New York Institute of Technology
School of Engineering and Computing Sciences
CS-380 Introduction to Software Engineering
Fall 2017

Prof. Murat Genc
mgenc@nyit.edu

Course Project Information

Instructions:

You will work with your team members to design, implement, test and document the project which will be described in detail in this document. Teams are announced on the BlackBoard.

All team members will receive the same grade, regardless their contribution.

For all your questions, you will use Discussion Board on Black Board. Create a new thread for your question. Create one thread for each question.

Programming Language will be used for the project is **Java 8.0**. GUI design should be done in **JavaFX**. If you are not familiar with JavaFX, you can consult the web page below.

http://docs.oracle.com/javafx/2/get_started/jfxpub-get_started.htm

You can also find text books on the internet, at the library. Another resource would be tutorial videos on YouTube.

There are several roles in a team, we will study those roles in the course. However, there is one specific role that needs to be carried by me; **Customer**.

Since I am your customer, I am the only person you can gather information from. You should ask all your questions about the application on **Discussion Board**. One thread for each question. E-mails or any other methods will not be accepted or answered.

Due Date:

12/14/2017 11:59PM. Project files should be zipped, and submitted on Black Board.

Submission:

Late Project submissions will have 25% penalty.

If any part of your project fails to compile, all team members will receive 0 points for the project.

Description:

* I need an application where I can store all my exam questions for all my courses from different colleges in a database (**MySQL**)

* All questions and answers should be entered to the system through the User Interface.

* You are free to design your own User Interface, there is no visual requirements. The only requirement is to make it User Friendly.

* There are different types of questions I am interested in;

- Multiple Choice (MC)
- Multiple Answer (MA)
- True/False (TF)
- Essay (ESS)
- Order Questions (ORD)
- Match Questions (MAT)
- File Response (FIL)
- Numeric Response (NUM)
- Short Response (SR)
- Multiple or Single Fill in the Blank (FIB_PLUS)

* I should be able to generate an examination for a course, save it in required format (TXT), and print if it is desired by the user.

* For each new examination, the User Interface should allow me to enter;

- Name of College
- Name of School
- Name of Department
- Course ID
- Course Name
- Exam Name
- Exam Date
- Instructor Name
- Instructor E-mail
- Semester
- Year

However, I should not be re-entering all the values here for the same college. **In other words, you should come up with a good database design.**

* Year and date should be picked from a calendar object on the User Interface.

* The above information should be printed on top of each page when I use “print exam” menu item. Please see **sample_exam_questions_only.txt** for a sample output.

* All questions for a new examination should be randomly picked from the database. However, I should be able to re-pick specific questions.

* Questions may have same weight, or variable weight but the total mark should always be 100.

* I should be able to print the exam in three formats;

- Questions only in TXT form (**sample_exam_questions_only.txt**)
- Questions and Answers together in TXT form (**sample_exam_qa.txt**)
- BlackBoard TXT format in TXT form (**sample_exam_BB.txt**)

Rules for BlackBoard TXT Fromat:

BlackBoard uses **Comma Separated** values for Test uploads. The resulting file must be saved with TXT extension. Please see sample_exam_BB.txt

Multiple Choice Question:
To create a multiple choice question, use the following formula:
MC | question text | answer text | 'correct' or 'incorrect'
Note: The maximum number of answers to create per multiple choice question is 20.

Example:
```
MC    How many States in the United States?    45    Incorrect   13    Incorrect
      50    Correct     52    Incorrect
```

Multiple Answer Question:
To create a multiple answer question, use the following formula:
MA | question text | answer text | 'correct' or 'incorrect'
Note: The maximum number of answers to create per multiple choice question is 20.

Example:
```
MA  Which of the following were U.S. Presidents?   Adams Correct
      Gainey      Incorrect   Lincoln     Correct     Robinson    Incorrect
```

True/False Question:
To create a true/false question, use the following formula:
TF | question text | 'true' or 'false'

Example:
```
TF  The capitol of the United States is New York City    False
```

Essay Questions:
To create essays, use the following formula:
ESS | question text | "essay sample text

Example:
```
ESS Write a response of no more than 500 words, using what you have learned in class. Here's a sample answer
```

Ordering Questions:
ORD | question text | answer
Note: The maximum number of answers to create per multiple choice question is 20. The system will randomly order the answers and matches.

Example:
```
ORD Put the following famous battles in order of occurence.    Battle of Haatings    Battle of Yorktown      Gettysburg  Battle of the Somme    D-Day
```

Matching Questions:
To create matching questions, use the following formula:
MAT | question text | answer text | matching text
Note: The maximum number of answers to create per multiple choice question is 20. The system will randomly order the answers and matches.

Example:
```
MAT Match the famous battles and the year they were fought.    Battle of Hastings    1066  Gettysburg  1863  Battle of the Somme     1917
```

Fill in the Blank Questions:
To create multiple fill-in-the-blank questions, use the following formula:
FIB_PLUS | question | variable1 | answer1 | answer2 | | variable2 | answer3
Note: The format consists of a list of variable-answers where each variable-answer is composed of the variable name and a list of correct answers.

Example: `FIB_PLUS At the CTL [x] and [y] are Bb Support Staff x Tonia Luanne y Guy Ryan`

With one blank spot, use only x:
Example: `FIB_PLUS At the CTL [x] Bb Support Staff x Tonia Luanne`

Numeric Response Questions:
To create numeric response questions, use the following formula:
NUM | question | answer | [optional] tolerance

Example: NUM e^3 20.09 0.1

Short Answer Questions:
To create short response questions, use the following formula:
SR | question | sample_answer

Example: `SR Describe the flight pattern of flamingos They fly in a V formation`

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