

### 1) WHAT IS SDLC

ANS-> THE SOFTWARE DEVELOPMENT LIFE CYCLE REFERS TO A METHODOLOGY WITH CLARLY DEFINED PROCESSES FOR CREATING HIGH-QUALITY SOFTWARE. IN DETAIL, THE SDLC METHODOLOGY FOCUSES ON THE FOLLOWING PHASES OF SOFTWARE DEVELOPMENT.

### 2) WHAT IS SOFTWARE TESTING ?

ANS-> SOFTWARE TESTING IS A PROCESS OF EXECUTING A PROGRAM OR APPLICATION WITH THE INTENT OF FINDING THE SOFTWARE BUGS.

### 3) WHAT IS AGILE METHODOLOGY?

ANS-> THE AGILE METHODOLOGY IS A WAY TO MANAGE BY BREAKING IT UP INTO SEVERAL PHASES. IT INVOLVES CONSTANT COLLABORATION WITH STAKEHOLDERS AND CONTINUOUS IMPROVEMENT AT EVERY STAGE.

### 4) WHAT IS SRS

ANS-> A SOFTWARE REQUIREMENTS SPECIFICATION IS A COMPLETE DESCRIPTION OF THE BEHAVIOR OF THE SYSTEM TO BE DEVELOPED.

5) WHAT IS OOPS

ANS-> IDENTIFYING OBJECTS AND ASSIGNING RESPONSIBILITIES TO THESE OBJECTS.

6) WRITE BASIC CONCEPTS OF OOPS

ANS->

❑ OBJECT

❑ CLASS

❑ ENCAPSULATION

❑ INHERITANCE

❑ POLYMORPHISM

1. OVERRIDING

2. OVERLOADING

❑ ABSTRACTION

7) what is object

Ans-> an object can be defined as a data field that has unique attributes and behavior.

8) what is class

Ans-> A class represents an abstraction of the object and abstracts the properties and behavior of that object.

9) what is encapsulation

Ans-> Encapsulation is the practice of including in an object everything it needs hidden from other objects. The internal state is usually not accessible by other objects.

10) what is inheritance

Ans-> Inheritance means that one class inherits the characteristics of another class. This is also called a “is a” relationship

11) what is polymorphism

Ans-> Polymorphism means “having many forms”. it allows different objects to respond to the same message in different ways, the response specific to the type of the object.

12) write SDLC phases with basic introduction

Ans->

- 1.requirement gathering -> establish customer needs
2. analysis ->Model And Specify the requirements-  
“What”
3. design ->Model And Specify a Solution-“Why”
4. implementation -> Construct a Solution In Software
5. testing ->Validate the solution against the  
Requirements
6. maintenance-> Repair defects and adapt the olution  
to the new requirements

13) explain phases of the waterfall model

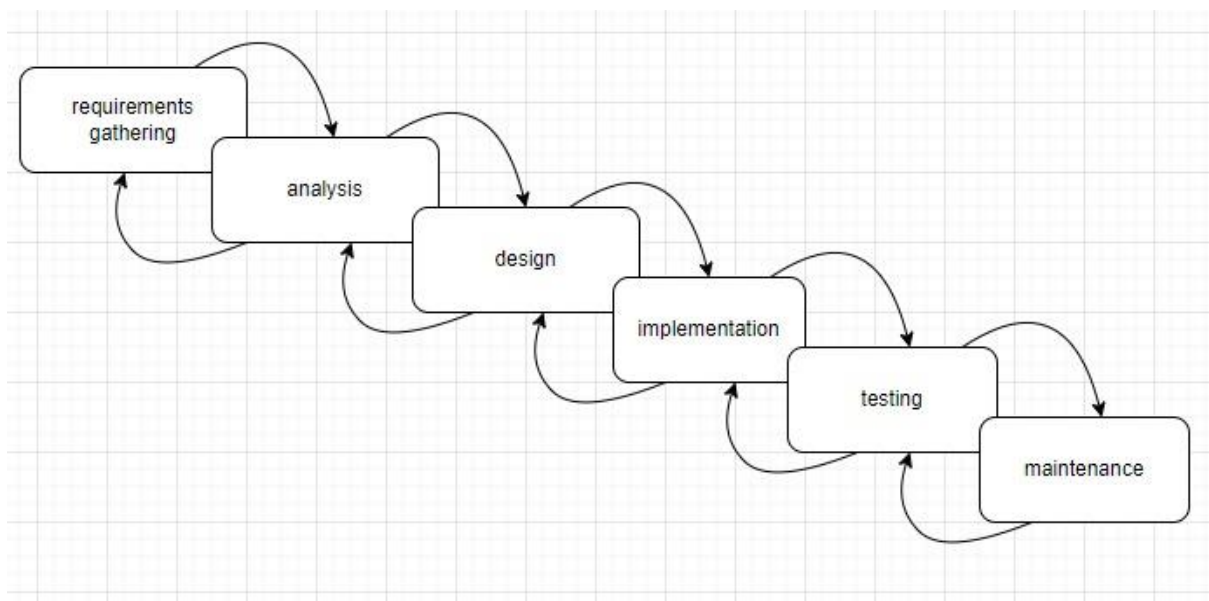
Ans->

- The waterfall is unrealistic for many reasons,  
especially:
  - Requirements must be “frozen” to early in the life  
cycle
  - Requirements are validated too late

