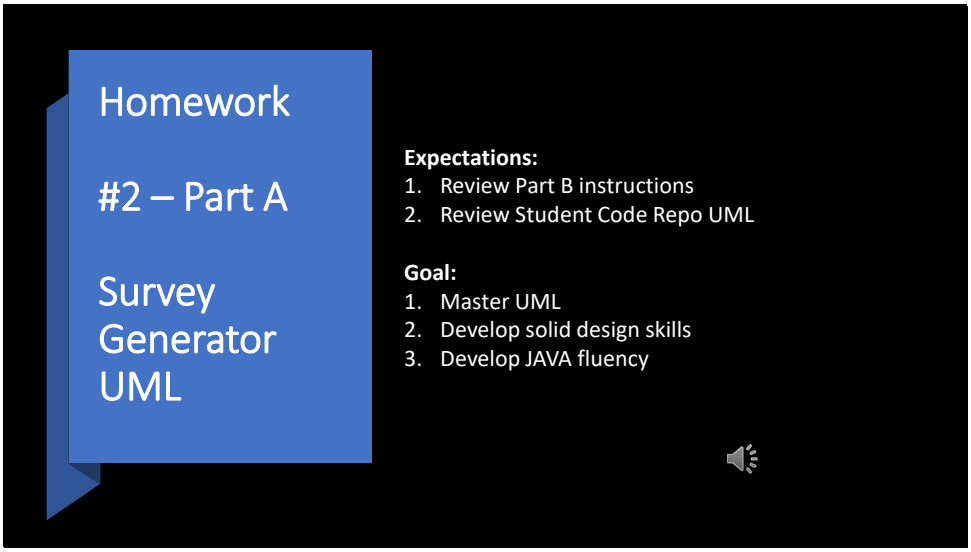
Slide 1



Your second homework assignment is a four-part assignment.
You are only going to see the first two parts now and when you complete them, we'll go over the next two parts.
Make sure you watch the video for the Part B of the assignment to fully understand what you are being asked to do in Part A.
Also, review the UML vehicleCityVersionWithUtilities.png from the Student Code Repo to get an idea of the scope of what a complete UML design looks like.
Note the number of classes, relationships between classes, method definitions, attributes and scope are all detailed.
We are expecting a similar level of detail.

For this assignment you are being asked to create a survey generator.

The goals of this assignment are to:

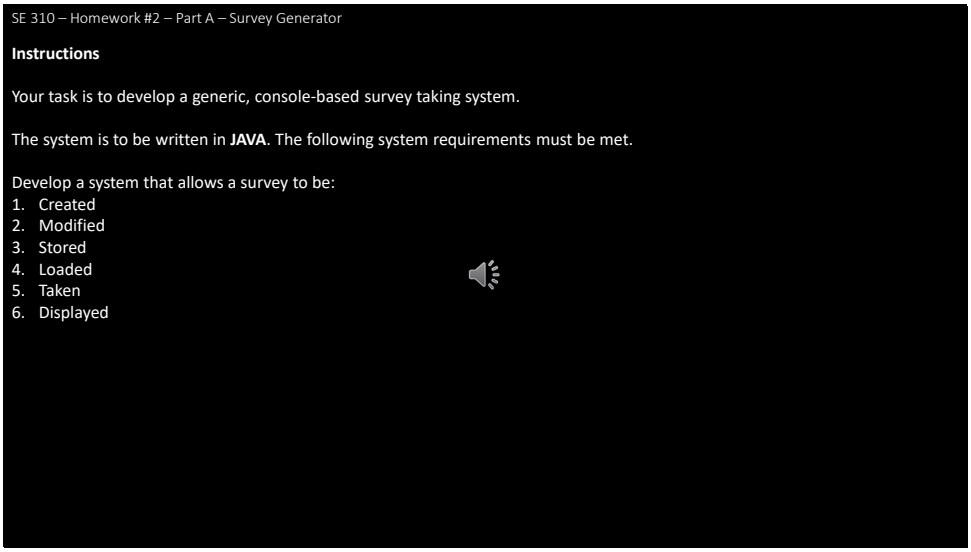
- Master UML
- Develop solid design skills and to
- Develop JAVA fluency

This is a very demanding project and it will require a lot of effort and a substantial amount of time.

For part A of this project, spending a just an hour or two will not be sufficient and will earn you a very low grade.

Also, note, this assignment has substantially changed from previous years. Therefore, be careful to make sure follow this year's instructions.

