1. Define Software Development Life Cycle (SDLC) and briefly explain its primary phases.

Software Development Life Cycle is a structure process that is used to design, develop, and test good quality software.

The phases in SDLC are

1.requirement gathering and Analysis

2.Design

3. Development

4.Implementation

5.Testing

6.Deployment

7.Maintence

1. Requirement gathering: in this phase business analyst collect the requirements from the customer and analysis the requirements and give the requirements to the architect.
2. Design : In this phase the architect go through the requirements and makes the design according to the customer requirements .
3. Development : In this phase the developers write the code according to the customers requirements.
4. Implementation : In this the testers prepare the test plan and test cases according to the requirements.
5. Testing : In this the testers will test the application according to the test plans and finds the bugs if any and send it the development team for fixing.
6. Deployment : In this phase after completing of the testing the application goes for customer use.

In SDLC there are models. They are

Water fall model

Validating and verification model

Spiral model

Iterative model

1. What are the main objectives of the Requirements Gathering phase in SDLC?

Requirements gathering is the process of identifying and defining what a software system needs to do to meet the requirements specifications of the customer.

1. Explain the significance of the Design phase in the SDLC process.

Design Phase is a critical step in developing the conceptual blue print of a software.

This phase involves the transforming software requirements gathered during the requirements gathering and analysis phase.

1. Differentiate between Waterfall and Agile methodologies in SDLC. Highlight the advantages and disadvantages of each.

The waterfall model is a universally accepted SDLC model. In this model the whole process of software development is divided into various phases.