## APPLICATIONS

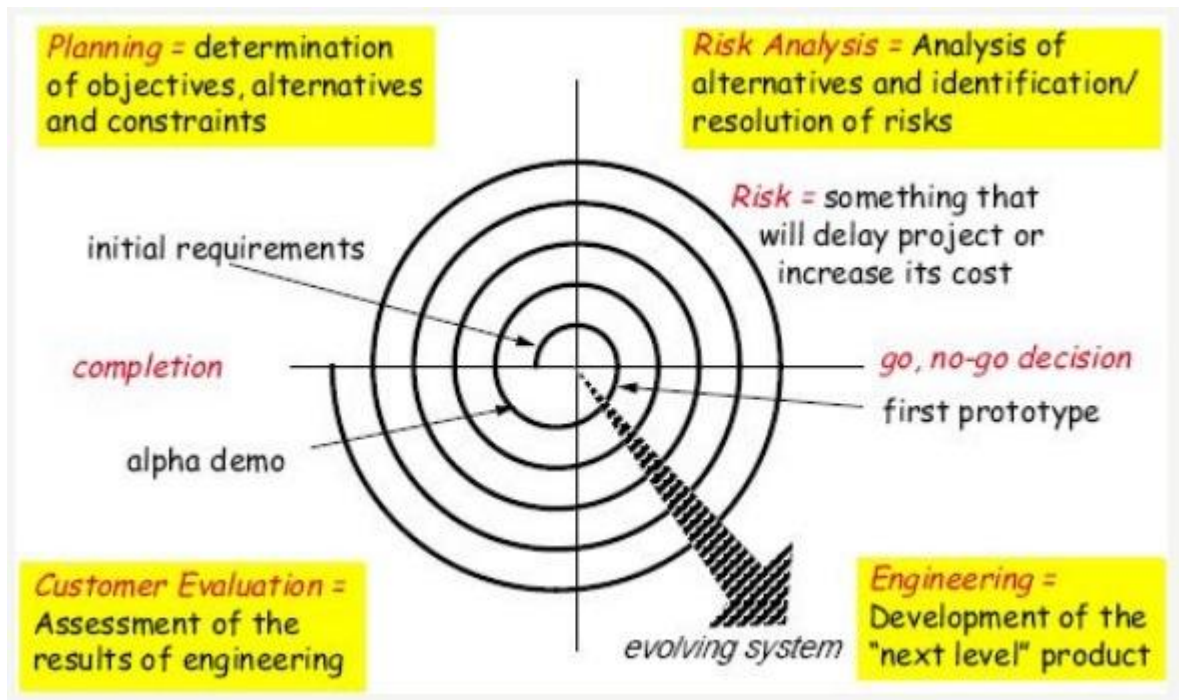
- Requirements are very well documented, clear  
and fixed.

- Product definition is stable.
- Technology is understood and is not dynamic.
- There are no ambiguous requirements.
- Ample resources with required expertise are available to support the product.
- The project is short.



14) Write phases of spiral model

Ans-> Spiral Model is very widely used in the software industry as it is in synch with the natural development process of any product i.e. learning with maturity and also involves minimum risk for the customer as well as the development firms. Following are the typical uses of Spiral model



15) Explain working methodology of agile model and also write pros and cons

ANS-> (A) PROS

- Is a very realistic approach to software development
- Promotes teamwork and cross training.
- Functionality can be developed rapidly and demonstrated.
- Resource requirements are minimum.
- Suitable for fixed or changing requirements
- Delivers early partial working solutions.
- Good model for environments that change steadily.

- Minimal rules, documentation easily employed. Enables concurrent development and delivery within an overall planned context.
- Little or no planning required
- Easy to manage
- Gives flexibility to developers

### (B) CONS

- Not suitable for handling complex dependencies.
- More risk of sustainability, maintainability and extensibility.
- An overall plan, an agile leader and agile PM practice is a must without which it will not work.
- Strict delivery management dictates the scope, functionality to be
- delivered, and adjustments to meet the deadlines.
- Depends heavily on customer interaction, so if customer is not clear, team can be driven in the wrong direction.
- There is very high individual dependency, since there is minimum documentation generated.
- Transfer of technology to new team members may be quite challenging due to lack of documentation.

## 16) Write agile manifesto principles

- Agile SDLC model is a combination of iterative and incremental process models with focus on process adaptability and customer satisfaction by rapid delivery of working software product.
- Agile Methods break the product into small incremental builds.
- These builds are provided in iterations.
- Each iteration typically lasts from about one to three weeks.
- Every iteration involves cross functional teams working simultaneously on various areas like planning, requirements analysis, design, coding, unit testing, and acceptance testing.