1.WHAT IS SDLC?

ANS:-The software development life cycle (SDLC) is the process of planning, writing, modifying, and maintaining software. Developers use the methodology as they design and write modern software for computers, cloud deployment, mobile phones, video games, and more. Adhering to the SDLC methodology helps to optimize the final outcome.

In IT, the term "life cycle" was first used in the 1950s and 1960s to describe the stages involved in developing a new computer system, but it is now commonly used to refer to all stages in the production of any type of software.

2.WHAT IS SOFTWARE TESTING?

ANS:-Software Testing is a method to check whether the actual software product matches expected requirements and to ensure that software product is Defect free. It involves execution of software/system components using manual or automated tools to evaluate one or more properties of interest. The purpose of software testing is to identify errors, gaps or missing requirements in contrast to actual requirements.

3.WHAT IS AGILE METHODOLOGY?

ANS:-Agile methodology is a project management framework that breaks projects down into several dynamic phases, commonly known as sprints.

The Agile framework is an iterative methodology. After every sprint, teams reflect and look back to see if there was anything that could be improved so they can adjust their strategy for the next sprint.

4.WHAT IS SRS

ANS:-A software requirements specification (SRS) is a document that captures complete description about how the system is expected to perform. It is usually signed off at the end of requirements engineering phase.

5.WHAT IS OOPS

ANS:-As the name suggests, Object-Oriented Programming or OOPs refers to languages that use objects in programming. Object-oriented programming aims to implement real-world entities like inheritance, hiding, polymorphism, etc in programming. The main aim of OOP is to bind together the data and the functions that operate on them so that no other part of the code can access this data except that function.

6.WRITE BASIC CONCEPTS OF OOPS.

ANS:-

- OBJECT
- CLASS
- ENCAPSULATION
- INHERITANCE
- POLYMORPHISM
- .OVERRIDING
- .OVERLOADING
- ABSTRACTION

7.WHAT IS OBJECT:-It is a basic unit of Object-Oriented Programming and represents the real-life entities. An Object is an instance of a Class. When a class is defined, no memory is allocated but when it is instantiated (i.e. an object is created) memory is allocated. An object has an identity, state, and behavior. Each object contains data and code to manipulate the data. Objects can interact without having to know details of each other’s data or code, it is sufficient to know the type of message accepted and type of response returned by the objects.

For example “Dog” is a real-life Object, which has some characteristics like color, Breed, Bark, Sleep, and Eats.

8.WHAT IS CLASS

ANS:-A class is a user-defined data type. It consists of data members and member functions, which can be accessed and used by creating an instance of that class. It represents the set of properties or methods that are common to all objects of one type. A class is like a blueprint for an object.

9.WHAT IS ENCAPSULATION

ANS:-Encapsulation is defined as the wrapping up of data under a single unit. It is the mechanism that binds together code and the data it manipulates. In Encapsulation, the variables or data of a class are hidden from any other class and can be accessed only through any member function of their class in which they are declared. As in encapsulation, the data in a class is hidden from other classes, so it is also known as data-hiding.

