Understanding Unit Testing and Its Benefits

Overview

Unit testing refers to the practice of testing certain functions and areas – or units – of our code. This allows us to assure that our functions work as expected. Unit testing has been considered by many software developers to be one of the most important software development practices. In this task you need to demonstrate your understanding of unit testing and their impact on the process and outcomes of software development projects. In particular, an in depth analysis of the pros and cons of unit testing in the context of the projects you have been involved in (both in CSE-404 and in other contexts) is required.

Purpose: Research, reflect and demonstrate a correct understanding of the impact that unit testing has on software development projects.

Tasks: Write a report that clearly explains unit testing and presents the impact that it has on the outcomes of a project.

Time: will be mentioned by course teacher.

Resources: Lecture material, books and online resources on this topic. The projects that you have been involved in and the people involved.

Task Submission Details and Assessment Criteria

You should create a personal (unique) report document, and submit as a PDF.

Instructions

The requirement of this task is that you demonstrate a correct understanding of unit testing and the impact it has on the outcomes of a software development project.

Include the following areas in your report:

- Explain unit testing. Substantiate your description with examples from the software projects you were/are involved. Make sure that your explanation can be easily understood by a CSE student.

- Provide an in depth analysis of the pros and cons of unit testing in the context of the projects you have been involved in (both in CSE-403 and in other contexts).

- Describe how unit testing can have an impact on the project outcomes. What are the other practices you have done that either require unit testing or can work well with unit testing? Are there any practices that you have had experiences with and didn't work well with unit testing? Again, it is important to substantiate your description with evidences from the projects you have been involved.

- Recommend guidelines for good practices with unit testing.

The report should aim to be succinct and relevant (~5-7 pages as a rough guide). Bullet points and summary tables are recommended. **You must be able to reflect on your own personal experience, not just reference to other sites or resources.**

Make sure you clearly point out any references or sources you used.