

Al-Imam Mohammad Bin Saud Islamic University

College of Computer and Information Sciences,

Department of Computer Science

CS 392 Software Engineering 2

Assignment #2: Quality Assessment

October 13th, 2022

On this assignment each group of students will answer question to assess their understanding of software and code quality. Students will work in groups of 3-4 students (same groups as Assignment 1) and use previous project from SWE1 of one of the student as a material in this assignment. Students will collect their in one document to be submitted in addition to a five minute power point presentation recorded and submitted with the other assignment materials.

Questions:

1. In class we discussed five design patterns. There are many other patterns available according to the book *Erich Gamma ... [and others]. Design Patterns : Elements of Reusable Object-Oriented Software. Reading, Mass. :Addison-Wesley, 1995.*
Select a design patterns that has not been covered in class. Read it and summarize it. Make a slideshow about the pattern that includes its definition, examples and a demonstration in Java of a code that uses this design pattern. Use the link below to register your choice of a design pattern. Each group should have a design pattern. No duplicates are accepted. **(4 marks)**
2. Review the Design of your project in CS 290 (Alhilal Alahmar). Discuss with your group how to improve your design using a design pattern. Discuss the problems of your previous design, what design pattern can improve your design and justify. Then modify your old design and explain how your design changed using the design pattern of your choice. **(3 marks)**
3. In the attached compressed file "pattern.zip" there is a java code that uses a design pattern. Download the code, check it and run it then answer the following questions:
 - a. What is the design patterns used here?
 - b. What does the code do (functionality wise)?
 - c. Show the output of the code.

Report structure: the report structure as follow:

- Cover page: include university logo, team members' names, emails and IDs, supervisor name.
- Write each question with its answer.
- Prepare a brief presentation with your results and video record it.

What to submit?

- The answers report
- The Project design from the previous course CS 290.
- The presentation in a video.