10.WHAT IS INHERITANCE

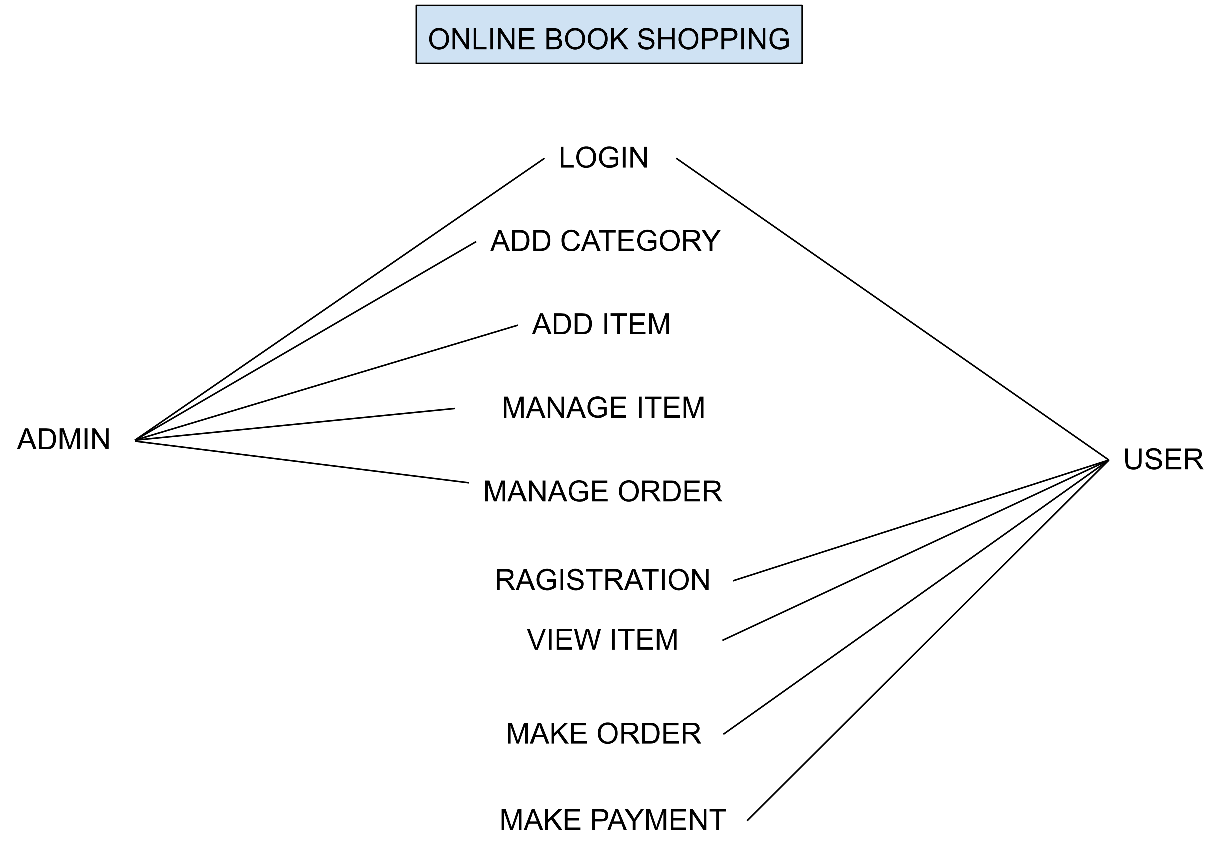
ANS:-Inheritance is an important pillar of OOP(Object-Oriented Programming). The capability of a class to derive properties and characteristics from another class is called Inheritance. When we write a class, we inherit properties from other classes. So when we create a class, we do not need to write all the properties and functions again and again, as these can be inherited from another class that possesses it. Inheritance allows the user to reuse the code whenever possible and reduce its redundancy.

11.WHAT IS POLYMORPHISM

ANS:-The word polymorphism means having many forms. In simple words, we can define polymorphism as the ability of a message to be displayed in more than one form. For example, A person at the same time can have different characteristics. Like a man at the same time is a father, a husband, an employee. So the same person posses different behavior in different situations. This is called polymorphism.

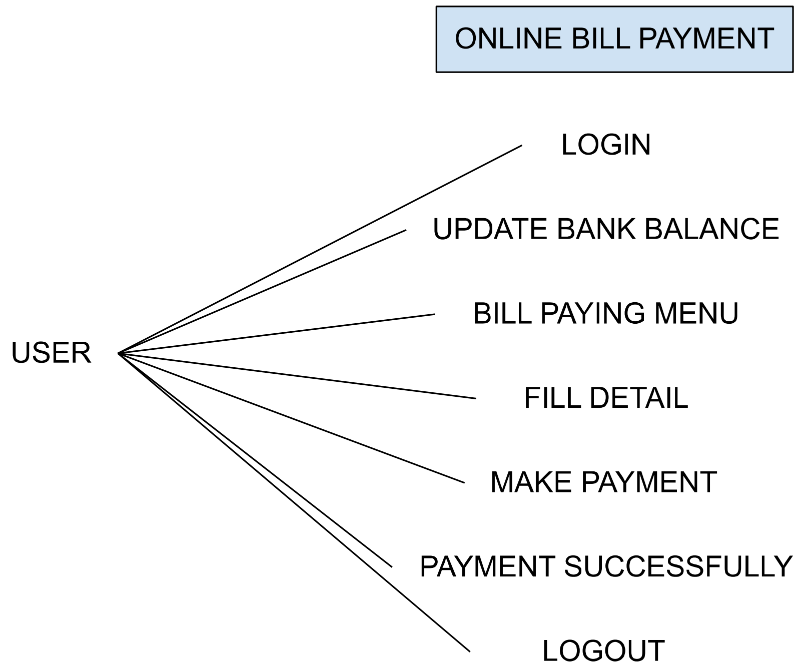
12.DRAW USECASE ON ONLINE BOOK SHOPPING

ANS:-



13.DRAW USECASE ON ONLINE BILL PAYMENT SYSTEM(PAYTM)

