Programming Fundamentals II Sec. 600

Assignment #5

Due date: 7/18/22 at 11:59 pm

1. (40 points) Briefly define (one to two sentences) each of the following ten terms.

1. Primary stage

*Is a Stage object and is passed to start method*

1. Node

*Represent various visual elements in the application in JavaFX (EX UI controls, layout panes and shapes)*

1. Property binding

Binds target object to source object. Is an instance of Property interface. Ex. DoubleProperty, IntegerProperty ect.

1. Event-driven programming

Where the user, based on actions they take cause events to fire and cause another method to execute its code.

1. Inner class (nested)

*Inner classes are classes that are defined within other classes*

1. Anonymous inner class

*Reduces the amount of code needed to implement an event handler. Implementing handle method and registering handler done at once.*

1. Lambda expression

Further reduce the amount of code needed

1. RadioButton

Allow users to make various dependent selections. Ex multiple choice question, once selected all other choices are deselected

1. CheckBox

Allow users to make various independent selections. Ex. Check Box on a questions that has mutliple choices and multiple answers. Checking one choice does not uncheck or check another choice because multiple choice can be checked.

1. TextArea

*Provide larger areas for providing user input or displaying output*

2. (15 points) What is the usefulness of property binding in a JavaFX application?

*It is an easy way to customize an target and source properties. For example customizing an images properties along with the panes properties that it is appearing in.*

3. (15 points) Describe the process of firing and handling an event.

*The source object is the object that receives action from user. Once action is received that fires to the event handler for that specific action to respond accordingly.*

4. (15 points) Explain the advantages and disadvantages of using private inner classes for event handling.

*The advantage of using private inner classes protects any code that might unintentionally be affected by the inner class. This helps to ensure event handling is done more precisely. The disadvantage of the private inner class is the more code that it requires.*

5. (15 points) Describe a practical application for each of the following UI controls: RadioButton, CheckBox, and TextArea. Practical applications should be specific use-cases in the real world.

*RadioButton UI control can be useful for a survey with questions that are true or false questions. Selecting either answer deselects the other.*

*CheckBox UI control can be used on a website signup page listing multiple interests for the user to select. Checking one option will not uncheck another. The user is able to check as little or as many interests as allowed.*

*TextArea UI control can be used in section of an application asking for the users own words for describing their experience with the program or website.*