**Software testing assignment**

**Module – 1 (Fundamental)**

* **What is SDLC?**

SDLC is structure imposed on the development of software product that defines the process for planning, implementation , testing , documentation , deployment , and ongoing maintenance , and support.

* **What id software testing?**

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

* **What id agile methodology?**

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.

* **What is SRS?**

Software requirement is a complete description of the behavior of the system to be developed**.**

* **What is OOPS?**

Object oriented programing is a computer programing model that organizes software design around data or objects rather than function and logic.

* **Write basics concepts OOPS?**
* CLASS
* OBJECT
* ENCAPSULATION
* INHERITANCE
* POLIMORPHISAM
* ABSTRACTION
* **What is object?**

Objects are an instances of a class created with specific define data.

* **What is class?**

Class is collection of data member and member function with it`s behaver.

* **What is encapsulation?**

Encapsulation is hiding or wrapping up of data in to single unit.

* **What is inheritance?**

Properties of parents class extends into child class is known as inheritance.

* **What is polymorphism?**

Ability to take one name having many forms is known as polymorphism.

* **Draw a use-case of online book shopping.**

**Open application**

**Search for product**

**Select product**

**Click Buy now option**

**Enter delivery address**

Se**lect payment mode**

**Pay online/COD**

**ORDER SUCCEFUL**

* **Draw use case of online bill payment system. (Paytm)**

**Open app with password or finger ID**

**SELECT BILL PAYMENT Option**

**Select electricity bill pay**

**Chose company**

**Enter customer number**

**Enter the Amount**

**Select pay bill**

**Enter UPI Pin**

**Payment successful**

* **Write SDLC phases with basic introduction**.
* SDLC has six phases

1. **Requirement gathering**.

All the relative information is collected from the customer to develop the product as per their expectation.

1. **Analysis**

The analysis phase defines the requirement of the system, independent of how these requirement will be accomplish.

1. **Design**

* Design Architecture document
* Implementation Plan
* Test plan
* Performance analysis

1. **Implementation**

In the implementation phase, the team builds the components either document from the design phase and the requirement document from the analysis phase.

1. **Testing**

In this phase the developed software is tasted by the testing team, any defect found are assigned to developer to get them fix.

1. **Maintenance**

Software maintenance is one of the activity in software engineering, and is the process of enhancing and optimizing developed software , as well as fixing the defect.

* **Explain the phases of waterfall model.**

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* **Write phases of spiral model.**
  + **Planning**

It includes estimating cost , schedule and resource for the iteration. It also involves understanding the system requirement for continuous communication between system and the customer.

* + **Risk analysis**

Identification of potential risk is done while risk mitigation strategy is planned and finalized.

* + **Engineering**

It includes coding , testing, and deploying software at the customer site.

* + **Evaluation**

Evaluation of software by customer. Also includes identifying and monitoring risk such as schedule slippage and cost overrun.

* **Write agile manifesto principles.**
* **Individuals and interactions –** in agile development, self-organization and motivation are important, as are interaction like co-location and pair programing.
* **Working software-** Demo working software is considered the best mean of communication.
* **Customer collaboration –** As the requirements cannot be gathered completely in the beginning of the product due to various factor, continuous customer interaction is very important to get proper product requirement.
* **Responding to change-** Agile development is focused on quick response to change and continuous  development.

* **Explain working methodology of agile model and also write pros and cons.**
* **Working methodology-** A Agile SDLC mode is combination of iterative and incremental process model with the focus on process adaptability and customer satisfaction by rapid delivery of working software product.
* **PRO ---**
* It is very realistic approach to software development
* Promotes teamwork and cross training
* Resource requirement are minimum
* Suitable for fix or changing requirements
* Delivers early partial working solution
* Functionality can be developed rapidly and demonstrated
* **Cons—**
* Not suitable for handling, complex dependencies.
* More risk of sustainability, maintainability, extensibility.
* 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 the new team member may be quite challenging due to lack of documentation.
* **Draw use case on online shopping product using COD**

**Open application**

**Search for product**

**Select by now option**

**Enter delivery address**

**Select payment option**

**Select COD MODE**

**Order placed successfully**

* **Draw Use case on Online shopping product using payment gateway.**

**Open shopping app**

**Log in app**

**Search product**

**Select product**

**Select buy option**

**Enter deliver address and other info**

**Select payment mod online**

**Enter UPI and pay**

**Order successful**