING"

MODEL DESCRIPTION(ER DIAGRAM)



ONLINE BAZAR WORKING MODEL

TECHNOLOGY USED IN PROJECT "ONLINE BAZAR"

- HTML: Page layout has been designed in HTML
- CSS: CSS has been for all the designing part
- Java script: All the validation task and animations has been developed by java script
- PHP: All the business and fronted logic has been implemented in PHP
- MYSQL: MYSQL database has been used as database for the project
- Apache2: project will be run over the Apache2 server

TECHNOLOGY USED

- **Client side**
  - HTML (mixed with ASP.NET)
  - Java script
  - CSS
- **Server side**
  - ASP.NET
  - C#
- **Database**
  - Microsoft SQL Server
- **Web-service**
  - NIH(National Institute of Health),News service

REFRENCES

Websites

- ppwww.futurebazzar.com
- www.en.wikipedia.org/wiki/Big_bazaar
- www.bigbazaar.co.in
- www.straightline.in/brand/gift/Big-bazar
- www.bigbazaar.com
- www.amanora.com
- www.amazon.com
- www.flipkart.com

11/02/2020

QUERIES FOR "ONLINE BAZAR APP" PROJECT

QUE: which technology is used to clear stock day by day in big bazar online mobile application? Is the technology used for clear food items is same as any other product?

ANS: WE EXPLORES OFFLINE CHANNEL TO CLEAR STOCKS & WE USE 'INVENTORY MANAGEMENT SYSTEM' TO AVOID PRODUCT SHORTAGE. YES WE USE CYCLE INVENTORY FOR FOOD CATAGORY.

QUE: How will you manage discount and offer advertisement in your app? What arethe benefits of displaying advertisement in your app for 2-3 min?

ANS: DIGITAL DISPLAY GRAPHIC ADVERTISEMENT IS USED FOR ADVERTISEMENT FORMATE MADE OF TEXT, IMAGES & AUDIO. YES IT IS NECESSORY FOR GETTING HUGE PROFITS IN SALES.

QUE: Are you provided clear framework for your web side? Which technology is used for this framework?

ANS: WE USE HTML, CSS & PHP FOR CLEAR FRAMWORK. YES IT IS GOOD FOR MAKING OUR WEBSIDE ATTRACTIVE AND USER FRIENDLY.

QUE: Are you provided any kind of GPS location system to your application? Is it necessary to know customer location after login?

ANS: YES, WE USE GPS LOCATION SERVER FOR GETTING CURRENT LOCATION OF OUR CUSTOMERS, YES IT IS NECESSORY FOR SEQUARITY PURPOSE AND FOR SENDING OFFERS DAY BY DAY TO OUR REGULAR CUSTOMERS.

QUE: We know you provided special benefits for your regular customers like PROFIT CLUB card membership. With the help of which technique or technology you know which customer is regular or not?

ANS: YES WE PROVIDED SPECIAL BENIFITS FOR OUR REGULAR CUSTOMERS FOR INCREASING SELLS & PRAMOTING OUR WEBSIDE. FOR ACHIEVING WE USE 'WEBSIDE ANALYSIS OPERATOR STAFF.

SIGNATURE

BIG BAZAR GWALIOR

V. Grewal
18/2/2020

EXPERIMENT-3

Software Requirement Specification (SRS) For Online Marketing App (OMA)

INTRODUCTION

This document is meant to delineate the features of OMA, so as to serve as a guide to the developers on one hand and a software validation document for the prospective client on the other. “ONLINE BAZAR” is basically an “ONLINE MARKETING APP” which deals with the online customer requirements and its services.. “ONLINE BAZAR” or an “ONLINE MARKETING APP” which allows consumers to directly buy goods or services from a seller over the Internet using a web browser.

Specific Requirements:

1) **Functional Requirements:**

This section provides requirement overview of the “ONLINE MARKETING APP”. Various functional modules that can be implemented by the system will be –

- Registration

If customer wants to buy the product then he/she must be registered, unregistered user can’t go to the services.

- Login

Customer logins to the system by entering valid user id and password for the services or buy the products.

- Changes to Cart

Changes to cart means the customer after login or registration can make order or cancel order of the product from the app cart.

- Payment

In this system we are dealing the mode of payment by Cash. We will extend this to credit card, debit card etc in the future.

- Logout

After ordering or surfing for the product customer has to logout.

- Report Generation

After ordering for the product ,the system will sent one copy of the bill to the customer's Email-address and another one for the system data base.

Non-Functional Requirements:

Following Non-Functional Requirements will be there in the insurance to the internet:

(i) Secure access to consumer's confidential data.
(ii) Availability of product at any time.
(iii) Better component design to get better performance at peak time.
(iv) Flexible service based architecture will be highly desirable for future extension.

Non-Functional Requirements define system properties and constraints.

Various other Non-Functional Requirements are:

- **Security**
- **Reliability**
- **Maintainability**
- **Portability**
- **Extensibility**
- **Reusability**
- **Compatibility**
- **Resource Utilization**

EXPERIMENT-4

To perform the function oriented diagram: DFD or Structured chart.

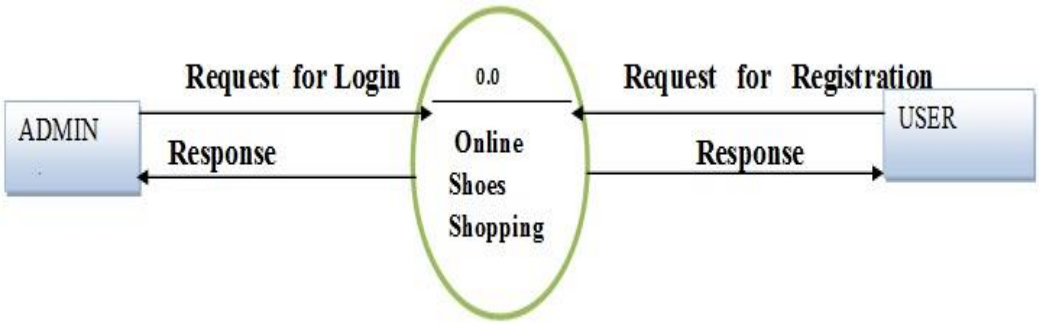
DATA FLOW DIAGRAM (DFD) OF ONLINE SHOPPING SYSTEM

A data flow diagram is a graphical view of how data is processed in online bazar system in terms of input and output.

The Data flow diagram (DFD) contains some symbol for drawing the data flow diagram. Which we represent in our project DFD also.

