Software testing

Module-1 (fundamental)

1.what is SDLC?

SDLC is a structure to impose on the development of a software product that define the process. For planning, implementation, testing, documentation, deployment, and ongoing maintainance.

2. What is software testing?

Software testing is process to identify to correctness, completeness, and quality to development computer software.

3. what is agile methodology ?

Agile SDLC model is a combination of iterative & incremental process model focus process adaptability customer’s satisfaction delivery working software product.

4. what is SRS ?

software requirements satisfaction is a complete description of the behaviour of the systems developed

5. What is oops ?

Object oriented programming is a computer programming model that organize software design around data or object rather than function and login.

6. Write basic concept of oops ?

.object

.class

.Encapsulation

.Inheritance

.polymorphism

.abstraction

7. What is objects ?

.Objects is a instance of a class

8. What is class ?

Class is a collection of data member (variable) and member function (process,method) with behaviours.

9. What is Encapsulation ?

.Data hiding wrapping of Data into single unit.

10.What is inheritance ?

.properties of parents class extends into child class.

11. What is polymorphism ?

.ability to take one name having many form.

12. Draw usecase on Online Book shopping ?

13.Draw usecase on online bill payment system (paytm) ?

14. Write SDLC phases with basic introduction ?

1. Requirement collection-: All the relevant information is collected from the customer to develop a product as per their expectation.

2. Analysis-: The analysis phase define the requirement of the system independent of how these requirement will be accomplished.

3. Design-: The Design Team Can Now expand upon the information established in the requirement document.

4. Implementation-: In the implementation phase the team build the component either from scratch or by composition.

.In the Implementation stage. The team develop the customer product.

5. testing-: In the phase the developed software is tested by tester and any defect found are assigned to developers to get them fixed.

6. Maintenance-: Software maintenance is one of the activates in software eng. And is the process of enhancing and optimizing deployed software as well as fix defect.

15. Explain Phases of the waterfall model-:

Requirement-: During this phase detailed requirement of the software systems to be developed are gathering from clint.

.Analysis-: The analysis phase defines the requirement of the system independent of how these req. will be accomplished.

Design-: Plan the programming lang. Database and other high level technical details of the project.

.Implementation-:Coding the software.

.Maintenance-: Once client system is ready to use you may later req. change the code as per customer req.

16. Write phases of spiral model-:   
 **Spiral Model phases**

* Planning**:** It includes estimating the cost, schedule and resources for the iteration. It also involves understanding the system requirements for continuous communication between the system analyst and the customer.
* Risk Analysis: Identification of potential risk is done while risk mitigation strategy is planned and finalized.
* Engineering: It includes testing, coding and deploying software at the customer site.
* Evaluation:Evaluation of software by the customer. Also, includes identifying and monitoring risk such as schedule slippage and cost overrun.

1. **.** Write agile manifesto principles.

Agile manifesto principles:

* Individuals and Interactions: In agile development, self-organization and motivation are important, as are interaction like co-location and pair programming.
* Working Software:Demo working software is considered the best means of communication.
* Customer Collaboration: As the requirements cannot be gathered completely in the beginning of the project due to various factors, continuous customer interaction is very important to get proper product requirements.
* Responding to change**:** Agile development is focused on quick responses to change and continuous development.

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

Working methodology of agile model:

* 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 method break the product into small incremental builds, these builds are provided in iterations.
* Every iteration involves cross functional teams working simultaneously on various areas like planning, requirements, analysis, design, coding, unit testing and acceptance testing.
* At the end of the iteration a working product is displayed to the customer and important stakeholders.

Pros:

* It is a very realistic approach to software development.
* Promotes teamwork and cross training.
* Functionality can be developed rapidly and demonstrated.
* Recourses 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.
* Little or no planning required, easy to manage.
* Gives flexibility to developers.

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.
* Depends heavily on customer interaction, so if customer is not clear, team can be driven in the wrong direction.
* Transfer of technology to new team members may be quite challenging due to lack of documentation.

19 Draw Use case on Online shopping product using COD.

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