Module 1 Fundamental

Software Testing Assignment

Q:What is SDLC?

A:SDLC stands for software development life cycle,SDLC is a framework that development team uses to produce high quality software in a systematic and cost effective way.Both large and small software organiztions use the SDLC methodology.

Q:What is Software testing?

A:It is the process of evaluating and verifying that a software product or application does hat it is supposed to do.

Q:What is agile methodology?

A:It is the combination of iterative and incremental process model with focus on process adaptability and customer satisfaction by rapid delivery of working software,agile methods break the product into small incremental builds.this build are provided in iterations,each iteration typically lasts from about one to three weeks,Every iteration involves cross functional team working simultaneously on varios areas like planning,requirements,analysis,design,coding,unit testing and acceptance testing,at the end of iteration a working product is displayed to customers and important stakeholders.

Q:What is SRS?

A:SRS stands for Software Requirement Specifications,it is a complete description of the behaviour of the system to be developed and describes what the software will do and how it will be expected to perform,it includes a set of use cases thatdescibes all the interactions that the user will have with the software.Usecases are also known as functional requirements,there are 2 types of requiremnets functional and non functional.

Q:What is OOP?

A:OOP stands for object oriented programming,it refer to the language that uses object in programming,objects communicate to other objects by sending messages and it is received by the method of an object.An object is like a black box internal details are hidden,Objects of a program interacts by sending messages to each others..

Q:Write basic concept of OOPS?

A:Concepts of OOPS are namely object,class,encapsulations,inheritance,polymorphism and abstraction.

Q:Write agile manifesto principle?

A:1-Individual interaction

2-Working software

3-Customer collaborations

4-responding to changes.

Q:Write phases of spiral model?

A:Phases of spiral model are namely

1-Planning:Determination of objectives,alternatives and constraints

2-Risk analysis:Analysis of alternatives and identification/resolution of risks

3-Engineering:Development of the next level product

4-Customer:Evaluation:Assessment of result of engineering

Q:What is objects?

A:Instance of an class

:To create memory for that class i.e to access the whole properties of class except private

Syntax

classname.object name=new classname();

Q:What is class?

A:It is a collection of data member(variables) and member function(process,method) with its behaviour syntax

Syntax

{

data member

member function

}

Q:What is encapsulations?

A:Data hiding:wrapping up of data into single unit i.e:private your data member and member function.

Q:What is inheritance?

A:Properties of parent class extends into child class

:properties of super class extends into sub class

:main purpose:reusability,extendability

There are mainly 5 types namely

1-single

2-multilevel

3-hierarchical

4-multiple

5-hybrid

Q:What is polymorphism

A:Ability to take one name having many forms,multiple,different forms

:there are mainly two types

1-Method overloading(complete time)

2-method overriding(run time)

Q:Write SDLC phases with basic introduction?

A:SDLC phases are as follow namely;

1-Requirements collection/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 Sofware

5-Testing-Validate the solution against the requiremnts

6-Maintenance-Repair defects and adapt the solution to the new requirements.

Q: Explain working methodology of agile model and also write pros and cons?

A: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,it break the product into small incremental builds and there builds are provided in iterations,each iteration typically lasts from about one to three weeks at the end of iteration a working product is displayed to the customers and important stakeholders

**Pros**

\*it is a very realistic approach to software development

\*promotes team work and cross training

\*functionality can be developed rapidly and demonstrated

\*resource requirements are minimum

\*suitable for fixed and changing requiremnts

\*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 developer

**Cons**

\*not suitable for handling complex dependencies

\*more risk of sustainability 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 deadlines

\*depends heavily on customer interaction so if customers is not clear team can be driven in wrong direction

\*there is very high individual dependency since there is minimum documentation generated

\*Transfer of technology to a team member may be quite challenging due to lack of documentation use case

Q: Explain phases of the waterfall model?

A:Phases of waterfall models are as follow

\*Requirement collection

\*Analysis

\*Design

\*Implementation

\*Testing

\*Maintenance

This phase is unrealistic for many reasons,this model is one way model we cannot go back and change the software.