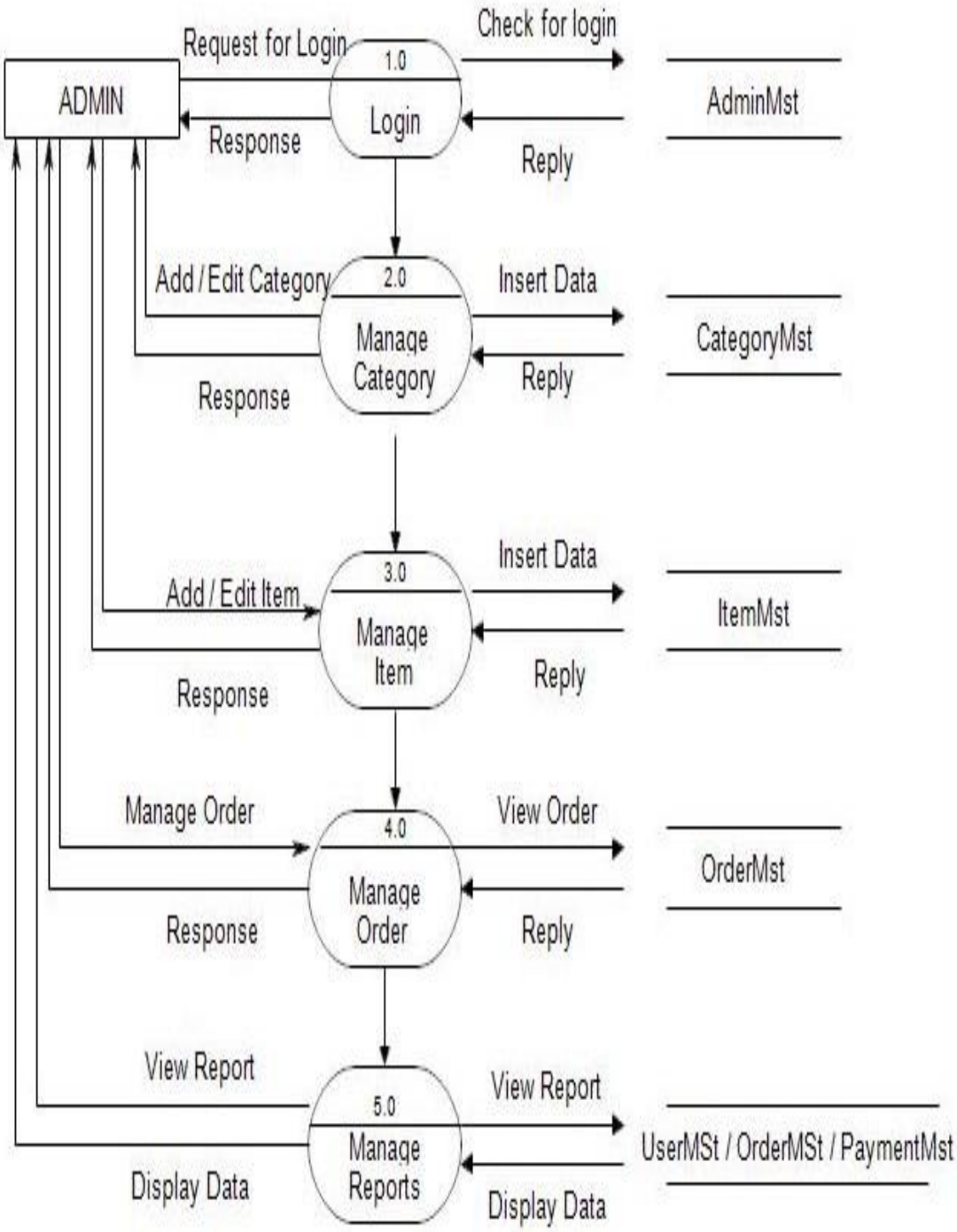
Context level DFD – 0 level

The context level data flow diagram (DFD) is describe the whole system. The (o) level dfd describe the all user module that operate the system. Below data flow diagram of online shopping site shows the two users can operate the system Admin and Member user.

