CS 350 Software Design / SE 310 Software Architecture I

Homework Assignment - Part 3: Modify a Survey/Test, Take a Survey/Test, Tabulate and Grade a Survey/Test

Add to the **Menu 2** options to take and to modify a survey/test as well as to tabulate a survey/test and grade a test.

   i.e.

i.e. Survey Menu 2
```
1) Create a new Survey
2) Display Survey
3) Load a Survey
4) Save a Survey
5) Modify an Existing Survey
6) Take a Survey
7) Tabulate a Survey
8) Quit
```

i.e. Test Menu 2
```
1) Create a new Test
2) Display a Test
3) Load a Test
4) Save a Test
5) Modify an Existing Test
6) Take a Test
7) Tabulate a Test
8) Grade a Test
9) Quit
```

Modifying an existing Survey/Test (14%)

Modify your program so that each type of question can be modified not simply deleted and replaced.

- True/False 2%
- Multiple Choice 2%
- Short Answer 2%
- Essay Answer 2%
- Rank the Choices 2%
- Matching 2%
- Multiple answers per each question – part of each section - 2%

When you select **option 5** from **Menu 2**, prompt the user to ask which survey/test to modify

   i.e.

```
What survey do you wish to modify?
Enter existing Survey name
```

Next, ask what question you wish to modify. i.e.

```
What question do you wish to modify?
Enter existing question.
```

If you select **multiple choice**, the program should first ask you if you wish to modify the prompt and then ask which choices you wish to change.

i.e.

```
Display the prompt for the existing question

Do you wish to modify the prompt?
```
User response entered

If the Answer is *Yes*

```
Display the prompt.

Enter a new prompt:
```
New prompt entered

```
Do you wish to modify choices?
```

if the Answer is *Yes* display the choices

```
Which choice do you want to modify?

A) Choice 1 B) Choice 2 C) Choice 3
```

Choice is entered

New Value is entered

If instead the user picked to modify a test, your program should have one more prompt.

i.e.

```
Do you wish to modify the correct answer?
```

If the answer is *Yes*, prompt:

```
What choice do you wish to make the new correct answer?
User enters their choice
```

Filling out a Survey/Test (20%)

After selecting **option 6**, the user is prompted to enter the name of the survey/test to take and then the questions are asked and answered

i.e.

```
Enter the name of the test you wish to take:
testName

What is your favorite movie?
Fletch
```

```
What is the most evil team in football?
A) Dallas Cowboys B) New England Patriots C) New York Giants

A
```

Aspects to consider

Multiple Multiple Choice questions:

If you are taking a multiple multiple choice question, you need to determine how many options the person is going to enter. Please make it obvious.

i.e.

```
What teams are evil in football? Please give two choices:
A) Dallas Cowboys B) New England Patriots C) Philadelphia Eagles

A
B
```

Multiple essay questions:

Some students questions whether an essay question can have multiple answers. There is no problem with this. Each essay could have two paragraphs.

i.e.

```
Give two reasons why Star Wars is better than Star Trek:

A) Star Wars has Yoda, Star Trek has Tasha Yar. Nuff said.
B) Star Wars consistently breaks new ground with effects. Star Trek follows suit.
```

Matching questions:

You should make your Matching questions look presentable. i.e. two columns neatly formatted. This really is not difficult. Then you can enter a letter and number combination on each line.

```
Match the team with the city

A) Yankees    1) Philadelphia
B) Phillies   2) New York
C) Red Sox    3) Boston

A 2
B 1
C 3
```

Note: Whether you choose a test or a survey filling out a survey/test is the same. Results should be automatically saved after completing it. You do not have to worry about people starting and stopping the survey/test in the middle.

Saving the responses of a Survey/Test (15%)

After each survey or test is taken, the results must be stored in a file. You may choose whatever file representation scheme you like.

NOTE: A Test can be both tabulated and graded!

Grade a test: 23%

- Each test can be graded.
- Grading is automatic.
- All questions are worth equal points.
- Essay questions cannot be graded.
- If there are 10 questions, 1 essay question and a student gets 8 of the 9 non essay questions correct, the program should output 80/90 as the actual grade.

Tabulate a Test/Survey: (23%)

Some questions can be tabulated, others can simply show the responses by responders placed together.

For each test or survey tabulated.

- True/False: Output the total True responses and total False responses.
- Multiple Choice: Output the total number of responses for each choice.
- Short Answer: Output the total number of each response. Do not worry about combining spelling issues and such.
- Essay Answer: Simply list all of the answers
- Matching and Ranking: List the number of each permutation submitted and the permutation.

Example 5 answers to True/False Questions:

Question:
```
Star Wars is the Greatest Movie Franchise. True / False
```

Replies:
```
True
True
False
True
True
```

Tabulation:
```
Star Wars is the Greatest Movie Franchise.
True: 4
False: 1
```

Example 4 answers to Multiple Choice Questions:

Question:
```
What is your favorite Star Wars movie?
A) I B) II C) III D) IV E) V F) VI
```

Replies:
```
D
E
D
E
```

Tabulation:

```
What is your favorite Star Wars movie?
A: 0
B: 0
C: 0
D: 2
E: 2
F: 0
```

Example 5 answers to Short Answer Questions:

Question:
```
What is your favorite Star Wars movie?
```

Replies:
```
IV
V
V
IV
V
```

Tabulation:
```
What is your favorite Star Wars movie?
IV 2
V 3
```

Example 3 answers to Essay Questions:

Question:
```
Why is your Star Wars your favorite movie?
```

Replies:
```
Star wars combines a mythos second to none.

Could it get any better than Darth Vader being Luke Skywalkers' father?

Lucas created a completely new world of special effects.
```

Tabulation:

```
Star wars combines a mythos second to none.

Could it get any better than Darth Vader being Luke Skywalkers' father?

Lucas created a completely new world of special effects.
```

Example 3 answers to Ranking Questions:

Question:
```
Rank your three favorite Star Wars movies:
```

Replies:
```
V
IV
VI

V
IV
II
I

V
IV
VI
```

Tabulation:

```
2
V
IV
VI

1
V
IV
II
I
```

Example 3 answers to Matching Questions:

Question:
```
Match the team with the city

A) Yankees    1) Philadelphia
B) Phillies   2) New York
C) Red Sox    3) Boston
```

Replies:
```
A 2
```

```
B 1
C 3

A 1
B 2
C 3

A 2
B 1
C 3
```

Tabulation:
```
2
A 2
B 1
C 3

1
A 1
B 2
C 3
```

PLEASE NOTE: You must include the entire project and all its files. Place these files in a Zip **NOT** Tar file. Load a single file to Drexel Learn with a ReadMe file included that explains any issues, what method you used for saving a file, and where the sample files are located. In addition, your sample files should have a relative address from the binary. Do not use absolute paths, as they will not work when we are grading them. **YOU MUST have file saving and loading working to submit this assignment and include a test and survey with all six question types that can be loaded.** Also, include at least three sets of responses for each test/survey. If you are missing a type of question or multiple answers, you can turn it in and you will lose the points for those types of questions.

Handling Improper Input (5%)

Your program should gracefully handle inappropriate input and NEVER crash.

Late Policy

- Assignments submitted 1 hour to 1 week late will receive a 15% penalty.
- Assignments submitted 1 to 2 weeks late will receive an additional 10% penalty.
- Assignments submitted more than 2 weeks late will be subject to an additional 5% penalty for each week.