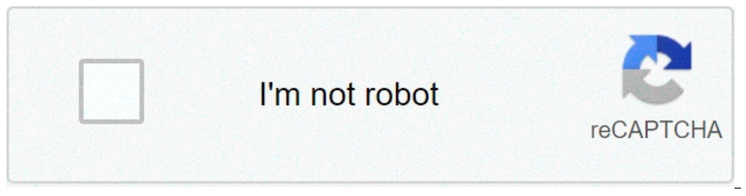

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Software testing notes pdf

Best Articles, News and Tools on QAAutomationSecurityPerformanceAccessibilityDevopsTDD Subscribe to get best resources and articles on Software Test Engineering in your inbox. Every Week — for free!No spam, ever. We'll never share your email address and you can opt out at any time.Read latest issue Software Testing | BasicsSoftware testing can be stated as the process of verifying and validating that a software or application is bug free, meets the technical requirements as guided by it's design and development and meets the user requirements effectively and efficiently with handling all the exceptional and boundary cases.The process of software testing aims not only at finding faults in the existing software but also at finding measures to improve the software in terms of efficiency, accuracy and usability. It mainly aims at measuring specification, functionality and performance of a software program or application.Software testing can be divided into two steps:1. Verification: it refers to the set of tasks that ensure that software correctly implements a specific function.2. Validation: it refers to a different set of tasks that ensure that the software that has been built is traceable to customer requirements.Verification: "Are we building the product right?"Validation: "Are we building the right product?"What are different types of software testing?Software Testing can be broadly classified into two types:1. Manual Testing: Manual testing includes testing a software manually, i.e., without using any automated tool or any script. In this type, the tester takes over the role of an end-user and tests the software to identify any unexpected behavior or bug. There are different stages for manual testing such as unit testing, integration testing, system testing, and user acceptance testing.Testers use test plans, test cases, or test scenarios to test a software to ensure the completeness of testing. Manual testing also includes exploratory testing, as testers explore the software to identify errors in it.2. Automation Testing: Automation testing, which is also known as Test Automation, is when the tester writes scripts and uses another software to test the product. This process involves automation of a manual process. Automation Testing is used to re-run the test scenarios that were performed manually, quickly, and repeatedly.Apart from regression testing, automation testing is also used to test the application from load, performance, and stress point of view. It increases the test coverage, improves accuracy, and saves time and money in comparison to manual testing.What are different techniques of Software Testing?Software techniques can be majorly classified into two categories:1. Black Box Testing: The technique of testing in which the tester doesn't have access to the source code of the software and is conducted at the software interface without concerning with the internal logical structure of the software is known as black box testing.2. White-Box Testing: The technique of testing in which the tester is aware of the internal workings of the product, have access to it's source code and is conducted by making sure that all internal operations are performed according to the specifications is known as white box testing.Black Box TestingWhite Box TestingInternal workings of an application are not required.Knowledge of the internal workings is must.Also known as closed box/data driven testing.Also knwon as clear box/structural testing.End users, testers and developers.Normally done by testers and developers.THis can only be done by trial and error method.Data domains and internal boundaries can be better tested.What are different levels of software testing?Software level testing can be majorly classified into 4 levels:1. Unit Testing: A level of the software testing process where individual units/components of a software/system are tested. The purpose is to validate that each unit of the software performs as designed.2. Integration Testing: A level of the software testing process where individual units are combined and tested as a group. The purpose of this level of testing is to expose faults in the interaction between integrated units.3. System Testing: A level of the software testing process where a complete, integrated system/software is tested. The purpose of this test is to evaluate the system's compliance with the specified requirements.4. Acceptance Testing: A level of the software testing process where a system is tested for acceptability. The purpose of this test is to evaluate the system's compliance with the business requirements and assess whether it is acceptable for delivery.Note: Software testing is a very broad and vast topic and is considered