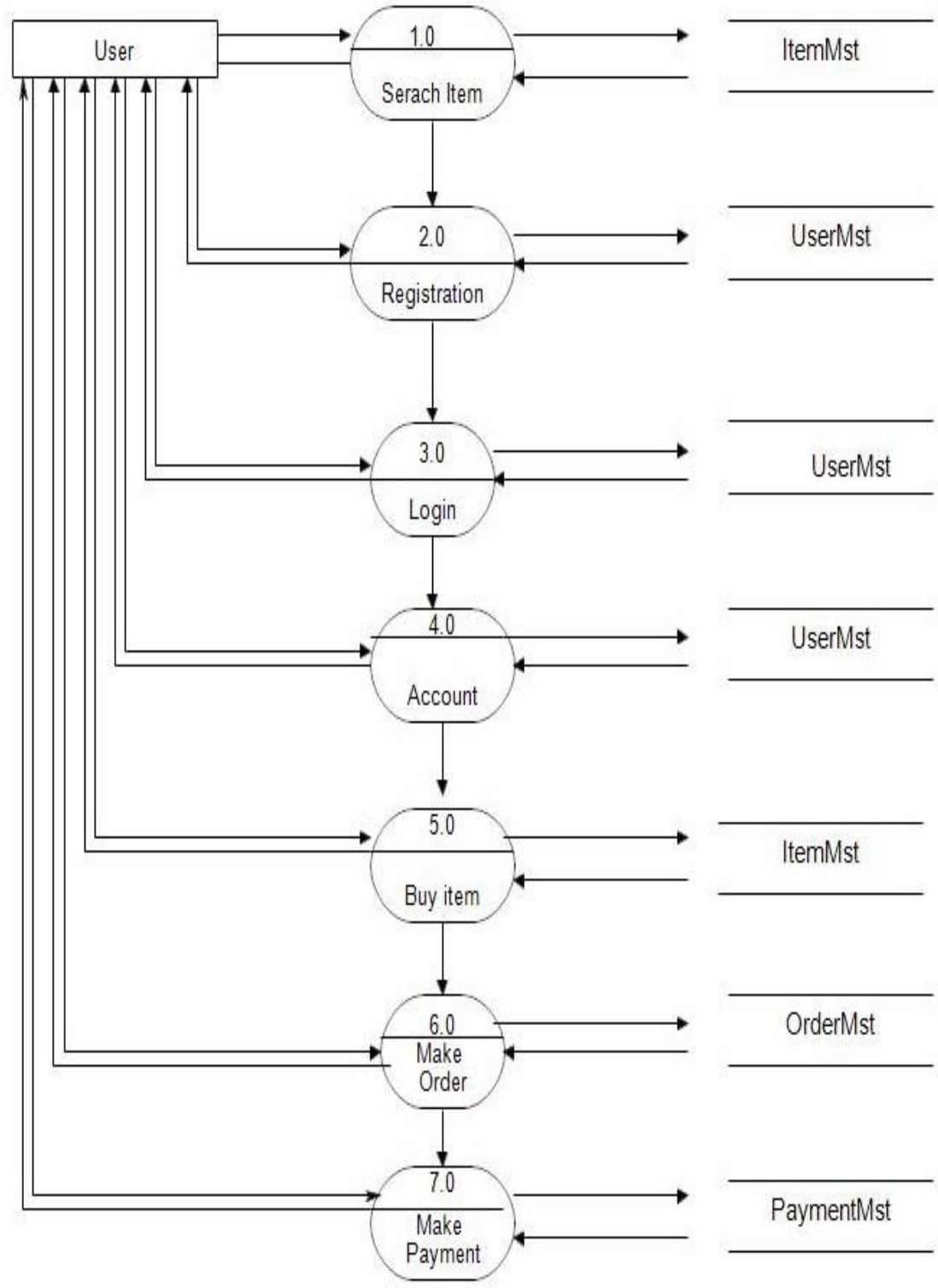


o – Level DFD for Online shopping website project

DATA FLOW DIAGRAMME OF ONLINE SHOPPING



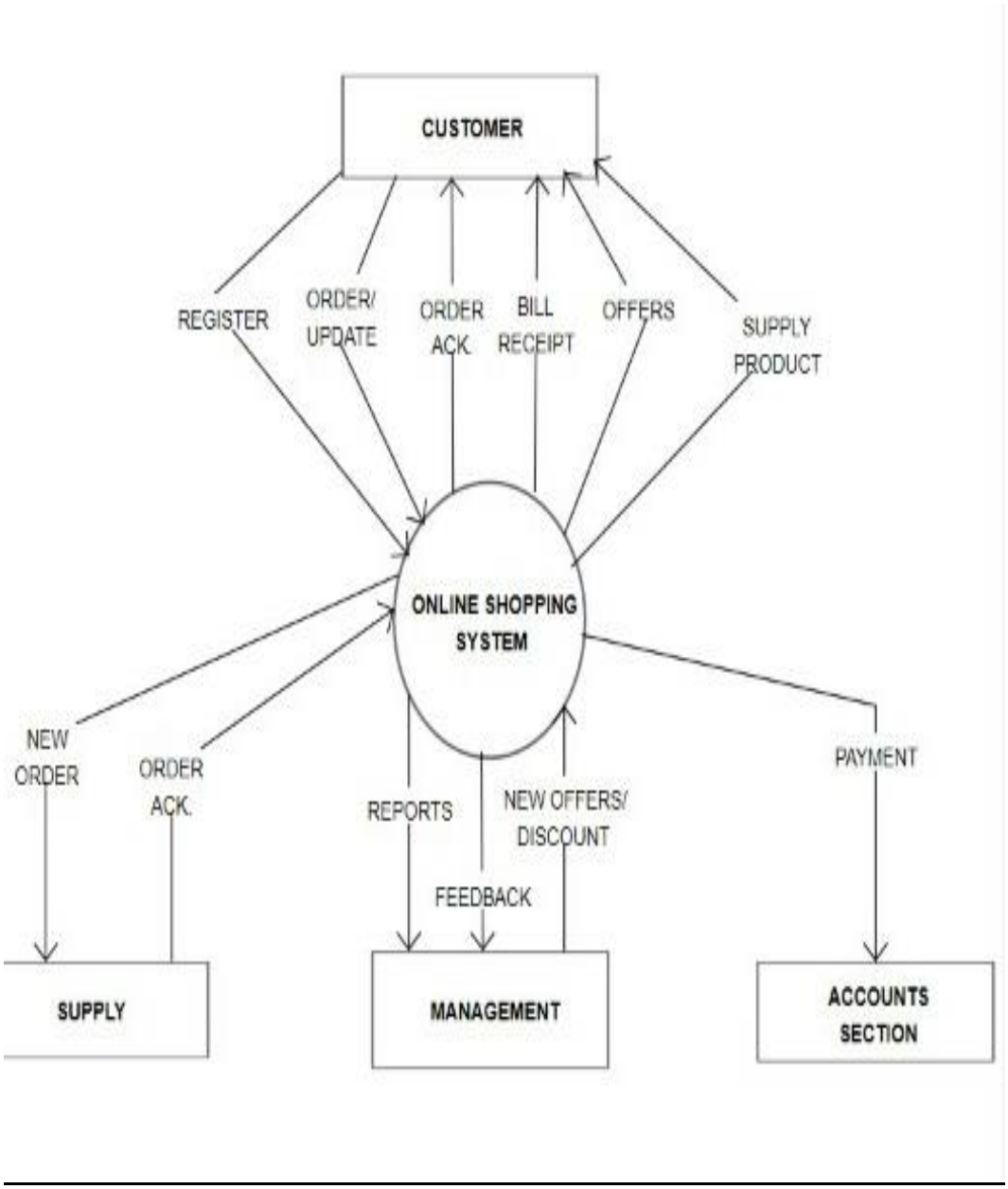
ADMIN SIDE DFD



USER SIDE DFD

STRUCTURED CHART

Structured diagram basically shows the structured layout of every modules present in online bazar application system which describe every layer of our system

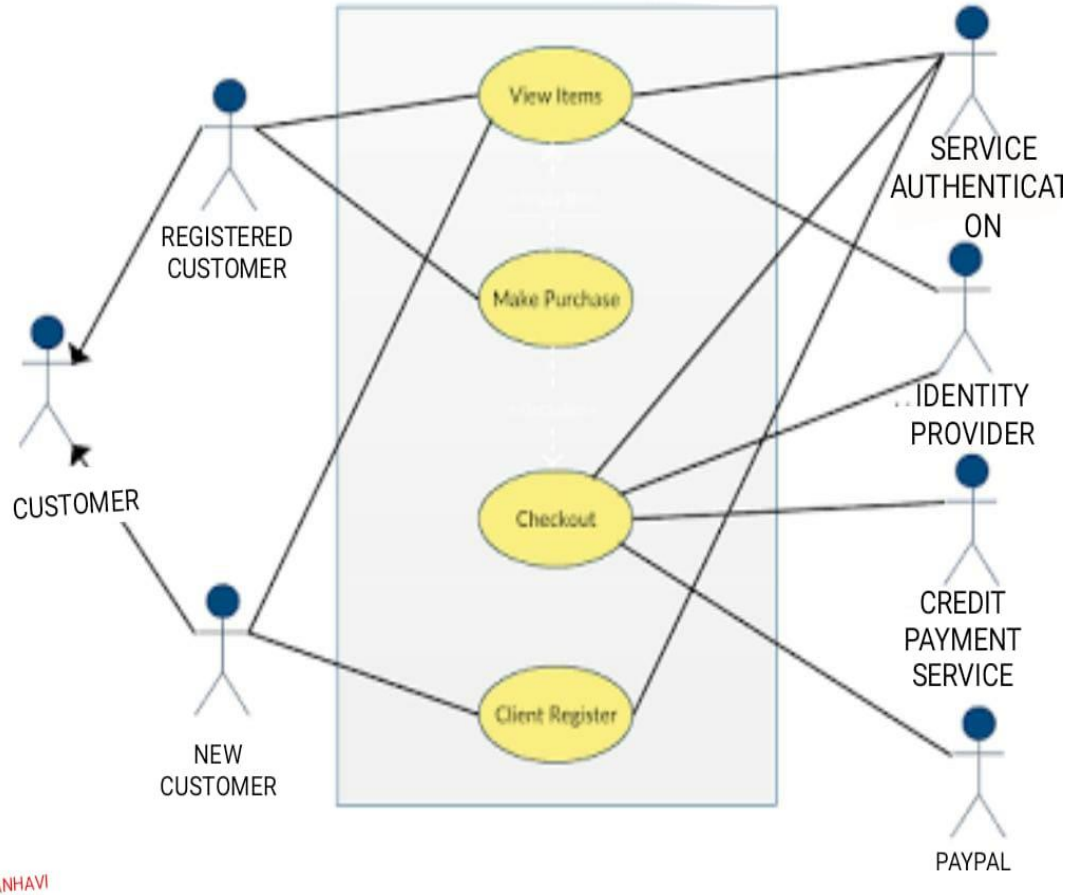


EXPERIMENT-5

UML diagrams using Argo UML tool

- Introduction of UML
- Introduction Argo UML Tool.

Unified Modeling Language (UML) is a general purpose modeling language. The main aim of UML is to define a standard way to visualize the way a system has been designed. It is quite similar to blueprints used in other fields of engineering.UML is not a programming language, it is rather a visual language. We use UML diagrams to portray the behavior and structure of a system. UML helps software engineers, businessmen and system architects with modeling, design and analysis.



JANHAVI SAHU

The **Object Management Group (OMG)** adopted Unified Modeling Language as a standard in 1997. It's been managed by OMG ever since. **International Organization for Standardization (ISO)** published UML as an approved standard in 2005. UML has been revised over the years and is reviewed periodically.

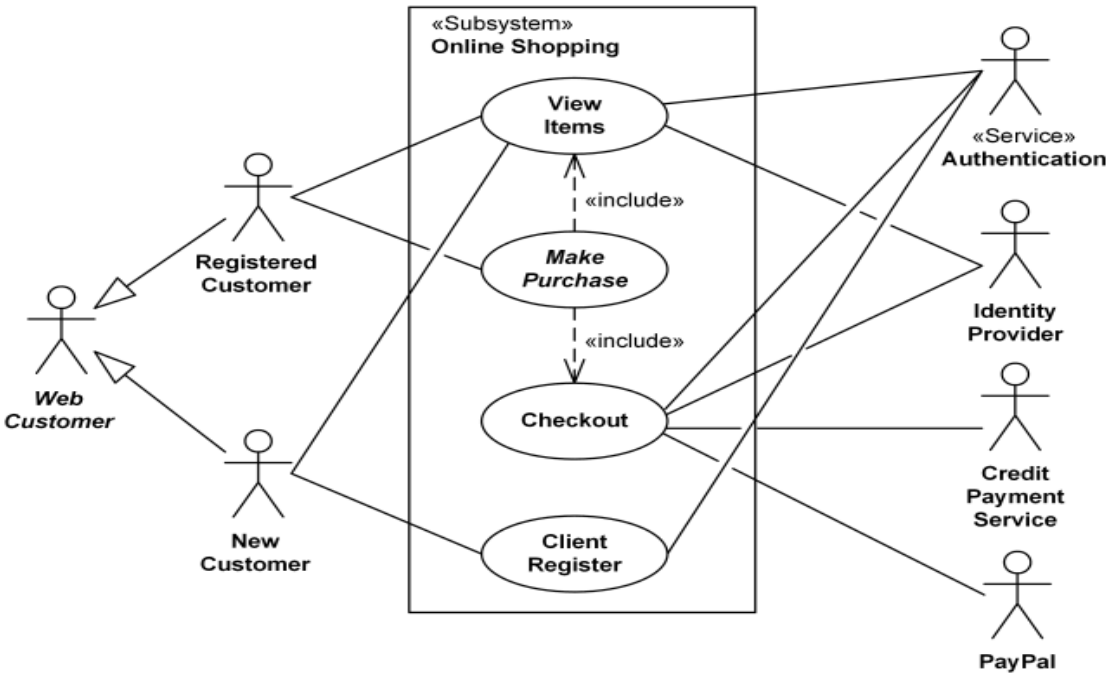
Argo UML is an UML diagramming application written in Java and released under the open source Eclipse Public License. By virtue of being a Java application, it is available on any platform supported by Java SE.