Slide 2



Instructions

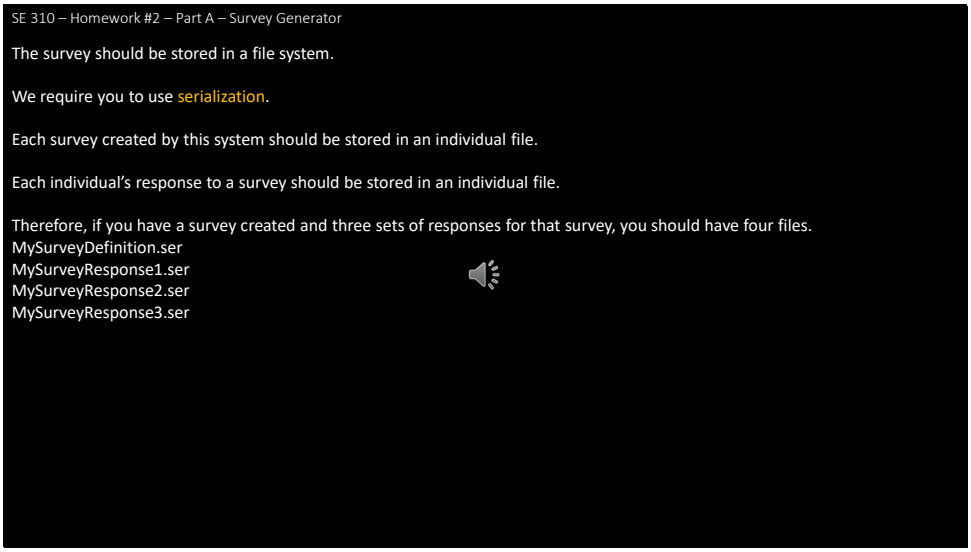
Your task is to develop a generic survey taking system.
We've all been asked to use surveys online. What we are building is a system to allow the creation and taking of those surveys.
Think of this as creating a simple system like Survey Monkey, but in a JAVA console instead of on a website.

The system is to be written in JAVA. The following system requirements must be met.

Develop a system that allows a survey to be:

- Created
- Modified
- Stored
- Loaded
- Taken
- Displayed

Slide 3



The survey should be stored in a file system.

We require you to use serialization.

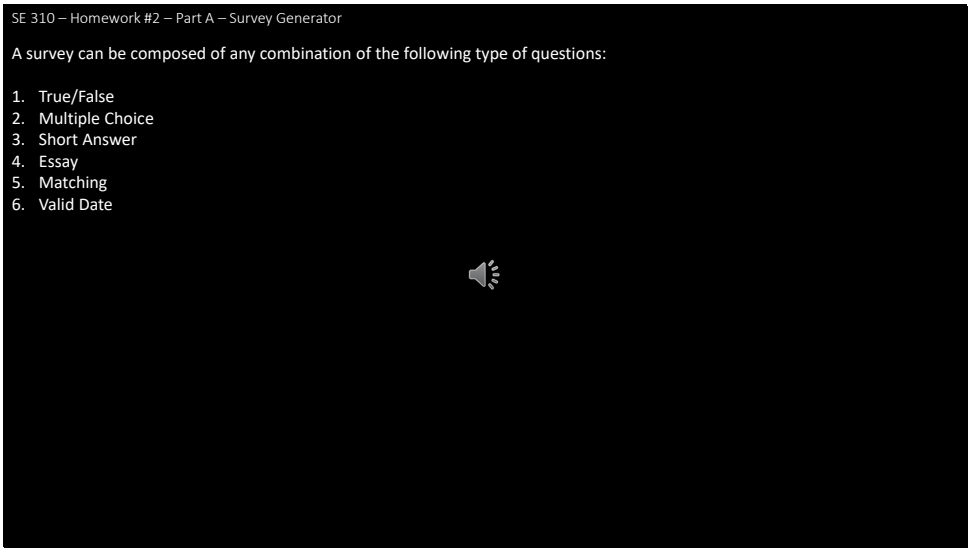
Each survey created by this system should be stored in an individual file.

Each individual's response to a survey should be stored in an individual file.

Therefore, if you have a survey created and three sets of responses for that survey, you should have four files.

For example, the survey definition could be stored in MySurveyDefinition.ser and the responses could be stored in
MySurveyDefinition.ser
MySurveyResponse1.ser
MySurveyResponse2.ser and
MySurveyResponse3.ser

