* **Testing Exercises:**
* What is the primary goal of manual testing?
* To find defects in software
* To automate the testing process
* To reduce the time required for testing
* To increase the efficiency of developers
* Which of the following is NOT a phase of the manual testing process?
* Test Planning
* Test Execution
* Test Automation
* Test Closure
* Which type of testing involves testing the software as a whole to ensure that all components work together?
* Unit Testing
* Integration Testing
* System Testing
* Acceptance Testing
* Which testing technique involves testing a system's functionality without knowing its internal code structure?
* White-box testing
* Black-box testing
* Gray-box testing
* Glass-box testing
* What is exploratory testing?
* Testing based on pre-defined test cases
* Testing without any specific test cases or plans
* Testing only the critical functionalities
* Testing performed by an external team
* In which phase of the software development lifecycle is manual testing typically conducted?
* Requirement Analysis
* Design
* Implementation
* Testing
* What is the purpose of regression testing?
* To validate if the software meets the specified requirements
* To ensure that new changes haven't adversely affected existing functionality
* To test the software in various operating environments
* To verify if the software is user-friendly
* Which of the following is NOT a common type of manual testing?
* Functional Testing
* Performance Testing
* Security Testing
* User Acceptance Testing
* What is the main advantage of manual testing over automated testing?
* Greater test coverage
* Faster execution of tests
* Human intuition and creativity
* Consistency in test execution
* What is the purpose of smoke testing?
* To verify if the software is stable enough for further testing
* To test the core functionalities of the software
* To test the software in various browser environments
* To ensure that the software meets all specified requirements
* What is the purpose of usability testing?
* To verify if the software performs efficiently under high load
* To ensure that the software is user-friendly and intuitive
* To test the software across different operating systems
* To check for security vulnerabilities in the software
* Which testing technique involves executing the test cases in a random order to identify defects?
* Ad-hoc Testing
* Boundary Testing
* Equivalence Partitioning
* Sanity Testing
* What is the main focus of acceptance testing?
* Validating if the software meets specified requirements
* Testing individual components or modules of the software
* Evaluating the overall performance of the software
* Ensuring that the software is compatible with different devices
* Which of the following is NOT a commonly used manual testing technique?
* Boundary Value Analysis
* Equivalence Partitioning
* Fuzz Testing
* Code Coverage Analysis
* What is the purpose of ad-hoc testing?
* To verify if the software performs well under normal conditions
* To execute pre-defined test cases systematically
* To test the software without any specific test cases or plans
* To test the software in different languages and locales
* What is the main advantage of pairwise testing?
* It ensures that every possible combination of inputs is tested
* It reduces the number of test cases while providing good coverage
* It focuses solely on testing user interfaces
* It allows for automated test execution without human intervention
* Which type of testing involves executing test cases in a controlled environment that simulates the production environment?
* Alpha Testing
* Beta Testing
* Regression Testing
* Smoke Testing
* What is the primary purpose of sanity testing?
* To ensure that the software meets all specified requirements
* To verify if the software is stable enough for further, more comprehensive testing
* To test the software in a variety of real-world scenarios
* To evaluate the software's performance under varying load conditions
* Which testing technique involves testing the software's response to unexpected inputs or conditions?
* Negative Testing
* Positive Testing
* Boundary Testing
* Equivalence Partitioning
* What is the primary focus of compatibility testing?
* To verify if the software performs efficiently under high load
* To ensure that the software is compatible with different devices, browsers, and operating systems
* To test individual components or modules of the software
* To evaluate the software's security features
* What is the primary goal of regression testing?
* To ensure that the software meets specified requirements
* To verify if the software is stable enough for release
* To ensure that new changes haven't introduced defects in existing functionality
* To test the software in various operating environments
* Which testing technique involves testing the software's ability to recover from crashes or failures?
* Recovery Testing
* Performance Testing
* Compatibility Testing
* Installation Testing
* What is the main focus of localization testing?
* To verify if the software performs efficiently under high load
* To ensure that the software is compatible with different devices
* To test the software's behavior in different locales and languages
* To evaluate the software's security features
* Which of the following is NOT a category of software testing?
* White-box testing
* Black-box testing
* Gray-box testing
* Blue-box testing
* What is the purpose of static testing?
* To verify the software's behavior under varying load conditions
* To test the software without executing the code
* To simulate real-world usage scenarios
* To evaluate the software's compatibility with different devices
* What is the primary focus of boundary testing?
* To test the software's ability to handle unexpected inputs or conditions
* To test the software's response to extreme or boundary values
* To verify if the software meets specified requirements
* To ensure that the software is user-friendly and intuitive
* What is the purpose of test case prioritization?
* To ensure that all test cases are executed in a specific order
* To identify which test cases should be executed first based on their importance
* To allocate resources for test case execution
* To generate additional test cases automatically
* Which testing technique involves testing the software's ability to handle large volumes of data?
* Volume Testing
* Stress Testing
* Load Testing
* Scalability Testing
* What is the main focus of smoke testing?
* To verify if the software is stable enough for further testing
* To test the core functionalities of the software
* To test the software's performance under varying load conditions
* To test the software's compatibility with different devices
* What is the primary goal of acceptance testing?
* To verify if the software meets specified requirements
* To ensure that the software is user-friendly and intuitive
* To identify defects in the software
* To test the software's performance under varying load conditions
* Define Software Development Life Cycle (SDLC) and briefly explain its primary phases.