EXPERIMENT-6

To perform the user's view analysis: Use case diagram

USE CASE DIAGRAM

Web customer actor uses some web site to make purchases online. Top level **use cases** are **View Items**, **Make Purchase** and **Client Register**. View Items use case could be used by customer as top level use case if customer only wants to find and see some products. This use case could also be used as a part of Make Purchase use case. Client Register use case allows customer to register on the web site, for example to get some coupons or be invited to private sales. Note, that **Checkout** use case is **included use case** not available by itself - checkout is part of making purchase. Except for the **Web Customer** actor there are several other actors which will be described below with detailed use cases.



Online shopping UML use case diagram example - top level use case.

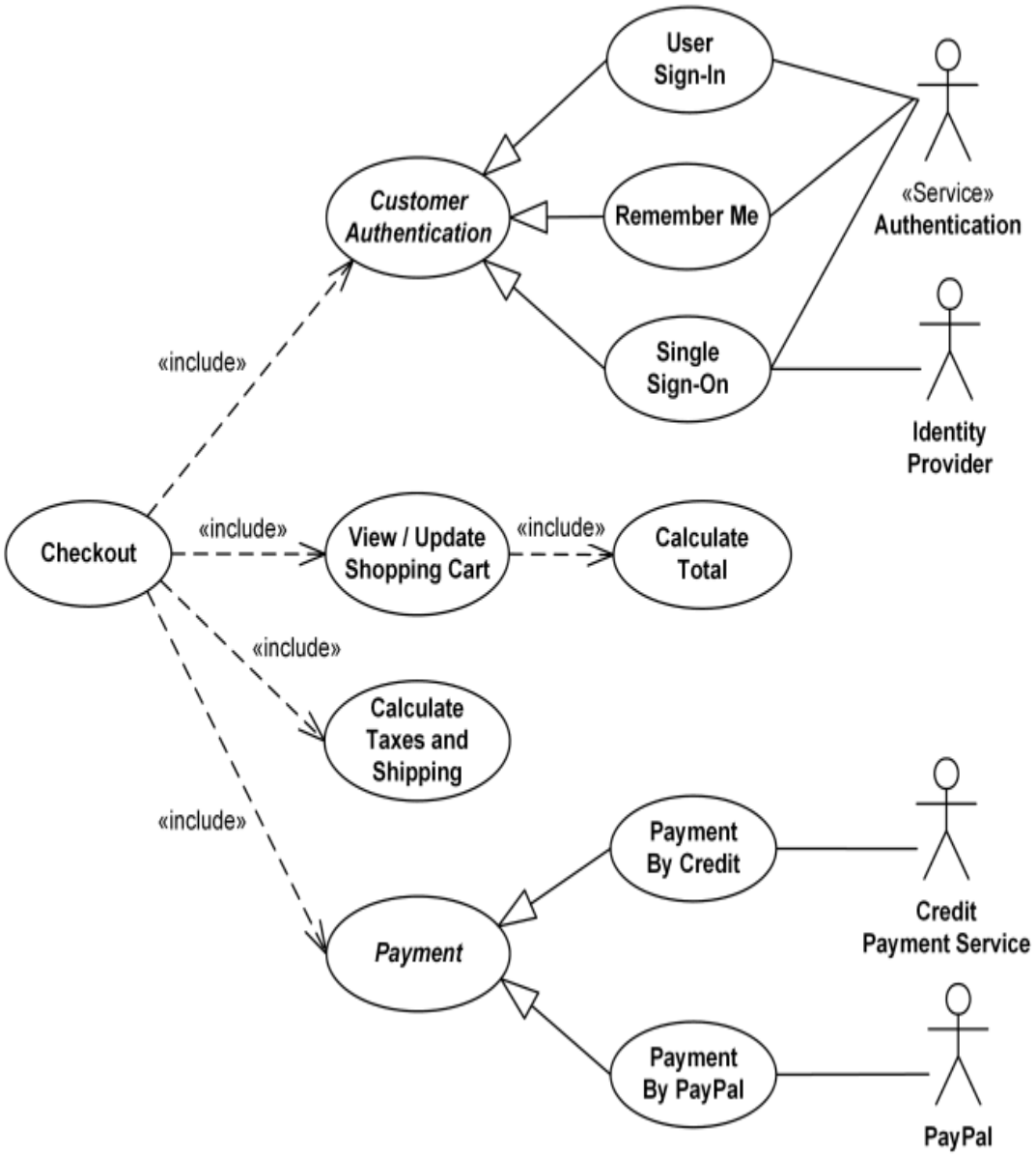
VIEW ITEMS USE CASE is **extended** by several optional use cases - customer may search for items, browse catalog, view items recommended for him/her, add items to shopping cart or wish list. All these use cases are extending use cases because they provide some optional functions allowing customer to find item.

Customer Authentication use case is **included** in **View Recommended Items** and **Add to Wish List** because both require the customer to be authenticated. At the same time, item could be added to the shopping cart without user authentication.

Online shopping UML use case diagram example - view items use case.

CHECK OUT USE CASE includes several required uses cases. Web customer should be authenticated. It could be done through user login page, user authentication cookie ("Remember me") or Single Sign-On (SSO). Web site authentication service is used in all these use cases, while SSO also requires participation of external identity provider.

Checkout use case also includes **Payment** use case which could be done either by using credit card and external credit payment service or with PayPal.



Online shopping UML use case diagram example - checkout, authentication and payment use cases.

EXPERIMENT-7

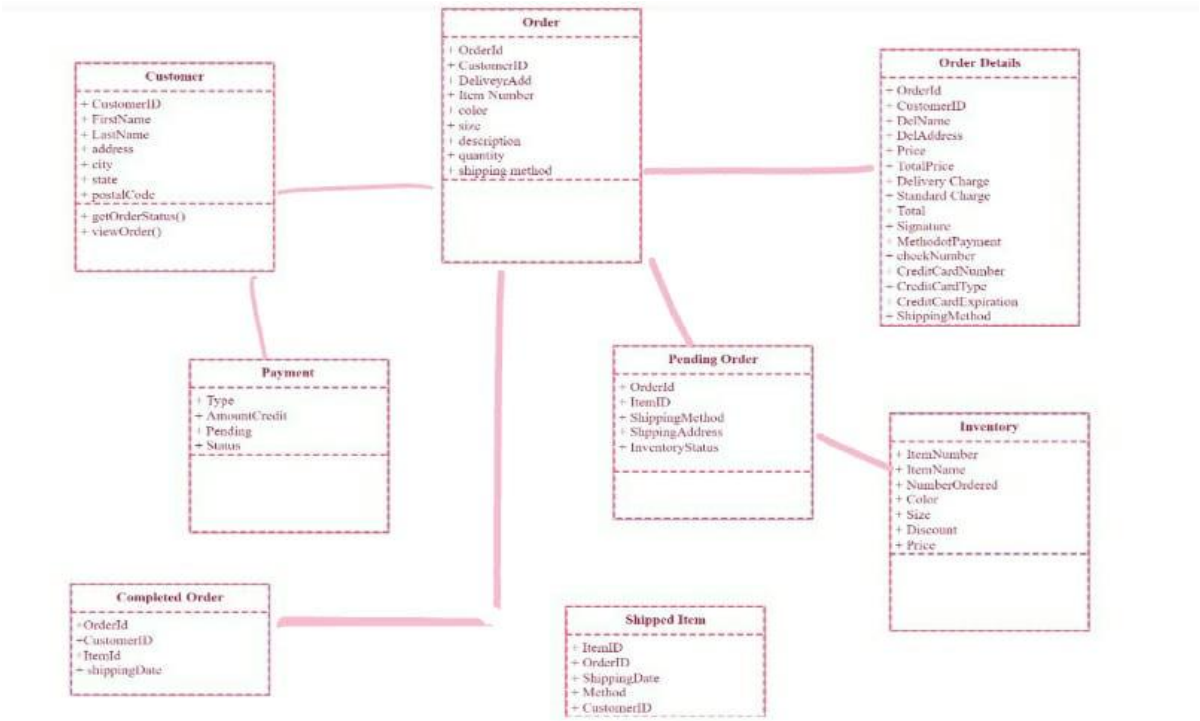
To draw the structural view diagram: Class diagram, object diagram.

Structural view diagram

Structural diagrams depict the elements of a system that are independent of time and that convey the concepts of a system and how they relate to each other. The elements in these diagrams resemble the nouns in a natural language, and the relationships that connect them are structural or semantic relationships.