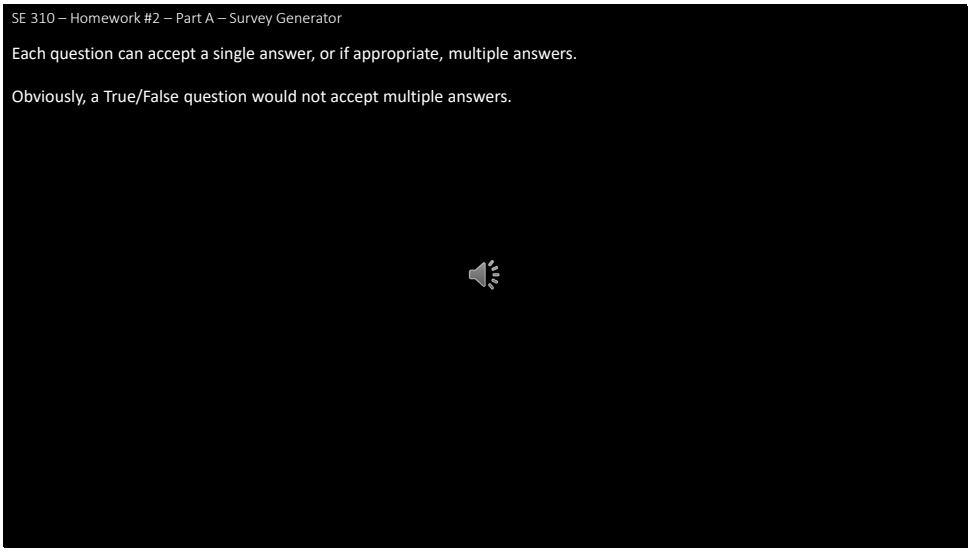
Slide 4



A survey can be composed of any combination of the following type of questions:

- True/False
- Multiple Choice
- Short Answer
- Essay
- Matching
- Valid Date

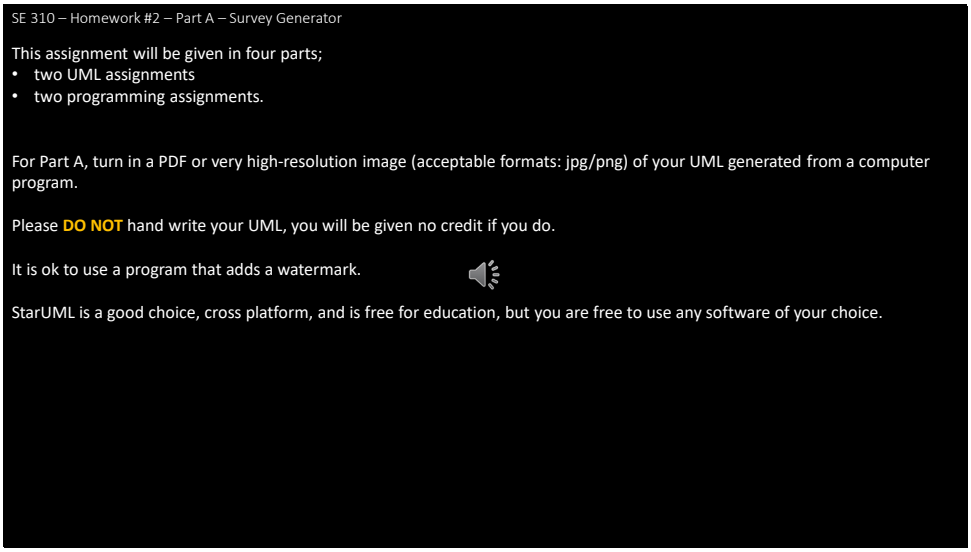
Slide 5



Each question can accept a single answer, or if appropriate, multiple answers.

Obviously, a True/False question would not accept multiple answers.

Slide 6



This assignment will be given in four parts;
- two UML assignments and
- two programming assignments.

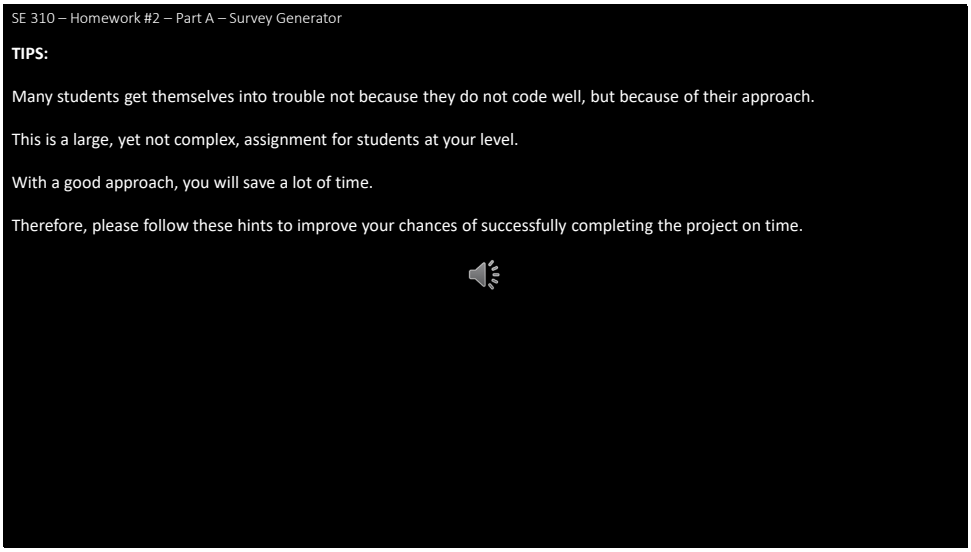
For Part A, turn in a PDF or very high-resolution image (acceptable formats: jpg/png) of your UML generated from a computer program.

