The University of the West Indies, St. Augustine
COMP 3607 Object Oriented Programming II
2021/2022 Semester 1
Project Handout

Objectives:

The myElearning content management platform allow students to submit files as PDFs or Word documents. Generally, students are required to follow a file naming convention for assignments. However, this is not always specified nor is it always adhered to in practice. For example, Fig1 shows actual examples of file naming variations used by students for an assignment (student IDs replaced with a generic character string).

Consider when a lecturer downloads assignment files from myElearning for grading, annotates the files and then prepares to upload the files for student feedback. myElearning renames the assignment files using the following convention (1):

randomMyElearningCode1-
randomMyElearningCode2_Name1_Name2_studentOriginalFilename_randomMyElearningCode3
_randomMyElearningCode4.pdf

E.g. 1409121490-61515_Joe_Doe_Shmoe_123456789_Assignment_1_477861_70956800.pdf

A problem arises if the lecturer uses this filename to upload on myElearning. The upload is rejected by myElearning because the filename does not follow the convention (2) below:

Name1 Name2_CCCCCC_assignsubmission_file_NNNNNN**.pdf**

myElearning requires a feedback filename, for upload, with the following components:

- The parts of a student's name, separated by a whitespace, followed by an underscore (_)
- A 6 character integer-identifier assigned to a student by myElearning (eg. 642151 in Figure 2), followed by an underscore (_)
- The tag assignsubmission_file, followed by an underscore (_)
- The original name of the file followed by the file extension (.pdf)

The challenge is to build a solution that accepts a csv (comma separated value) file similar to that shown in Figure 2 and a collection of marked up assignment files named according to convention (1). A successful outcome would be a collection of renamed assignment files conforming to convention (2) that would be accepted by myElearning for upload. The solution should work such that after the user places the csv file and marked up assignment files in a particular folder called filesToRename, and executes the main class (FileFixer.java), the renamed files are placed in a nested folder, called renamedFiles, within the filesToRename folder.

This project requires you to work in a team with 3 or 4 other students to design, develop and present a fully object oriented solution called FileFixer. It should be for managing the downloading/uploading of file submissions on myElearning. The solution must be:

- implemented in Java,
- feature at least two design patterns (Singleton is not allowed),
- conform to SOLID design principles,
- evaluated using a test suite of classes.

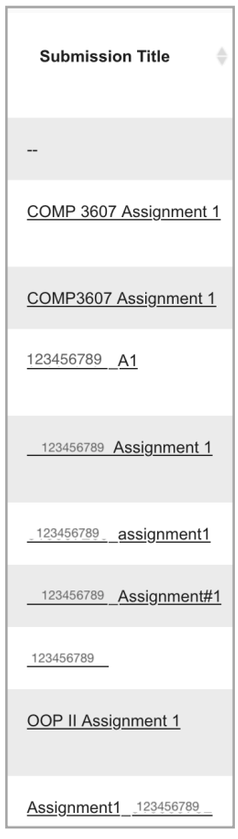

Figure 1

Identifier	Full name	ID number	Email address	Status	Grade	Maximum Grade	Grade can be changed	Last modified (grade)	Feedback comments
Participant 642151	Joe Doe-Shmoe	123567894	joe.doeshmoe@my.uwi.edu			100.00	Yes	-	
Participant 642180	John Jimmy Jake White	123567893	john.white@my.uwi.edu			100.00	Yes	-	
Participant 642103	Kate Simple	123567892	kate.simple@my.uwi.edu			100.00	Yes	-	
Participant 642111	Mary Jane Green	123567891	mary.jane.green@my.uwi.edu			100.00	Yes	-	
Participant 642110	Alex Jr Adams	123567890	alex.adams@my.uwi.edu			100.00	Yes	-	

Figure 2. myElearning CSV File Format for Uploading Marks and Feedback Files

Activity 1: Team Formation, Scope Description (1%) - Due Oct. 13, 2021 @10:00pm

Students are required to form teams of exactly 3 (limit 2 groups for this cohort) or exactly 4 member a (limit 12 groups for this cohort) by **Oct. 01, 2021 @10:00pm.** After this deadline, the remaining, unassigned students will be randomly allocated to form the rest of the teams. Next, teams are required to define the project boundaries for their solutions should work in a scope document. This is due on **Oct. 13, 2021 @10:00pm.**

Activity 2: Code Development (14%) - Due Nov 17, 2021 @ 10:00pm

Teams are required to design and develop a working solution for the defined project scope.
Essential features include:

- Locates and processes zero or more PDF files to be renamed in a particular directory
- Locates and extracts relevant data from a myElearning csv file
- Renames one or more PDF files according to convention (2)
- Produces a list of missing submission files based on csv student list
- Original and renamed files are matched with a student correctly
- Test suite for evaluation of system performance
- Code storage on a GitHub repository

Sound software engineering practices and design principles should be applied at all time.

Activity 3: Code Documentation and Demo Video (10%) - Due Nov 24, 2021 @10:00pm

Teams are required to produce documentation for their codebase using software engineering techniques on their GitHub project's wiki. Refer to the myElearning page for guidelines on sections to include and formatting instructions.

Teams are also required to produce a video summarising how the application's functionality was evaluated and how it is meant to be used. The following criteria should be met by the video:

- Identifies the scope area, and project team
- Within 5-6 minutes in length
- Illustrates how the test suite was used to test correct functionality
- Demonstrates with at least three use cases how the application produces recommendations for three different kinds of students
- Clear narration or explanations in the video, no fuzzy shots, no shaking, no portrait views.
- Uploaded to YouTube with a link submitted on myElearning as indicated

Activity 4: Team Presentation (5%) - Due Nov 24, 2021 @10:00pm

Groups are required to produce a video summarising each member's experiences while working on the project. The following criteria should be met by the video:

- Identifies the scope area, and project team
- Within 2-3 minutes in length
- Each member must be visible at some point in the video and speak for 45-60 seconds.
- Each member is required to talk, identify and discuss features of the project that was (a) most challenging (b) most gratifying and (c) most impactful for him/her.
- Clear audio, no shaking, no portrait views, blur backgrounds of rooms as necessary.
- Uploaded to YouTube with a link submitted on myElearning as indicated

Activity 5: Peer Review Forms and In-class Activity (5%) - Due Nov 26, 2021 (in lab session)

Students are required to submit internal peer review assessments of their members' contributions using the supplied individual feedback forms. Feedback forms submitted on myElearning.

Peer review assessment of group work will be conducted during lab session in Week 12. All members must be present. Teams will be assigned to review the work produced by 3 other groups, generate and ask questions.

Video Suggestions

Use a camera on a smart phone to record your video. Mount on a tripod or a secure surface and record in an area with good lighting and low background noise. Avoid portrait views. There are many free video editing software options online or you may use Windows Movie Maker in the lab machines. Practice before recording.

Submission Instructions

Refer to myElearning for the instructions on how to submit the various parts of the project.