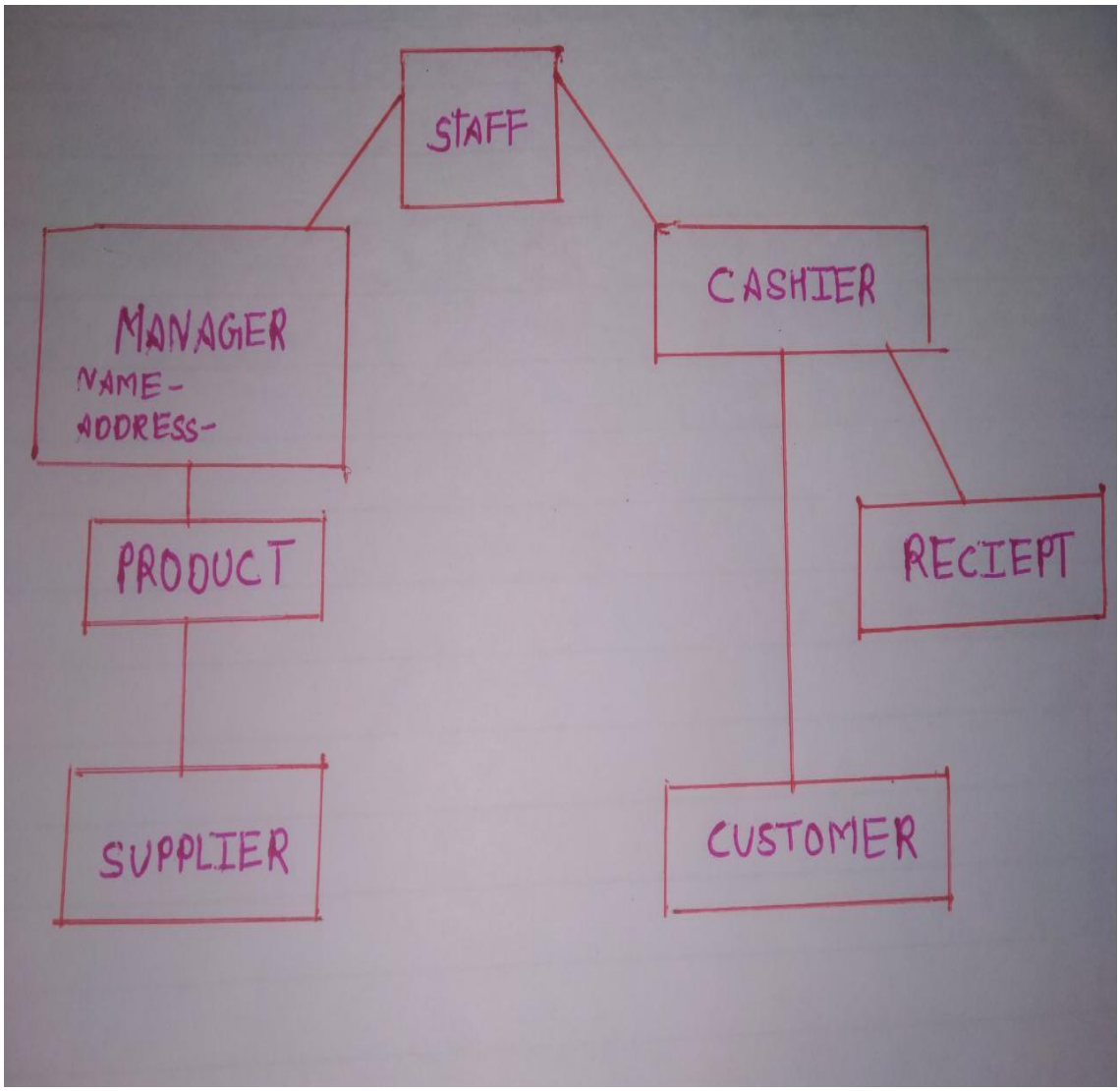
Class diagram

Class diagrams capture the logical structure of the system , the classes and objects that makeup the model, describing what exist and what attributes and behavior it has.



Object diagram

Object diagrams depict object instances of Classes and their relationships at a point in time.



EXPERIMENT-8

To draw the behavioral view diagram: Sequence diagram, Collaboration diagram.

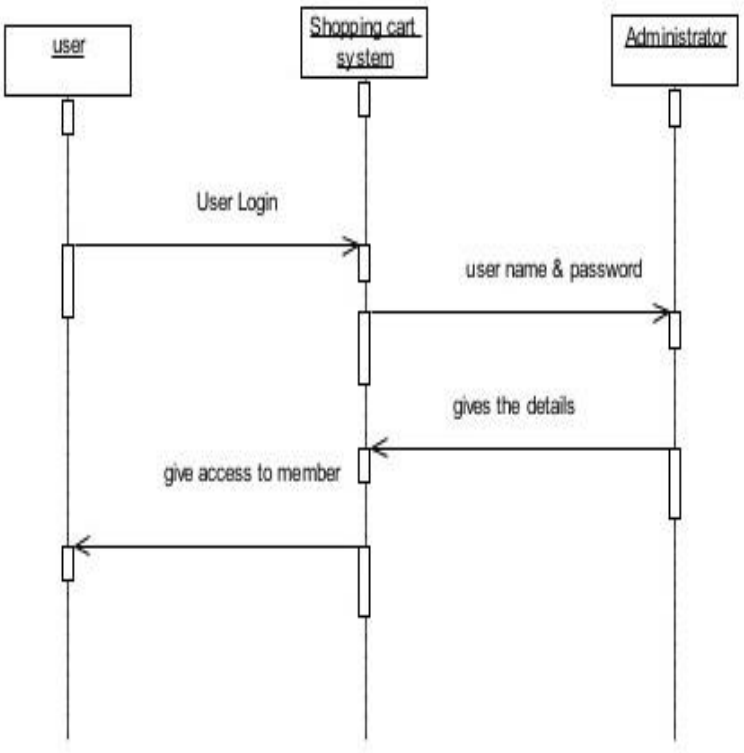
SEQUENCE DIAGRAMME

What is a Sequence Diagram?

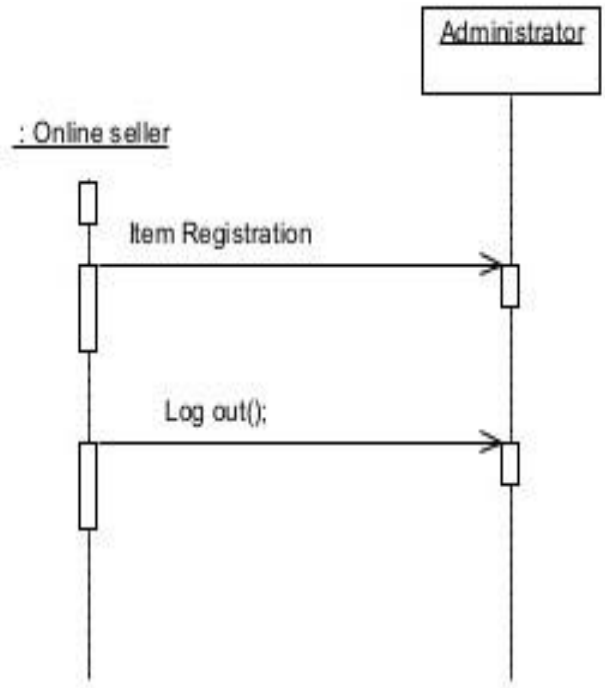
• A model describing how groups of objects collaborate in some behavior over time. • The diagram captures the behavior of a single use case. • It shows objects and the messages that are passed between these objects for the particular use case.

When to use a Sequence Diagram?