Please DO NOT hand write your UML, you will be given no credit if you do.

It is ok to use a program that adds a watermark.

StarUML is a good choice, it's cross platform, and is free for education, but you are free to use any software you wish.

Slide 7



Please pay attention to the following tips:

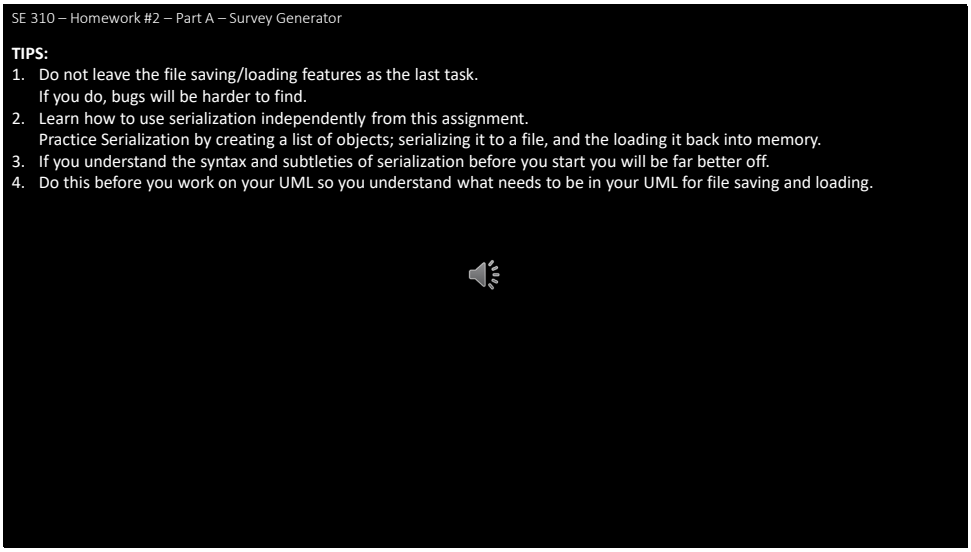
Many students get themselves into trouble not because they do not code well, but because of their approach.

This is a large, yet not complex, assignment for students at your level.

With a good approach, you will save a lot of time.

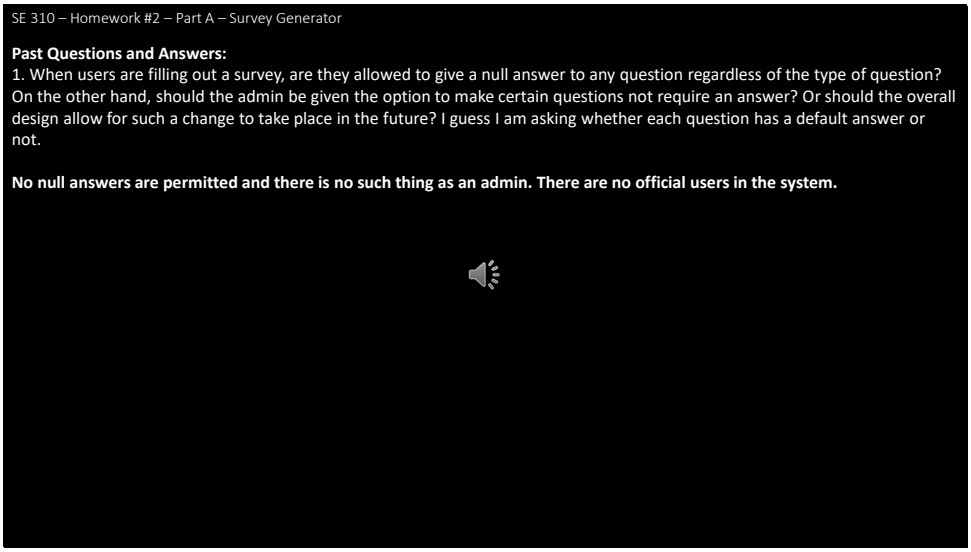
Therefore, please follow these hints to improve your chances of successfully completing the project on time.

Slide 8



Here are some general tips on File Saving and Loading.
First, do not leave the file saving/loading features as the last task.
If you do so, chances are that when a bug arises you will have a hard time figuring out if this was cause in middle of your main code.
Learn how to use serialization independently from this assignment.
Practice Serialization by creating a list of objects; serializing it to a file, and the loading it back into memory.
If you understand the syntax and subtleties of serialization before you start you will be far better off.
Do this before you work on your UML so you understand what needs to be in your UML for file saving and loading.