It is a process of building a application.

Phases:

1. Requirement analysis=Analysing the requirements of the customer what type of appliction they want and how it should work and it is all discussed with the team members.

2.Desigining: Desigining as per the customer needs as analysed.

3.Coding= Writing a code as designed.

4.Testing=written code is tested as it is working as per the customer requirement or not and it reachs the software specification.

5.Maintaining= Observing the whole infrastructure of the application and continuously monitoring the application.

* What are the main objectives of the Requirements Gathering phase in SDLC?

The main objective of requirement gathering are:

1. Test planning will be easy

2. Desinging will be easy

3. write code will be fast as we know all the requirements

4.we can review easily all the requirements

* Explain the significance of the Design phase in the SDLC process.

Designing phase involves desigining the application as per the customer requirements. It will be easy to find bugs by designing.

* Discuss the importance of thorough Testing during the SDLC.

Testing is done to identify the defects in the application and to fix them.To check that it meets software specification and meets customer satisfaction.

* Differentiate between Waterfall and Agile methodologies in SDLC. Highlight the advantages and disadvantages of each.

Waterfall model:

1. In waterfall model it involves the verification process.

2. each step is executed orderly one by one

3. easy to find bugs and errors and fix them.

4.quality will be increased.

Agile model:

1.Large project is divided into small projects and divided among the team members.

2. customer need not wait for whole application

3. There will be good communication between team and customer

4. After completion of each small piece of software it will be given to customer.

* What is the purpose of the Implementation phase in SDLC? How does it differ from the Deployment phase?

The purpose of implementing SDLC is to build a appliation in a proper way. As it will be easy to find bugs and fix them,but we cannot make changes once it is implemented changes can be done in next phase.quality will be increased by following the correct steps.

In Implentation phase planning,desiging,coding,testing and maintaining is done.where in Deployment phase the whole application will be monitered continuously.

* Describe the role of stakeholders in the SDLC process. How do their involvement and feedback influence project outcomes?
* Explain the concept of Iterative Development in the context of SDLC. How does it contribute to project success?

Itervative development is repeatedly executing the performed process.by using this software can be bug free, it meets the customer requirements.If there is any defect found it will be fixed at a same time.

* Discuss the importance of Documentation throughout the SDLC. What types of documents are typically produced at each phase?
* How does the Maintenance phase contribute to the overall success and sustainability of a software product? Discuss the activities involved in this phase.

Maintainace phase contribute overall success as delivered application will be continuously monitered to check if there is any defects,inproper actions in the application,updating the application

* Outline the key challenges faced during each phase of the SDLC and propose strategies to mitigate them.

1. Ensure software is bug free.

2. Ensure that it meets the customer requirements and software specification.

3.Ensure that it meets end user exceptations.

* Describe the role of Quality Assurance (QA) and Quality Control (QC) in ensuring the reliability and quality of software products during SDLC.
* Explain the concept of Risk Management in SDLC. How can risks be identified, assessed, and mitigated throughout the software development process?
* Discuss the importance of Change Management in SDLC. How should changes be managed to minimize disruptions and ensure project success?
* Describe the role of Project Management in overseeing and coordinating the various activities within the SDLC. What skills are essential for an effective project manager in this context?