A good design can have lots of small methods in different classes. Because it is difficult to figure out the overall behavior of the design we draw a sequence diagram to verify the behavior. SE

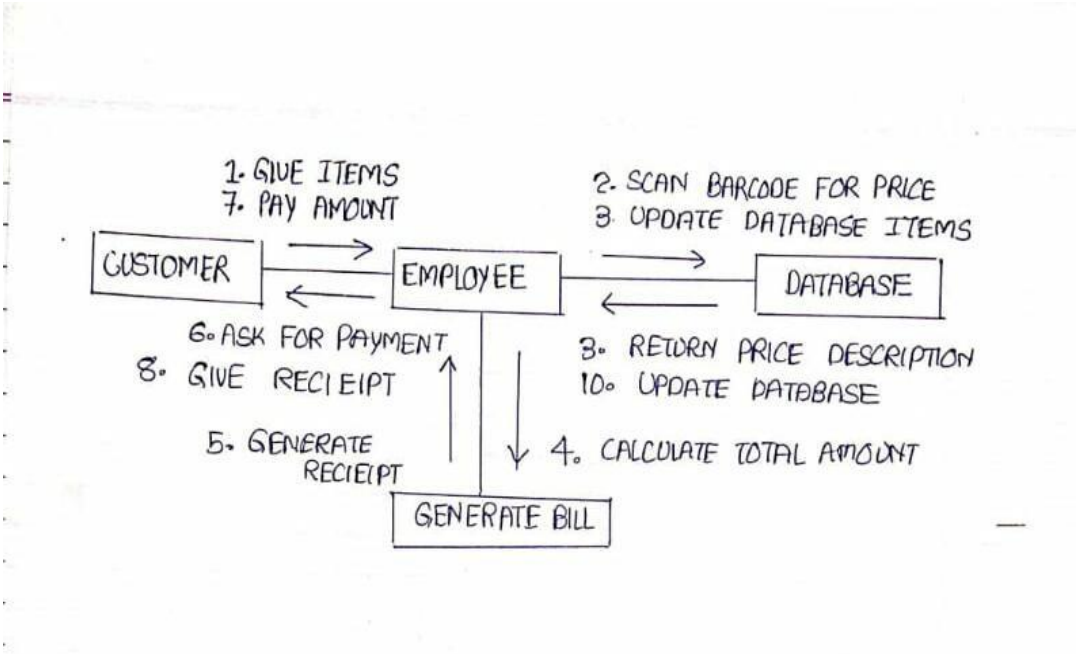


SEQUENCE DIAGRAMME FOR USER REGISTRATION



SEQUENCE DIAGRAMME FOR SELLER REGISTRATION

COLLABORATION DIAGRAMME

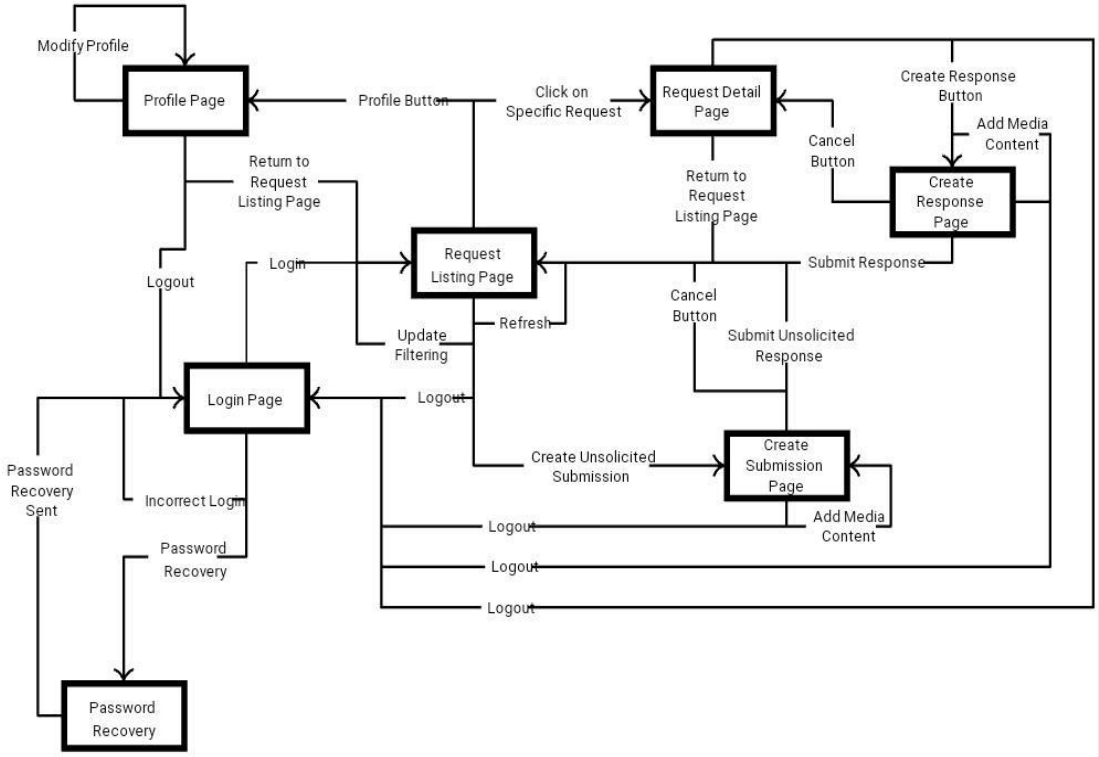


EXPERIMENT-9

BEHAVIOURAL VIEW DIAGRAM

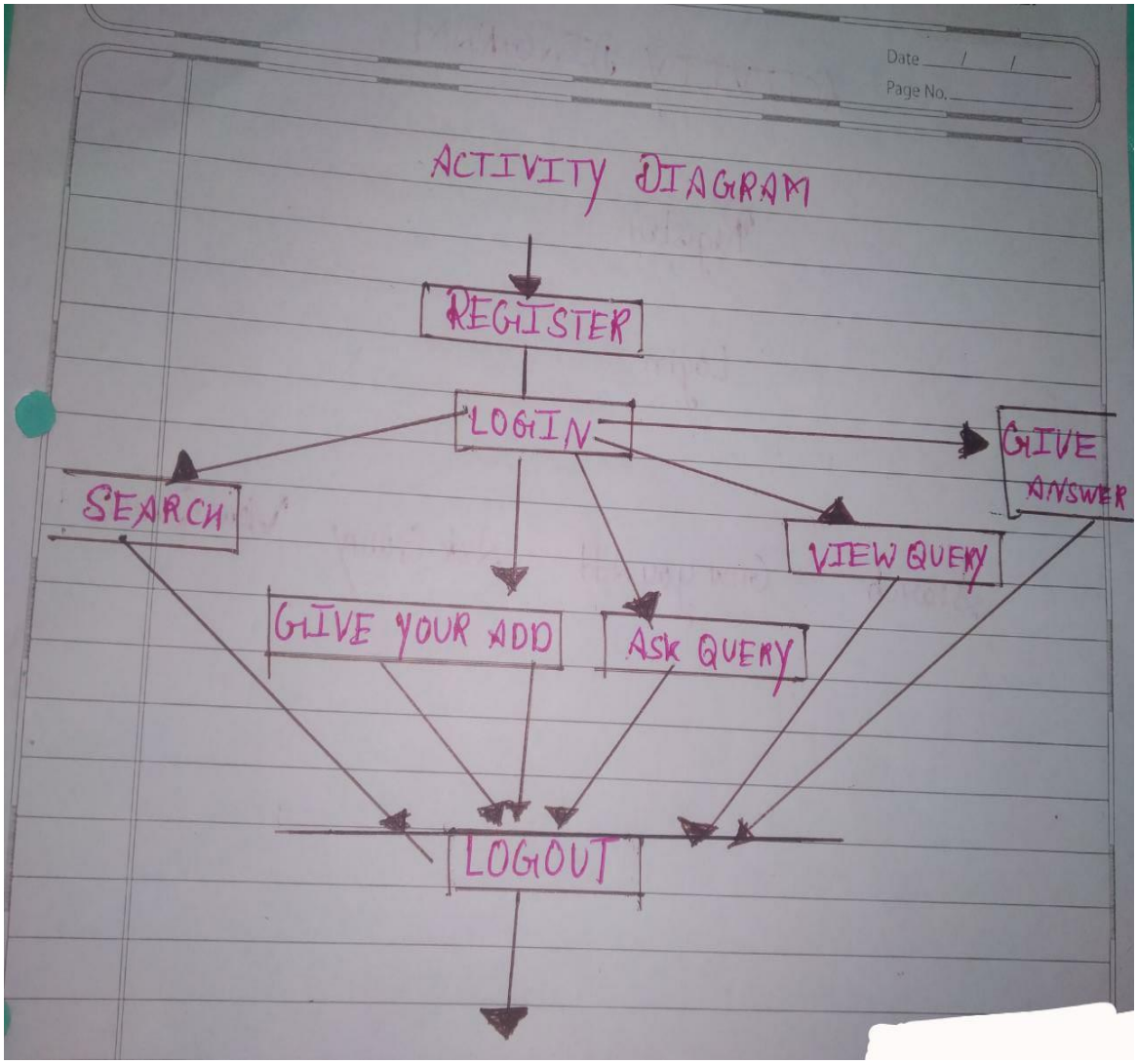
What is a State Diagram?