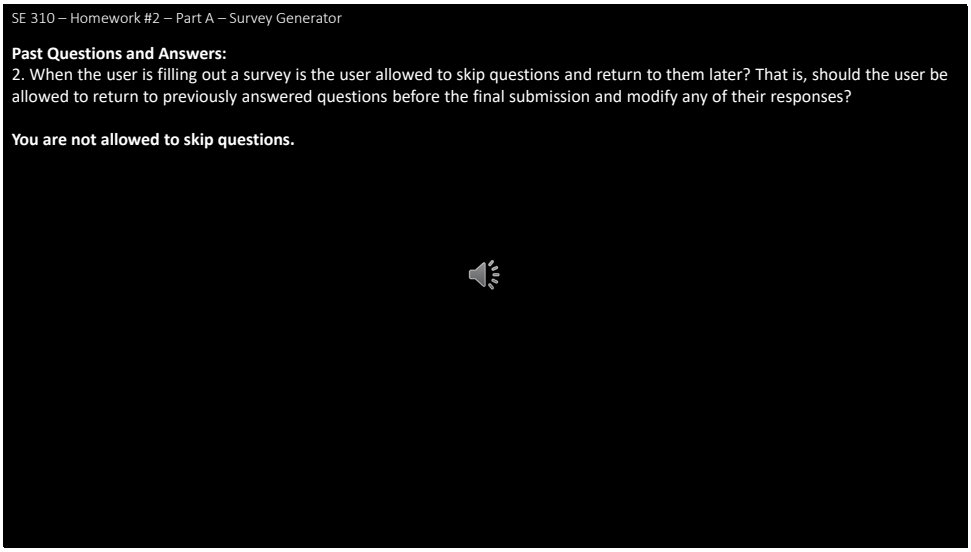
Slide 9



Past Questions and Answers:
1. When users are filling out a survey, are they allowed to give a null answer to any question regardless of the type of question? On the other hand, should the admin be given the option to make certain questions not require an answer? Or should the overall design allow for such a change to take place in the future? I guess I am asking whether each question has a default answer or not.

No null answers are permitted and there is no such thing as an admin. There are no official users in the system.

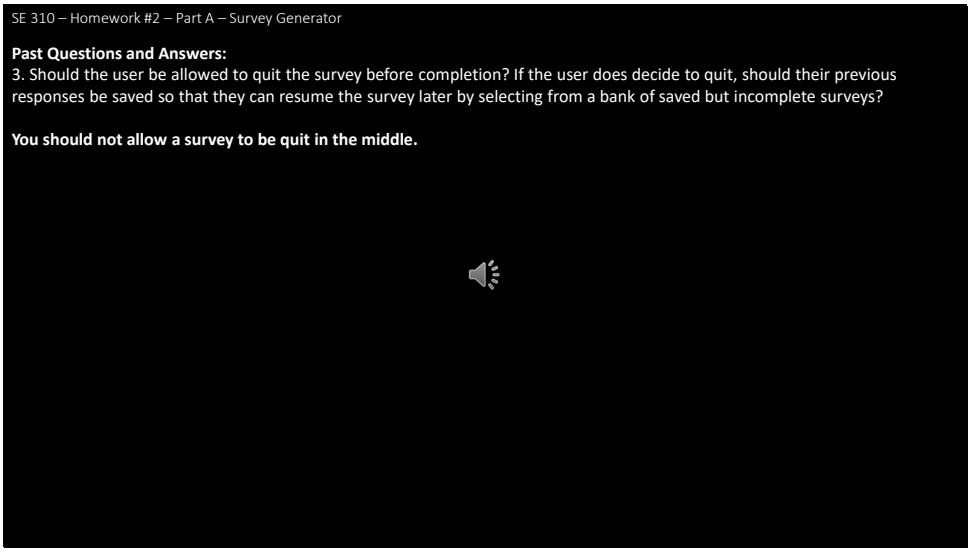
Slide 10



2. When the user is filling out a survey is the user allowed to skip questions and return to them later? That is, should the user be allowed to return to previously answered questions before the final submission and modify any of their responses?

You are not allowed to skip questions.

