

**SWE 316: Software Design and Construction (Term 221)**

**Homework # 2 Weight 10%**

**Date of Submission: 12/12/2022**

Name	ID
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Task	Grade	Your Grade	Comments
Task # 1: Principles Evaluation	20		
Task # 2: Project Re-Works	20		
Task # 3: Timeline Update	20		
Task # 4:	10		
Task # 5:	30		
Check list and penalties			
No Cover page with grade table		-10	<input type="checkbox"/>
File name (report)		-5	<input type="checkbox"/>
Not in PDF format		-10	<input type="checkbox"/>
Total	100		

1. Include the question text and then put your answer
2. The file (report) name should be in the following format: **HW<#> - <YOUR ID> - <YOUR NAME>**
3. Correct solutions earn full mark. However, **not following the previous points will reduce your mark.**

## 1. Part A : xyzSoft

xyzSoft team was impressed by your work in the first phase. Ahmad (from Quality Management Department) loved the way he can navigate through the projects and view them using the custom timeline. However, he came back with more ideas that we need to fulfill in this part.

### 1.1. Principles Evaluation

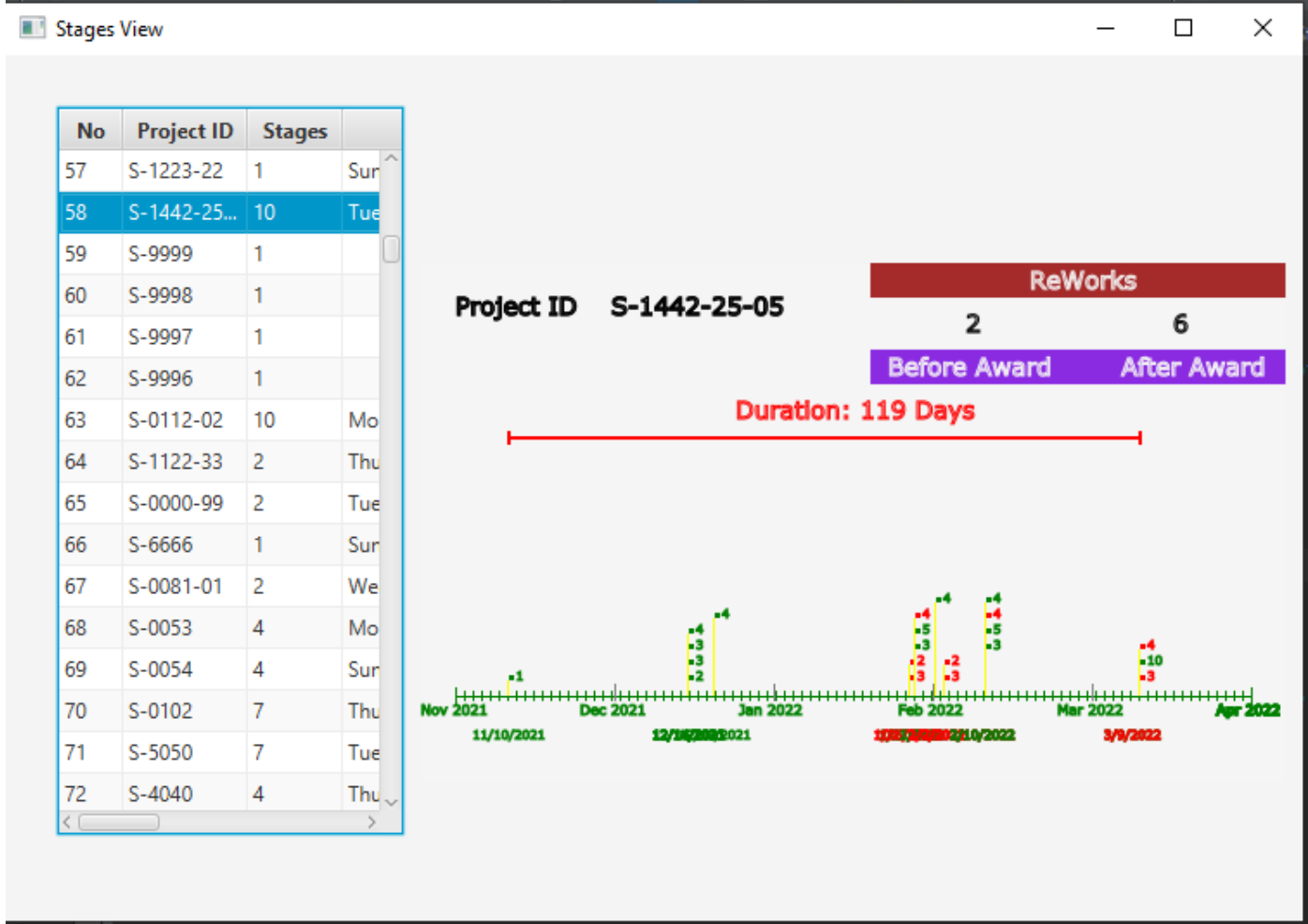
[20 points]