A state diagram shows the behavior of classes in response to external stimuli. Specifically a state diagram describes the behavior of a single object in response to a series of events in a system. Sometimes it's also known as a Harel state chart or a state machine diagram. This UML diagram models the dynamic flow of control from state to state of a particular object within a system.



Activity Diagram:

Activity diagrams are graphical representations of workflows of stepwise activities and actions with support for choice, iteration and concurrency.

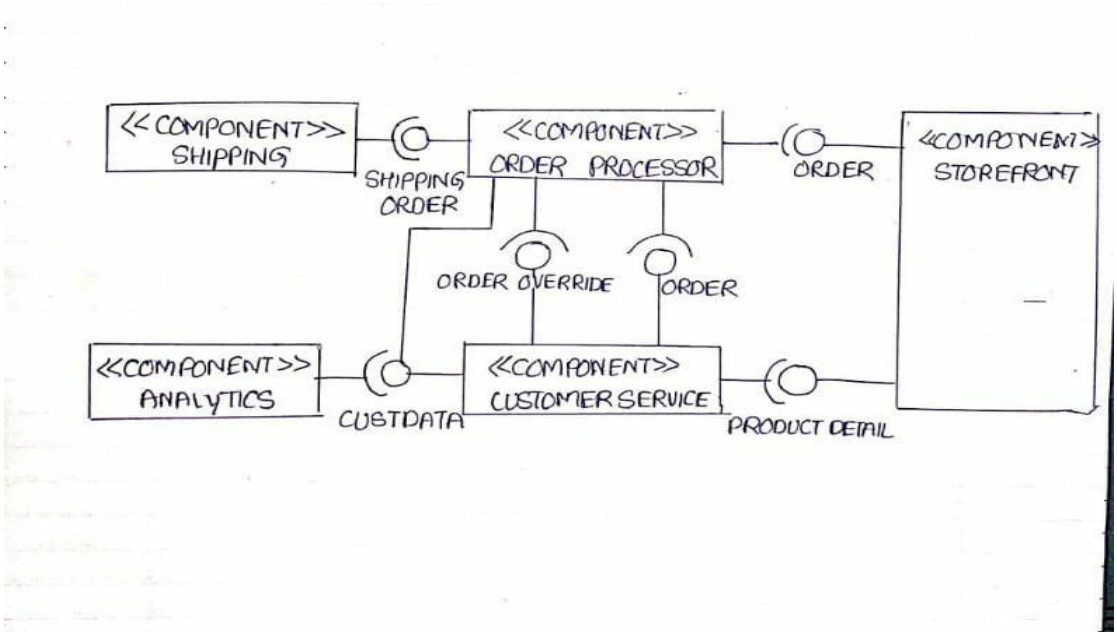


EXPERIMENT-10

To draw the implementation view diagram: Component diagram.

COMPONENT DIAGRAM

One main benefit of Component diagrams if to simplify the high-level view of the ONLINE BAZAR system. The Figure below is a much larger view of what is involved in an ONLINE BAZAR. By using a component diagram we see the system as a group of nearly independent component or subsystems that interact with each other in a specifically defined way.



Each component is responsible for the action for which it is named and interface(s) it provides. As long as those requirements are maintained changes to one component will not percolate to other components.

ONLINE BAZAR COMPONENT DIGRAM EXPLANATION:

There is a seller component that sequentializes requests from both selling system and clients . A component that processes credit card charges; and the database containing the product information.

EXPERIMENT 11

Environmental view diagram

Deployment diagram:

A deployment diagram is UML diagram type that shows the execution architecture of a system. Deployment diagram are used to visualize the hardware process / nodes / device of system. Using it you can understand how the system will be physically deployed on the hardware

Deployment diagram applications

Deployment diagrams have several valuable applications. You can use them to:

- **Show which software elements are deployed by which hardware elements.**

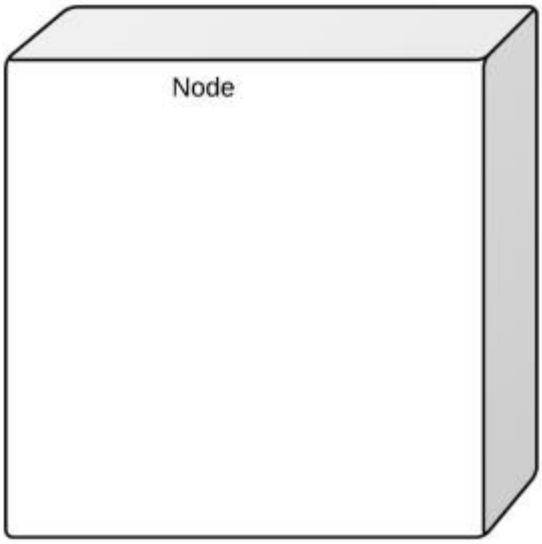
- **Illustrate the runtime processing for hardware.**

- **Provide a view of the hardware system's topology**

Deployment diagram symbols and notation

Use these shapes as you build UML deployment diagrams.

Nodes



There are two types of nodes in a deployment diagram: device nodes and execution environment nodes. Device nodes are computing resources with processing capabilities and the ability to execute programs. Some examples of device nodes include PCs, laptops, and mobile phones.

An execution environment node, or EEN, is any computer system that resides within a device node. It could be an operating system, a JVM, or another servlet container.

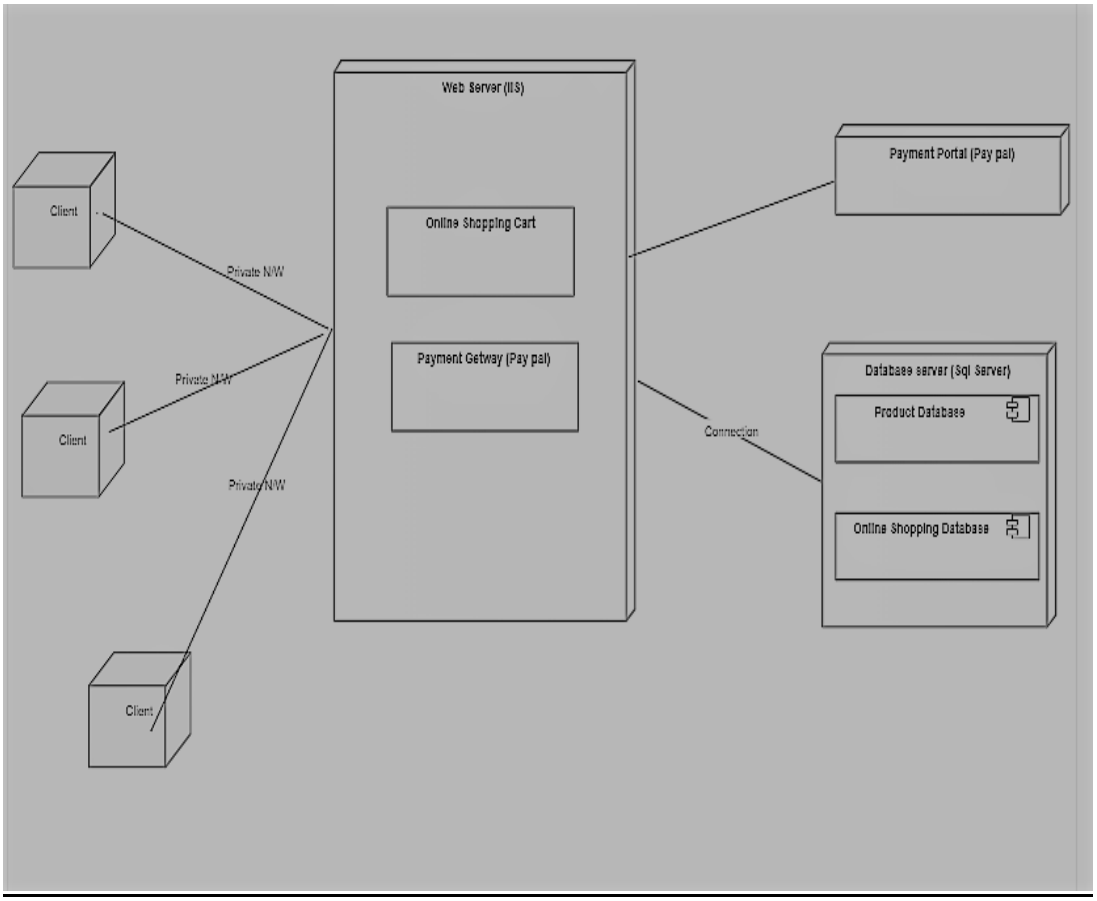
Database

Databases represent any data stored by the deployed system. In some instances, you'll see a database represented as just another node, but sometimes you will see this shape as a database.

