

software testing assignment

module 1

(fundamental)

1. What is SDLC?

The full form of SDLC is Software Development Life Cycle. SDLC is the process for planning, implementation, testing, documentation, deployment and ongoing maintenance and support.

2. What is software testing?

Software testing is the process for identifying the correctness, completeness and quality of development computer software.

3. What is agile methodology?

Agile methodology is a way to manage a project by breaking it up into several phases.

4.What is SRS?

Software requirement specification is a complete description of the behaviour of the system to be developed.

5.What is OOPS?

Object oriented programming is a core of java programming , which is used for designing a program using classes and objects.

6.Write a basic concept of OOPS.

OOPS is an approach or a programming pattern where the programs are structured around objects rather than functions and logic.it makes the data partitioned into two memory areas.

7.What is object?

object is anything to which concept applies.

8.What is class?

A blueprint for an object is called class.

9.What is encapsulation?

Encapsulation is the practice of including in an object everything needs hidden from other objects.

10.What is inheritance?

Inheritance means that one class inherits the characteristics of other class. This is also called a "is a" relationship.

11.What is polymorphism?

The ability to change form is known as polymorphism.

12. Write SDLC phases with basic introduction.

SDLC fullform is software development life cycle. This is the process for planning, implimenting, testing, documentation and ongoing maintainace and support.

SDLC phases

Requirement collection: establishing customer needs

Analysis : model and specify the

requirement "What"

Design : model
and specify a solution

"Why"

Implementation : construct a solution is
software

Testing : validate
the solution against

the requirements.

Maintenance : repair defect and
adopt the

solution to the new requirements

13. Explain phases of the Waterfall model.

Requirement gathering and analysis: All possible requirements for the system to be developed are captured in this phase and documented in a requirement specification document.

System design: the requirement specifications from first phase are studied in this phase and the system design is prepared. this system design helps in specifying hardware and system requirements and help in defining the overall system architecture.

Implementation: 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 failures.

Integration and 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 failures.

Deployment system: once the functional testing is done the product is deployed in the customer environment or released into the market.

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 realised. maintenance is done to deliver these changes in the customer environment.

14. Write phases of spiral model.

Determine objectives and find alternate solutions – This phase includes requirement gathering and analysis. Based on the requirements, objectives are defined and different alternate solutions are proposed.

Risk Analysis and resolving – In this quadrant, all the proposed solutions are analyzed and any potential risk is identified, analyzed, and resolved.

Develop and test: This phase includes the actual implementation of the different features. All the implemented features are then verified with thorough testing.

Review and planning of the next phase – In this phase, the software is evaluated by the customer. It also includes risk identification and monitoring like cost overrun or schedule slippage and after that planning of the next phase is started.

15. Write agile manifesto principles.

Customer satisfaction through early and continuous software delivery –

Customers are happier when they receive working software at regular intervals, rather than waiting extended periods of time between releases.

Accommodate changing requirements throughout the development process –

The ability to avoid delay when requirements or features request changes.

Frequent delivery of working software –
Scrum accommodates this principle since the

team operates in software sprints or iterations that ensure regular delivery of working software.

Collaboration between the business stakeholders and developer throughout the project

Decisions are made when the business and technical team are aligned.

Support, trust, and motivate the people involved Motivated teams are more likely to deliver their best work than unhappy teams.

Working software is the primary measure of progress
Delivering functional

software to

the customer is the ultimate factor that measures progress.

Agile processes to support a consistent development pace

Teams establish a repeatable and maintainable speed at which they can deliver working software, and they repeat it with each release.

Attention to technical detail and design enhances agility The right skills and good

design ensures the team can maintain the pace, constantly improve the product, and sustain change.

Simplicity— Develop just enough to get the job done for right now.

Self-organizing teams encourage great architectures, requirements, and designs —

Skilled and motivated team members who have decision-making power, take ownership,

communicate regularly with other team members, and share ideas that deliver quality

products.

Regular reflection on how to become more effective —

Self-improvement, process

improvement, advancing skills, and techniques help team members work more efficient.

15. 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. Iterative approach is taken and working software build is delivered iteration. Each build is incremental in terms of features; the final build holds all the features required by the customer.

Agile thought process had started early in the software development and started becoming popular with time due to its flexibility and adaptabilities.