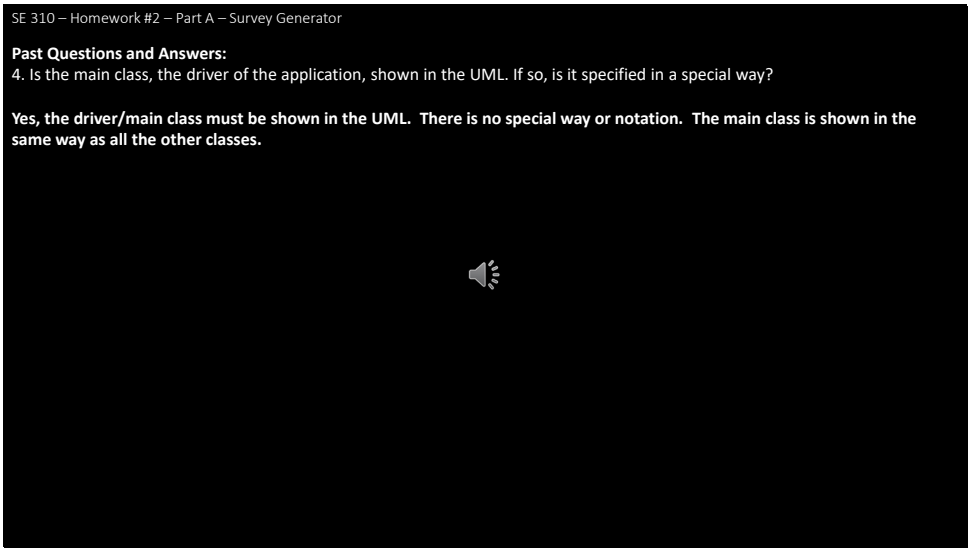
Slide 11



3. Should the user be allowed to quit the survey before completion? If the user does decide to quit, should their previous responses be saved so that they can resume the survey later by selecting from a bank of saved but incomplete surveys?

You should not allow a survey to be quit in the middle.

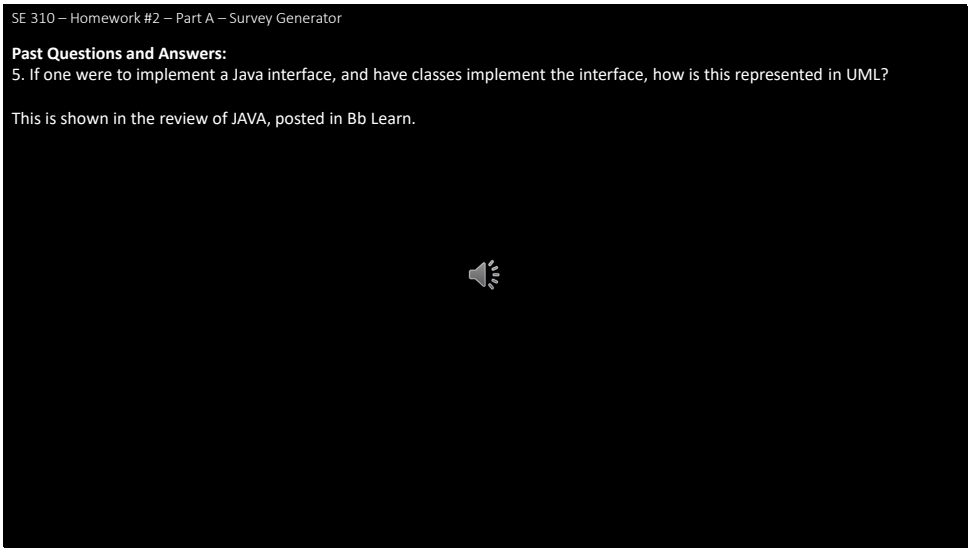
Slide 12



4. Is the main class, the driver of the application, shown in the UML. If so, is it specified in a special way?

Yes, the driver/main class must be shown in the UML. There is no special way or notation. The main class is shown in the same way as all the other classes.

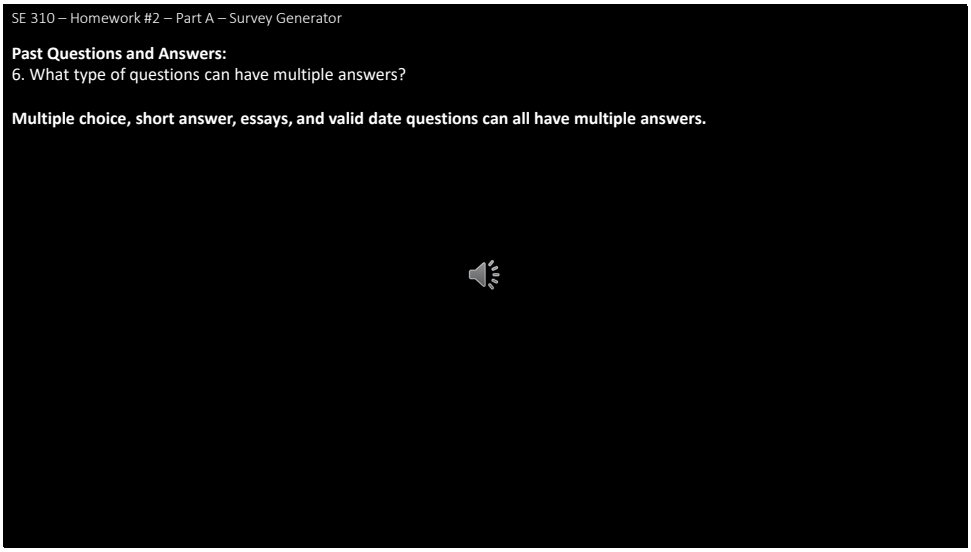
Slide 13



5. If one were to implement a Java interface, and have classes implement the interface, how is this represented in UML?

This is shown in the review of JAVA, posted in Bb Learn.