Other shapes

- **Communication path:** A straight line that represents communication between two device nodes.

- **Artifacts:** A box with the header "<<artifact>>" and then the name of the file.
- **Package:** A file-shaped box that groups together all the device nodes to encapsulate the entire deployment.
- **Component:** An entity required to execute a stereotype function.



EXPERIMENT-12

INTRODUCTION OF TESTING AND TESTING REPORT

INTRODUCTION OF TESTNG

Software testing is an investigation conducted to provide stakeholders with information about the quality of the product or service under test. Software testing also provides an objective, independent view of the software to allow the business to appreciate and understand the risks of software implementation. Test techniques include, but are not limited to, the process of executing a program or application with the intent of finding software bugs.

Software testing can also be stated as the process of validating and verifying that a software program/application/product:

1. meets the business and technical requirements that guided its design and development;
2. works as expected; and
3. Can be implemented with the same characteristics.

Software testing, depending on the testing method employed, can be implemented at any time in the development process. However, most of the test effort occurs after the requirements have been defined and the coding process has been completed. As such, the methodology of the test is governed by the software development methodology adopted.

Different software development models will focus the test effort at different points in the development process. Newer development models, such as Agile, often employ test driven development and place an increased portion of the testing in the hands of the developer, before it reaches a formal team of testers. In a more traditional model, most of the test execution occurs after the requirements have been defined and the coding process has been completed.

Typically Testing is classified into three categories.

- Functional Testing
- Non-Functional Testing or Performance Testing

- Maintenance (Regression and Maintenance)

SYSTEM TESTING

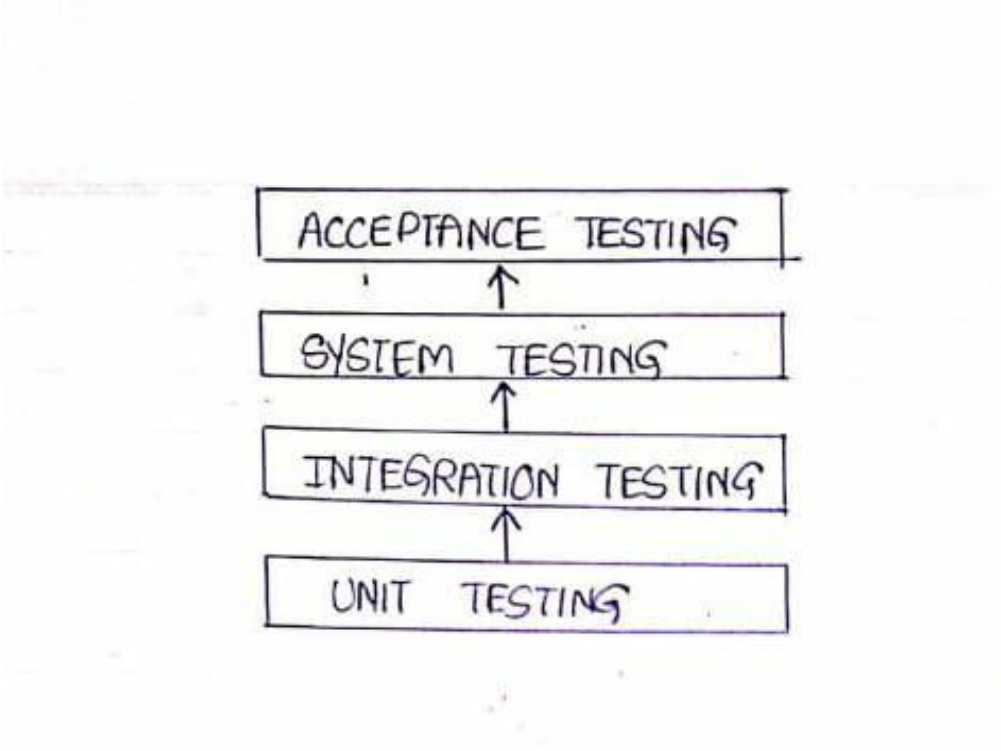
System Testing is basically performed by a testing team that is independent of the development team that helps to test the quality of the system impartial. It has both functional and non-functional testing.

System Testing is a black-box testing.

System Testing is performed after the integration testing and before the acceptance testing.

TESTING REPORT (ONLINE BAZAR SYSTEM)

TESTING PROCESS IN ONLINE BAZAR SYSTEM



System Testing is performed in the following steps:

Test Environment Setup:

Create testing environment for the better quality testing.

Create Test Case:
Generate test case for the testing process.

Create Test Data:
Generate the data that is to be tested.

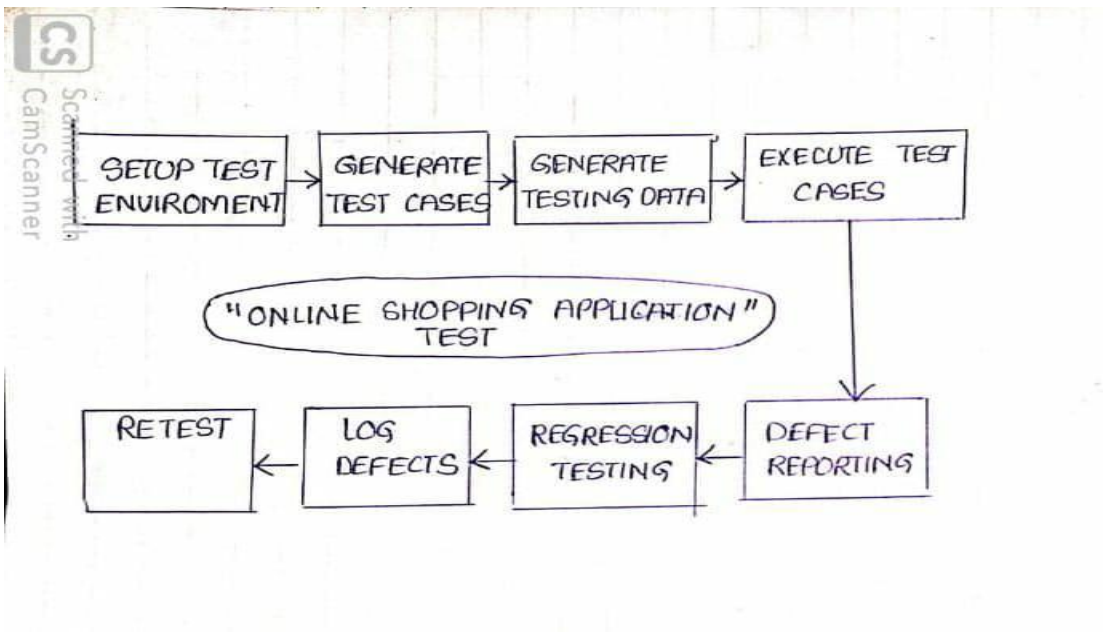
Execute Test Case:
After the generation of the test case and the test data, test cases are executed.

Defect Reporting:
Defects in the system are detected.

Regression Testing:
It is carried out to test the side effects of the testing process.

Log Defects:
Defects are fixed in this step.

Retest:
If the test is not successful then again test is performed.



Types of System Testing:

Performance Testing:
Performance Testing is a type of software testing that is carried out to test the speed, scalability, stability and reliability of the software product or application.

Load Testing:
Load Testing is a type of software Testing which is carried out to determine the behavior of a system or software product under extreme load.

Stress Testing:
Stress Testing is a type of software testing performed to check the robustness of the system under the varying loads.

Scalability Testing:
Scalability Testing is a type of software testing which is carried out to check the performance of a software application or system in terms of its capability to scale up or scale down the number of user request load.