Pros

Is a very realistic approach to software development

Promotes teamwork and cross training?

Functionality can be developed rapidly and demonstrated.

Resource 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.

Enables concurrent development and delivery within an overall planned context.

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.

Strict delivery management dictates the scope, functionality to be delivered, and adjustments to meet the deadlines.

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 new team members may be quite challenging due to lack of documentation use – case

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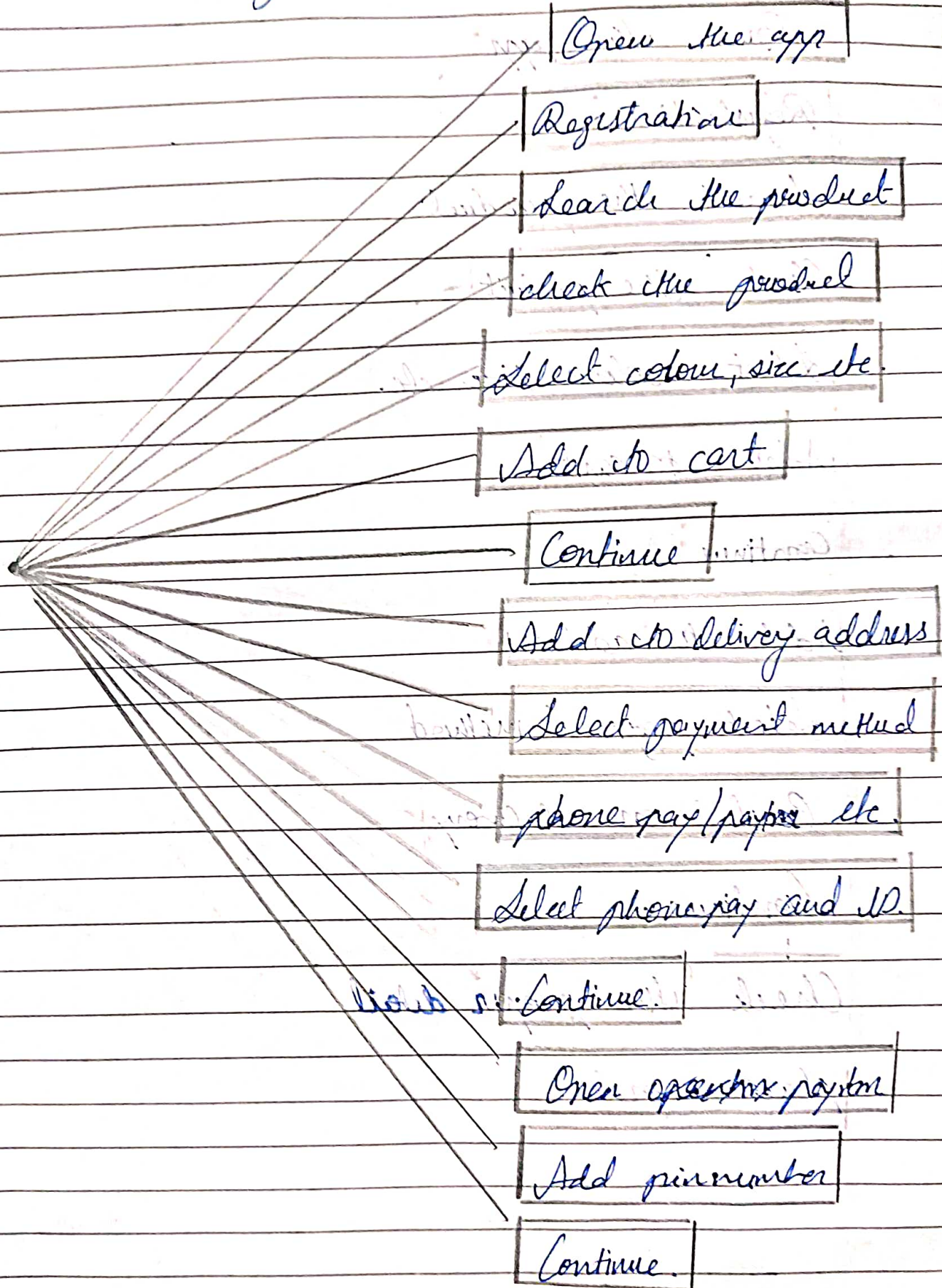
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