ANS:-



14.WRITE SDLC PHASES WITH BASIC INTRODUCTION

ANS:-

14.1.REQUIREMENTS COLLECTION/GETHERING:-ESTABLISH CUSTOMER NEEDS

14.2.ANALYSIS:-MODEL AND SPECIFY REQUIREMENTS

14.3.DESIGN:-MODEL AND SPECIFY A SOLUTION

14.4.IMPLEMENTATION:-CONSTRUCT A SOLUTION IN SOFTWARE

14.5.TESTING:-VALIDATE THE SOLUTION AGAINST THE REQUIREMENTS

14.6.MAINTENANCE:-REPAIR DEFECTS AND ADAPT THE SOLUTION TO THE NEW REQUIREMENTS

15.EXPLAIN PHASES OF THE WATERFALL MODEL

ANS:-

1.Requirements analysis and specification phase: The aim of this phase is to understand the exact requirements of the customer and to document them properly. Both the customer and the software developer work together so as to document all the functions, performance, and interfacing requirement of the software. It describes the "what" of the system to be produced and not "how."In this phase, a large document called Software Requirement Specification (SRS) document is created which contained a detailed description of what the system will do in the common language.

2.Design Phase: This phase aims to transform the requirements gathered in the SRS into a suitable form which permits further coding in a programming language. It defines the overall software architecture together with high level and detailed design. All this work is documented as a Software Design Document (SDD).

3.Implementation and unit testing: During this phase, design is implemented. If the SDD is complete, the implementation or coding phase proceeds smoothly, because all the information needed by software developers is contained in the SDD.

4. Integration and System Testing: This phase is highly crucial as the quality of the end product is determined by the effectiveness of the testing carried out. The better output will lead to satisfied customers, lower maintenance costs, and accurate results. Unit testing determines the efficiency of individual modules. However, in this phase, the modules are tested for their interactions with each other and with the system.

5.Operation and maintenance phase: Maintenance is the task performed by every user once the software has been delivered to the customer, installed, and operational.

16.WRITE PHASE OF SPIRAL MODEL:-

ANS:-

- **PLANNING:**DETERMINATION OF OBJECTIVES,ALTERNATIVES AND CONSTRAINTS
- **RISK ANALYSIS:**ANALYSIS OF ALTERNATIVES AND IDENTIFICATION/RESOLUTION OF RISKS
- **ENGINEERING:**DEVELOPMENT OF THE “NEXT LEVEL”PRODUCT
- **CUSTOMER EVALUATION:**ASSESSMENT OF THE RESULT OF ENGINEERING

17.WRITE AGILE MANIFESTO PRINCIPLES

ANS:-

- Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.
- Welcome changing requirements, even late in development. Agile processes harness change for the customer’s competitive advantage.
- Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.

- Business people and developers must work together daily throughout the project.
- Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.

18.EXPLAIN WORKING METHODOLOGY OF AGILE MODEL AND ALSO WRITE PROS AND CONS.

ANS:-

18.1METHODOLOGY:-

- AGILE METHODS BREAK THE PRODUCT INTO SMALL INCREMENTAL BUILDS
- THESE BUILDS ARE PROVIDED IN INTERATIONS.
- EACH INTERACTION TYPICALLY LASTS FROM ABOUT ONE TO THREE WEEKS.

18.2.PROS:-

- CHANGING REQUIREMENTS CAN BE ACCOMMODATED
- ALLOWS FOR EXTENSIVE USE OF PROTOTYPES
- REQUIREMENTS CAN BE CAPTURED MORE ACCURATELY