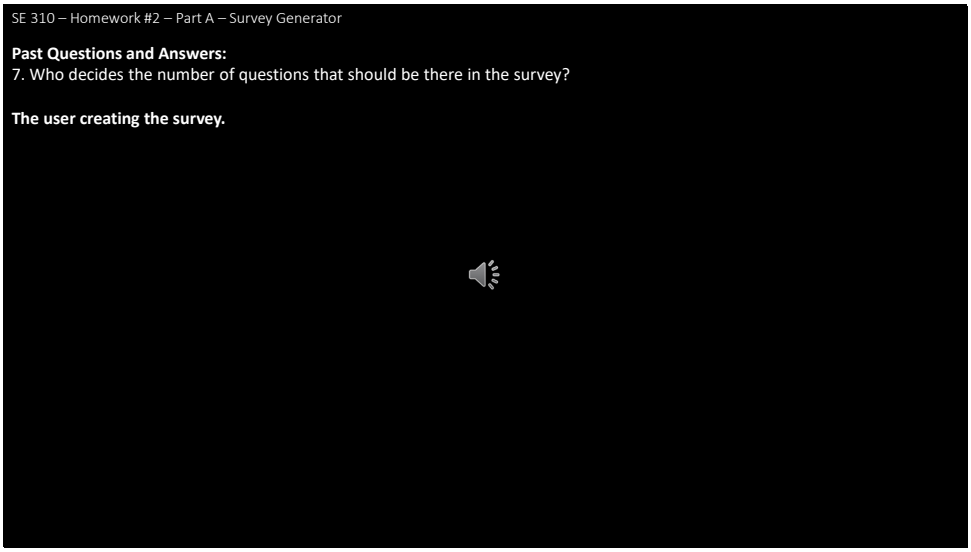
Slide 14



6. What type of questions can have multiple answers?

Multiple choice, short answer, essays, and valid date questions can all have multiple answers.

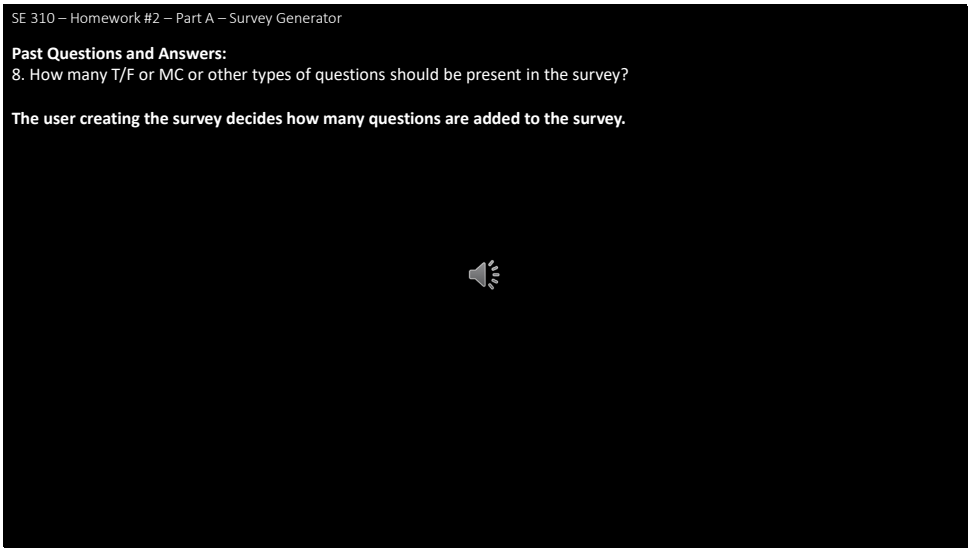
Slide 15



7. Who decides the number of questions that should be there in the survey?

The user creating the survey.

