

CHAROTAR UNIVERSITY OF SCIENCE AND TECHNOLOGY
DEVANG PATEL INSTITUTE OF ADVANCE TECHNOLOGY AND RESEARCH
DEPARTMENT OF COMPUTER ENGINEERING

ACADEMIC YEAR: 2020-21

Subject Name: Software Engineering
Subject Code: CE343

Semester: 5th Semester
Duration: June-Nov. 2020_2021

Practical List

Sr. No	Aim	Hours
1	Study and compare different software process models and compare them based on cost, simplicity, risk, involvement of user, flexibility, maintenance, integrity, security, re-usability, and requirement.	2
2	How your site performs, reveal why it's slow and discover optimization opportunities with GTMetrix.	2
3	Design questionnaires and other techniques to elicit requirements for the given project.	2
4	Design System Requirement Specification (SRS) document for a given project. (IEEE Standard).	2
5	Calculate cost estimation for your SGP project using LOC, Function Point and COCOMO	2
6	<p>Background: There are some metrics which are fundamental and the rest can be derived from these. Examples of basic (fundamental) measures are size, effort, defect, and schedule. If the fundamental measures are known, then we can derive others. For example, if size and effort are known, we can get Productivity (=size/effort). If the total numbers of defects are known, we can get the Quality (=defect/size) and so on.</p> <p>Problem Description: Online loan system has two modules for the two basic services, namely Carloan service and House loan service. The two modules have been named as Car_Loan_Module and House_Loan_Module. Car_Loan_Module has 2000 lines of uncommented source code. House_Loan_Module has 3000 lines of uncommented source code. Car_Loan_Module was completely implemented by Mike. House_Loan_Module was completely implemented by John. Mike took 100 person hours to implement Car_Loan_Module. John took 200 person hours to implement House_Loan_Module. Mike's module had 5 defects. John's module had 6 defects. With respect to the context given, which among the following is an INCORRECT statement?</p> <p>Choose One: 1. John's quality is better than Mike. 2. John's productivity is more than Mike. 3. John introduced more defects than Mike. 4. John's effort is more than Mike</p>	2
7	Case Study: Project Management using ASANA tool.	2

8	Prepare design document for your project (MS Visio (Desktop Tool) or Draw io (Web Tool)) <ol style="list-style-type: none"> 1. Use case diagram 2. DFD (Level 1 & 2) 3. Activity Diagram 4. Class diagram (If database use in your project) 	4
9	Design coding standards and guidelines for a given project (C, C++, Java, HTML etc.)	2
10	Design the following for given project (Black Box Testing) <ol style="list-style-type: none"> 1. Test Case 2. Test Suite 3. Testing Strategy Also Design Test Cases using White Box Testing, Gray Box testing.	4
11	<p>Background: Performance testing tests the non-functional requirements of the system. The different types of performance testing are load testing, stress testing, endurance testing and spike testing.</p> <p>Problem Description: Identify the type of performance testing for the following:</p> <ol style="list-style-type: none"> 1. A university uses its web based portal for publishing the results of the students. When the results of an examination were announced on the website recently on a pre-planned date, the web site crashed. Which type of performance testing should have been done during web-site development to avoid this unpleasant situation? 2. A space craft is expected to function for nearly 8 years in space. The orbit control system of the spacecraft is a real-time embedded system. Before the launch, the embedded software is to be tested to ensure that it is capable of working for 8 years in the space. Identify the suitable performance testing category to be carried out to ensure that the space craft will be functioning for 8 years in the space as required. 3. During unexpected terrorist attack, one of the popular websites crashed as many people logged into the web-site in a short span of time to know the consequences of terrorist attack and for immediate guidelines from the security personnel. After analyzing the situation, the maintenance team of that website came to know that it was the consequences of unexpected load on the system which had never happened previously. Which type of performance testing should have been done during web-site development to avoid this unpleasant situation? 4. Global Education Centre (GEC) at Infosys Mysore provides the training for fresh entrants. GEC uses an automated tool for conducting objective type test for the trainees. At a time, a maximum of 2000 trainees are expected to take the test. Before the tool is deployed, testing of the tool was carried out to ensure that it is capable of supporting 2000 simultaneous users. Indicate the performance testing category? 	2
12	Installation of Selenium automated testing tool and Create Test Scripts in Selenium with Python. https://www.guru99.com/selenium-python.html	2
13	Study different CASE tools and Testing tools (QTP, qTest, IBM Rational Functional tester, MSC (message sequence chart), SDL (specification and description language), TTCN (testing and test control notation), TTCN-3) and prepare a summary report.	2