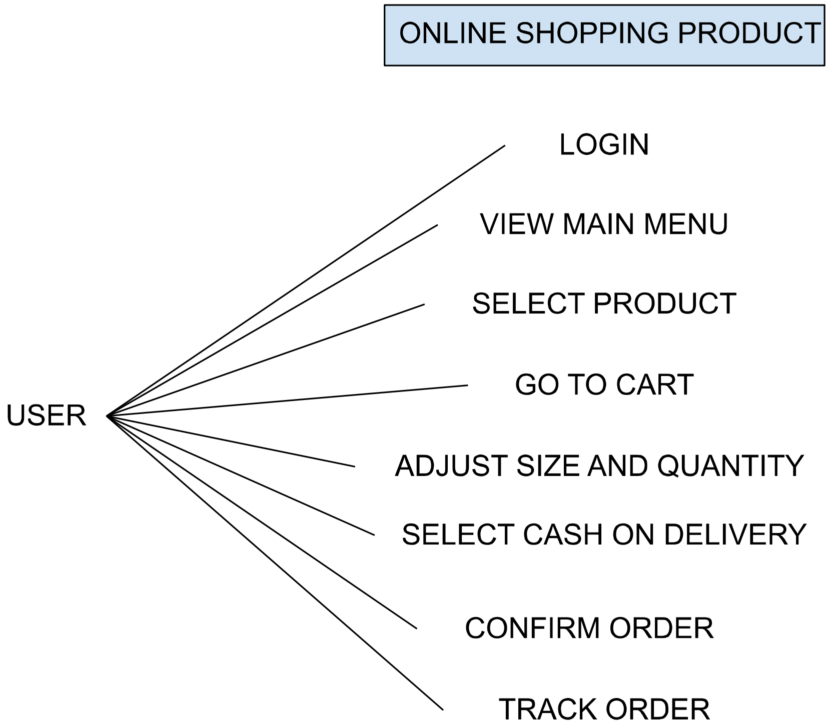
- USERS SEE THE SYSTEM EARLY

18.3.CONS:-

- MANAGEMENT IS MORE COMPLEX
- END OF PROJECT MAY NOT BE KNOWN EARLY.
- PROCESS IS COMPLEX
- SPIRAL MAY GO INDEFINITELY

19.DRAW USECASE ON ONLINE SHOPPING PRODUCT USING COD.

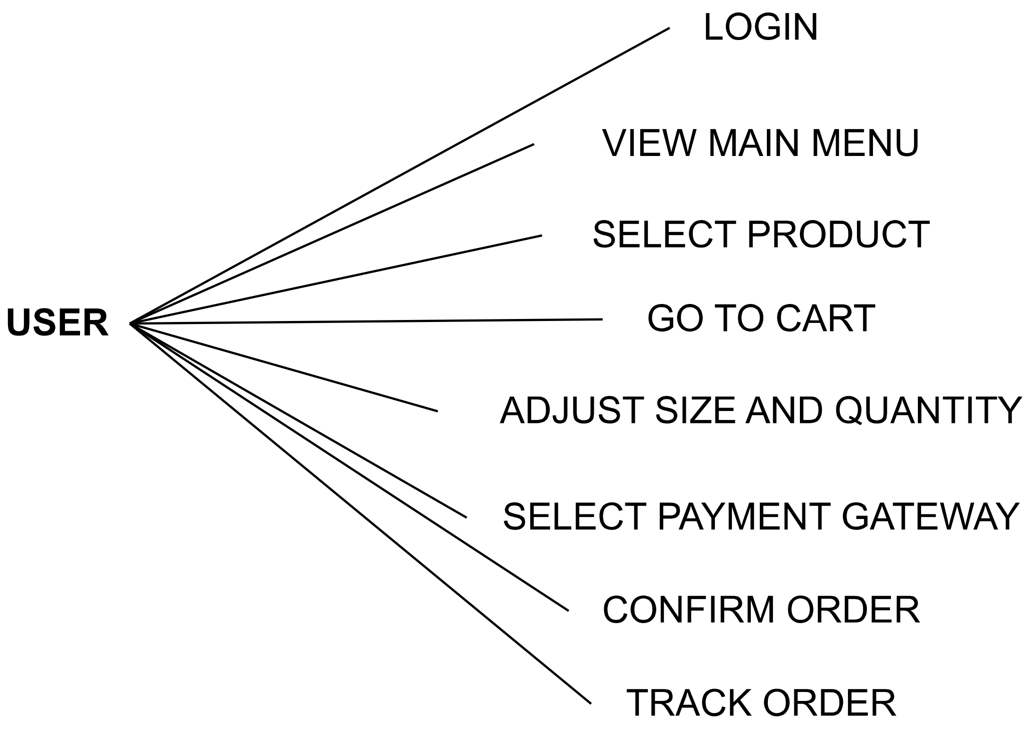
ANS:-



20.DRAW USE CASE ON ONLINE SHOPPING PRODUCT USING PAYMENT GATEWAY.

ANS:-

ONLINE SHOPPING PRODUCT



USER

LOGIN

VIEW MAIN MENU

SELECT PRODUCT

GO TO CART

ADJUST SIZE AND QUANTITY

SELECT PAYMENT GATEWAY

CONFIRM ORDER

TRACK ORDER