to be an integral and very important part of software development and hence should be given it's due importance.Next : Type of Software TestingThis article is contributed by Aditya Gupta. If you like GeeksforGeeks and would like to contribute, you can also write an article using contribute.geeksforgeeks.org or mail your article to contribute@geeksforgeeks.org. See your article appearing on the GeeksforGeeks main page and help other Geeks.Please write comments if you find anything incorrect, or you want to share more information about the topic discussed above.Attention reader! Don't stop learning now. Get hold of all the important CS Theory concepts for SDE interviews with the CS Theory Course at a student-friendly price and become industry ready. Software Testing Notes PDF: Graduates struggling to get hold of the Software Testing Study Material and Notes PDF can avail of this article and download the best notes and resources for their preparation process of all the essential concepts. 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Software Testing involves the execution of any system or software components through the implementation of automated or manual tools and to process the evaluation of one or more properties of interest. The primary purpose of Software Testing is the identification of missing requirements, or errors, or gaps contrasting the actual requirements. Software Testing is also known as Black box Testing or White box Testing. Software Testing in simple terms is commonly known to verify the AUT- Application Under Test. Graduates can avail from the Software Testing Notes, and Study Materials PDF briefed in this article and enhanced your preparation with the ultimate tools to help you procure more marks. Graduates can download the best and credible sources of study material, and notes PDFs and refer to them during the preparation process. 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This article on Software Testing Notes PDFs provides the best books for Software Testing as per the subject experts' recommendations for students to refer and read through the reference Books during your preparation. The list of the best and highly recommended books for Software Testing course programme preparation are as follows, and graduates must ensure to select the reference book that meets their knowledge and prepare accordingly. Lessons Learning in Software Testing by James Marcus Bach The Third Edition of The Art of Software Testing by Glenford Myers, Corey Sandler, and Tom Badgett Perfect Software by Gerald Weinberg The Fourth Edition of Software Testing- A Craftsman's Approach by Paul C. Jorgensen Testing Computer Software by Cem Kaner How to Break Software- APractical Guide to Testing by James Whittaker The Second Edition of Software Testing by Ron Patton Common System and Software Testing Pitfalls (SEi Series in Software Engineering) by Donald G. 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From this article, you can get the unit-wise break up of all the important topics that fall under each unit, and students can allot time to each topic accordingly. Students should ensure to cover all the essential topics before attempting the Software Testing exam so that the paper is reasonably answerable at the time of the exam. Graduates must ensure that they remain aware and updated of the Software Testing Syllabus as it prevents you from wasting unnecessary time on redundant topics. The updated unit-wise breakup of the Software Testing Syllabus is as follows- UNIT-1: Introduction to Software Testing Introduction of Software Testing, The Seven Principles of Testing, Defect Distribution, General Characteristics of Testing, Defect Distributions, Need for Software Testing, Software Testing Fundamentals, and Various Approaches to Software Testing. UNIT-2: Software Testing strategies Criteria for completion of Debugging and Testing Process, Testing Strategies in Software Testing, and Basic Concepts of Verification and Validation UNIT-3: Software Development Testing and Life Cycle Life-Cycle Testing Concepts, Waterfall Model, Testing Levels, Agile Model, V-Model, Testing Methods, and Spiral Models. UNIT-4: Dynamic and Static Testing Dynamic Testing, Dynamic Testing Tools, Static Testing, Block Box Testing, Static analysis Tool, Regression Testing, and White Box Testing UNIT-5: Functional Testing Random Testing, Equivalence Class Partitioning, Decision Tables, Functional Testing Concepts, Boundary Value Analysis, and Error Guessing. UNIT-6: Test Management Test strategies, Test Controls, Test Planning, Specialised Testing, Control-Test Reporting, Test Organisation, Cost-Benefit Analysis of Testing, and Test Progress Monitoring UNIT-7: Testing Tools Testing Framework, Test automation Approach, and Types of Testing tools UNIT-8: Object-Oriented Testing Cluster