During this course, we covered several principles including Open Closed Principle, Single Responsibility, and Principle of Least Knowledge. **Focus on the Single Responsibility Principle** and list all classes that you implemented in the previous homework and indicate the logics/responsibilities that are linked to each class. If a class has several responsibilities, clarify how you can split it. You can use the template below:

Class	Responsibilities	Can be split into.. (if applicable)
Class # 1 (Project)	Control project data file and get information from Stage class	No, because we are using stage information in the project class
Class # 2 (Stage)	Control stage data	No because it has one purpose
Class # 3 (Controller)	1- Read excel files 2- Set the table view 3- Set the canvas - Draw lines - Draw duration - Draw stages	Yes, but we don't recommend it; because it will be low coupled between the classes and if we split the classes, we will extend it to a parent class where we use them all.

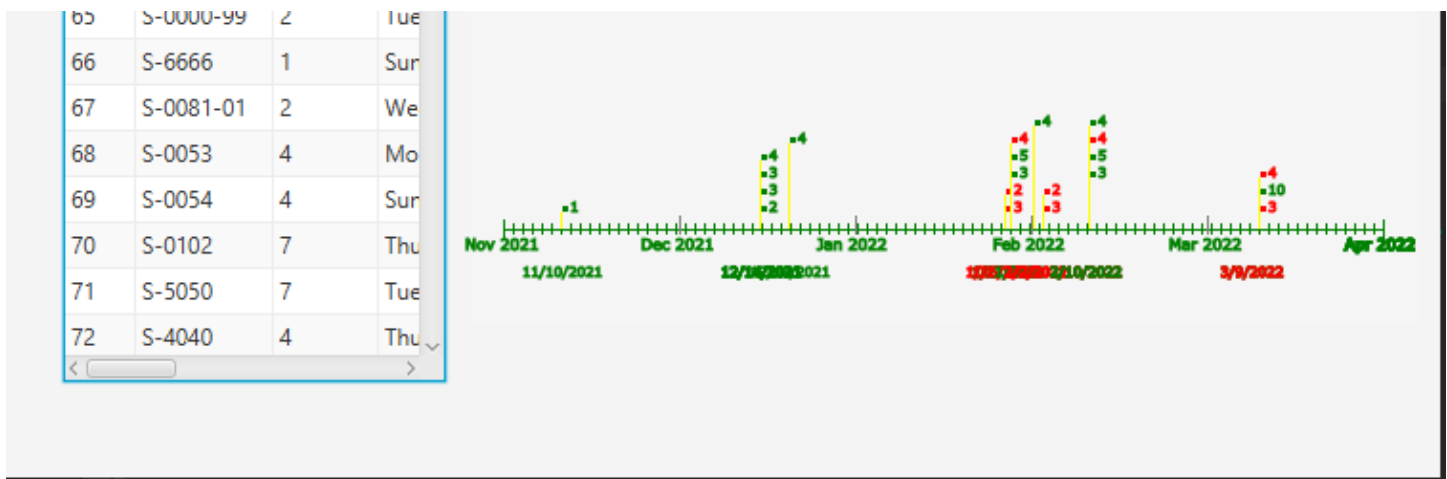
## 1.2. Project Re-Works

[20 points]



