**Module-1 assignment**

1. **What is SDLC**

SDLC full form is software developed life cycle. SDLC is a structure imposed on the development of a software product that define the process for planning, implementation, on testing documentation and ongoing maintenance and support.

Requirement gathering,

Analysis

Design

Implementation

Testing

Maintenance

1. **What is software testing**

Software testing is a process used to identify the correctness, completeness and quality of developed computer software.

1. **What is agile methodology**

agile method believes that every projects need to be handled differently and the Exisiting methods ned tailored.

* No deadline fix
* Agile methos break the product.
* These buids are provided in iteration promote teamwork and cross training.

1. **What is SRS**

A software requirement specification (SRS) it includes a set of use cases that describe all of the interaction that software types of software requirement

1. Functional requirement,

2. Non-functional requirement,

and customer requirement.

1. **What is oops?**

* Identifying object and assigning responsibilities to these object.
* Object communication to other object by sending messages.
* Messages are received by the methods of an object.
* An object is like a black box
* The internal details are hidden.

1. **Write basic concepts of oops.**

Object

Class

Encapsulation

Inheritance

Polymorphism

Overriding, Over loading

1. **What is object?**

Any living things which has own state and behaviour.

Ex: pen

1. **What is class.**

Collection of object.

Ex: classroom

1. **What is encapsulation.**

Binding data or wrapping up of data

Ex: capsule

1. **What is inheritance .**

One object required all the properties and behaviour of parent class

1. **What is polymorphism.**

Many ways to performs anything

Ex: multiple ways

1. **Draw use case on online book shopping.**
2. **Draw use case on online bill payment system.**

1. **Write SDLC phases with basic introduction.**
2. **Requirement gathering:**

Establish customer needs.

1. **Analysis:**

Model and specify the requirements “what”.

1. **Design:**

Model and specify a solution- “ why”’.

1. **Implementation:**

Construct a solution in software.

1. **Testing:**

Validate the solution against the requirement

1. **Maintenance:**

Repair defects and adapt the solution to the new requirement. corrective, adaptive, perfective.

1. **Explain phases of waterfall model.**
2. Requirement gathering:

All possible requirements of the system to be developed are captured in this phase and documented in a requirement specification document.

1. Analysis:

Every software project with an analysis phase that includes a feasibility study and a requirements definition. In the feasibility study. The software project assessed in terms of costs, revenue and feasibility. The feasibility study provides a requirement specification a project plan and the project calculation as well as an offer for the client, if applicable.

1. Design:

The requirement specification from first phase are studied in this phase and the system design is prepared. This system design helps in specifying hardware and system requirement and helps in defining the overall system architecture.

1. Implementation:

With inputs from the system design the system is first developed in small programs called units which are integrated in the next phase. Each unit developed and tested for its functionality which is referred to as unit testing.

1. Testing:

All the units developed in the implementation phase are integrated into a system after testing of each unit. Post integration the entire system is tested for any faults and failure.

1. Maintenance:

There are some issues which come up in the client environment. To fix those issues, patches are released. Also to enhance the product some better versions are released. Maintenance is done to deliver these change in the customer environment.

1. **Write phases of spiral model:**
2. **Planning:**

Determination of objectives, alternatives and constraints.

1. **Risk analysis:**

Analysis of alternatives and identification/ resolution of risks.

1. **Engineering:**

Development of the next level product.

1. **Customer evaluation:**

Assessment of the results engineering.

1. **Explain working methodology of agile model and also write pros and cons.**

Agile model believes that every project needs to be handled differently and the existing methods need to be tailored to best suit the project requirements. In agile the tasks are divided to time boxes to deliver specific features for a release. Agile thought process had started early in the software development and started becoming popular with time due to its flexibility and adaptability.

**Pros:**

* Promote teamwork and cross training.
* Resources requirement are minimum.
* Suitable for fixed or changing requirement.
* Good model for environment that change steadily.
* Enables concurrent development and delivery within an overall.
* Easy to manage

**Cons :**

* 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.
* Depend heavily on customer interaction so if customer is not clear, team can be driven in the wrong direction.
* There s very high individual dependency, since there is minimum documentation generated.

1. **Draw use case on online shopping product using COD?**
2. **Draw use case on online shopping product using payment gateways.**