Software Engineering Lab

Week 7 Task 7.1: Architectural Design Pattern

Overview

Understanding and demonstrating the usage of architectural design pattern. Each team need to select an architectural design pattern for their project work. We will extend the lab work of Week 6 by applying architectural design pattern along with coding standard and documentation tool for the following six (6) Math classes each having:

- **Constructor function** – to create a new object by initializing the attributes/data members of the class
- **Specific mathematical functions** such as addition / subtraction / multiplication / division / prime number checking/finding max value among three numbers.
- Each class should have one mathematical function. Except *"prime number checking"* functionality, other functions should be overloaded with different type of parameters.
- Each team member should implement one Math class **using the selected architectural design pattern**. Make sure you have required number of source files for each class according to the number of layers of the selected architectural pattern.
- Make sure you apply the **selected coding standard with proper documentation in the source code**.

Purpose: To be familiar with architectural design pattern.

Tasks: As a team, create a package consisting of 6 math classes following the architectural design pattern along with coding standard and proper documentation.

Time: This task should be starting in your lab class and demonstrated via classroom when done.

Resources: Your course teacher(s), your team members, resource on architectural pattern.

Feedback: Your teacher(s) will give you feedback on the document your team creates and your activity. Your individual contribution evidence will be documented and submitted to classroom.

Task 7.1 Submission Details and Assessment Criteria

You should create a personal (unique) document with an image of your individual contribution to the work. The report should include the source code that you wrote and the image of the generated outcome of your code segment. You should mention and explain the how the architectural pattern is applied in your code segment.