## 1.3. Timeline Update – indicator of Stages going backward.

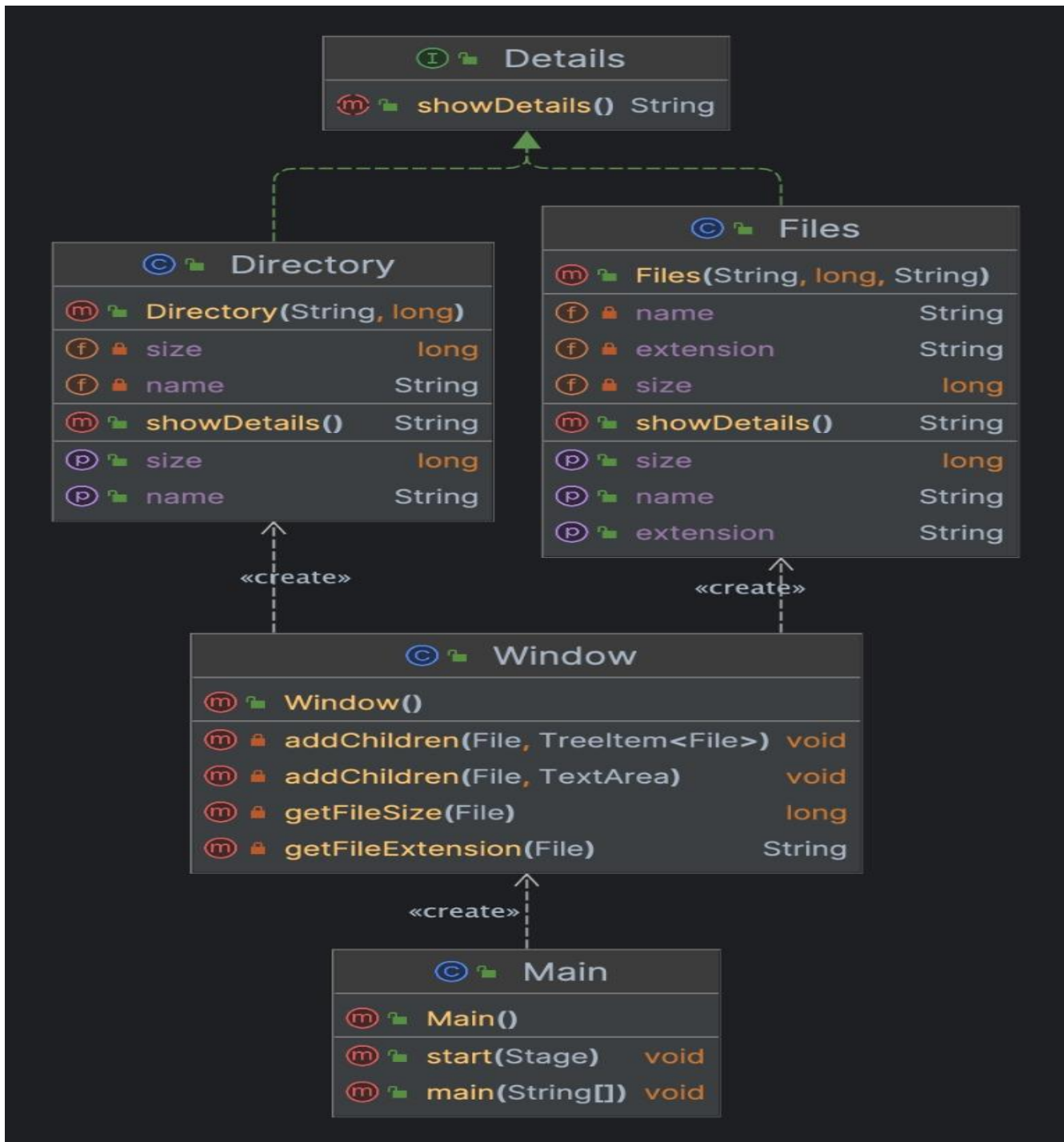
[20 points]



## 2. Part B: Composition Design Pattern

### 2.1. Class diagram

[10 marks]



**[30 marks]**