Testing, Object-Oriented Testing Challenges, Integration Testing- Bottom-Up and Top-Down, and Unit testing for Object-Oriented Programming UNIT-9 Basic Principles of Software Quality Assurance and Software Quality, Composition of SQA Plan, Planning of SQA, Software Quality Assurance and Software Quality, Organisational Initiatives required for SQA, and Introduction to Software Quality Assurance and Software Quality UNIT-10 Various Models for Process Quality and Software Process quality and Product Quality, UNIT-11: Software Configuration Software Configuration Auditing, Management Software Configuration, Software Configuration Control, and Management Activities like Software Configuration Identification UNIT-12: Software Testing Report Execute Test and Record Results, Evaluate Test Effectiveness, Requirement Phase Testing, Acceptance Test Report Test Results, Test Software Change, TCM- Testing Calculating Model, Design Phase Testing, Testing Software Installation, Access Project Management Development Estimate and Status, and Program Phase Testing UNIT-13: Testing Specialised Applications and Systems Off-the-Shelf Software, Data Warehouse, Server or Client Systems, Security, RAD, Web-based Systems, System Documentation, and Multi-Platform Environment UNIT-14: Installation and Selection of Software Testing tools Appointing Managers for Testing Tools, Testing Tools-Hammer, and Selection and Use of the Test Tools List of Software Testing Important Questions Candidates can go through the list of all the important questions mentioned below for the Software Testing course programme. All the given important review questions focus on helping the candidates to excel in the examination. Discuss and enlist the Technological Developments that cause organisations to revise their testing approach. a)Elucidate on Testing Axioms b)Discuss in detail the classification defects Illustrate with an example, the importance of Test Result and the Drawbacks in case of failure. Write short notes on TMM- Testing Maturity Model Give the definitions of the following terms- Reliability Interoperability Correctness Integrity Demonstrate the importance of a Document to a Product and explain the process to Test requirement and Design Document Name the Test-related activities for V-Model Architecture. Does automation replace manual testing? Illustrate with an example. Define Testing Policy. State the benefits of Designing Tests in the Early Stage of a Life Cycle. Differentiate between Dynamic and Static Testing. Enumerate the various components of the Software Development process. Briefly explain Configuration Management with an example. State the importance of Test development of both Invalid and Valid Input Condition. Explain with an example of the importance of Experience-based Testing Techniques. FAQs on Software Testing Notes PDF Question 1. Define Software Testing. Answer: Software Testing is a process to verify a system and identify the gaps, errors, or any missing requirements contrary to actual requirements. Software Testing holds two major classifications- Non-Functional and Functional Testing. Question 2. Why is Software Testing an important element? Answer: Software Testing is an important segment because software-based bugs can cause great danger or can be extremely expensive. Software bugs are errors or flaws that can cause potential monetary and human loss, and History is the best example of Software bus. Software Testing helps to verify the errors over actuality. Question 3. What essential topics does the Introduction to Software Testing unit in the syllabus comprises? Answer: The unit- Introduction to Software Testing comprises of the following topics- Introduction of Software Testing, The Seven Principles of Testing, Defect Distribution, General Characteristics of Testing, Defect Distributions, Need for Software Testing, Software Testing Fundamentals, and Various Approaches to Software Testing. Question 4. Name a few important books that enhance Software Testing exams. Answer: The Fourth Edition of Software Testing- A Craftsman's Approach by Paul C. Jorgensen Testing Computer Software by Cem Kaner How to Break Software- APractical Guide to Testing by James Whittaker The Second Edition of Software Testing by Ron Patton Common System and Software Testing Pitfalls (SEi Series in Software Engineering) by Donald G. Firesmith Conclusion The article on Software Testing Notes PDF is a viable source of information that provides credible and accurate details. The article also provides a list of Important questions, Reference Books, and Study Materials to assist and strengthen student's comprehension and understanding of Software Testing during preparations and examination period. Graduates can access and download the PDFs on Software Testing Notes, Study Materials, Important questions, and Books from this article.