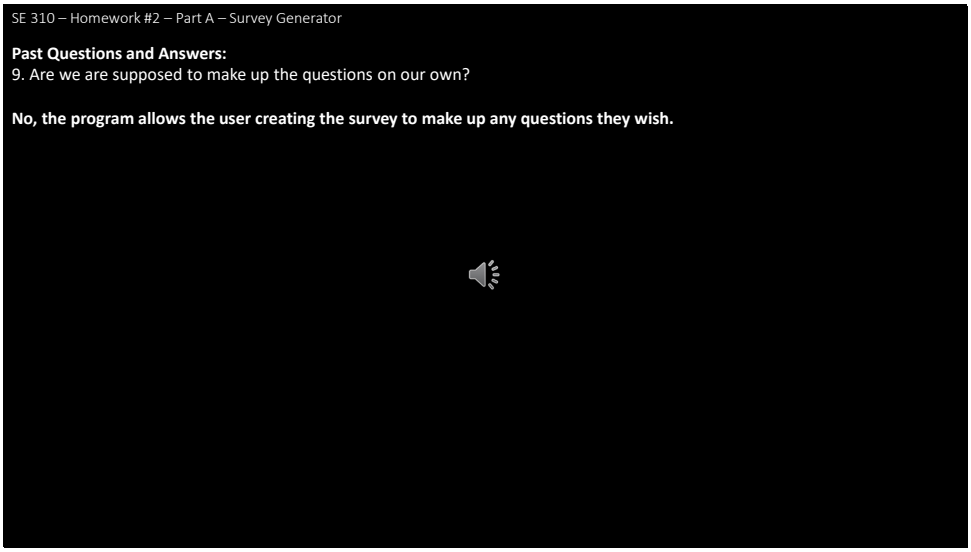
Slide 16



8. How many T/F or MC or other types of questions should be present in the survey?

The user creating the survey decides how many questions are added to the survey.

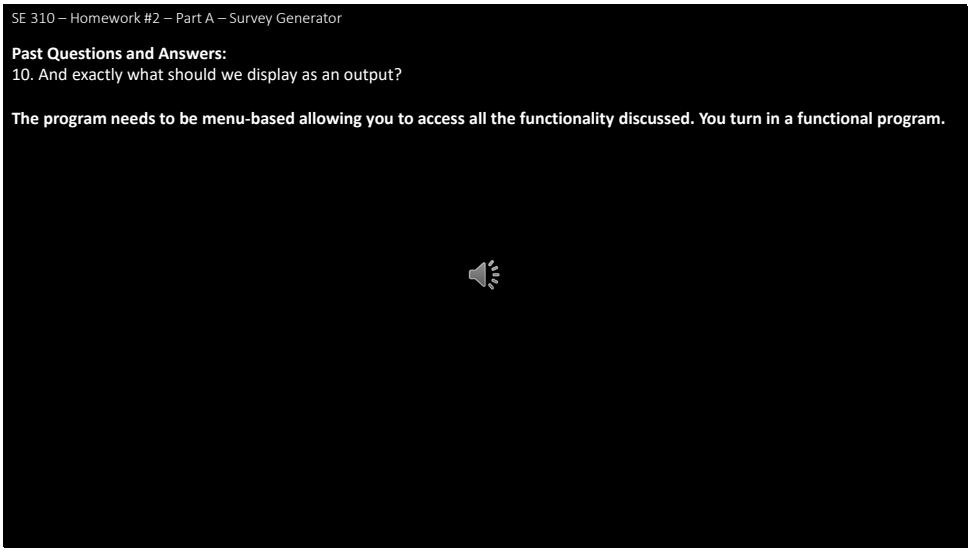
Slide 17



9. Are we are supposed to make up the questions on our own?

No, the program allows the user creating the survey to make up any questions they wish.

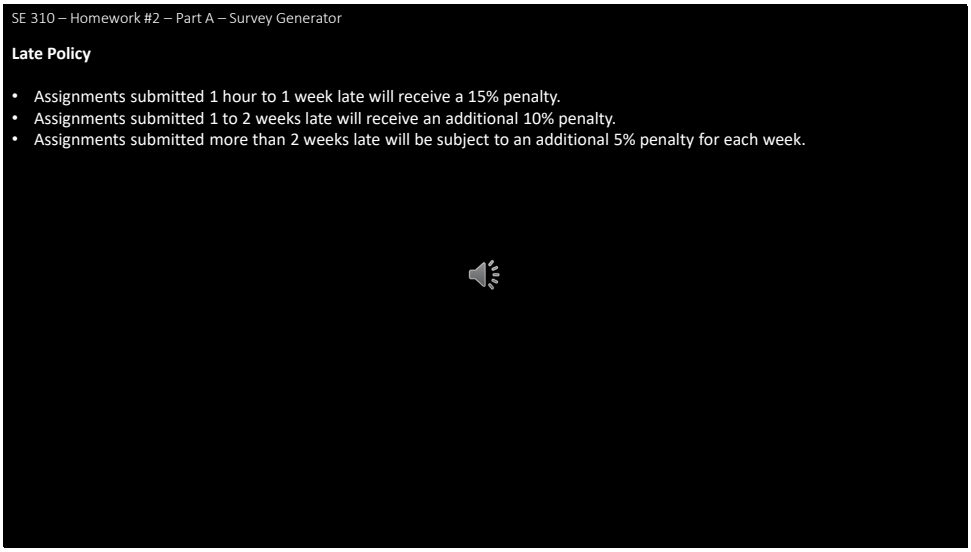
Slide 18



10. And exactly what should we display as an output?

The program needs to be menu-based allowing you to access all the functionality discussed. You do not turn in output. You turn in a functional program.

Slide 19



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.