Quiz 3 – Chapters 14-19 and Notes

# Multiple Choice:

1. B
2. D
3. A
4. C
5. C
6. C
7. D
8. D
9. B
10. C
11. B
12. B
13. C
14. B
15. C

# Short Answer:

1. Marked below:
2. void print<T>(T x) { System.out.println(x); }

Invalid.

1. static <T> void print(T x) { System.out.println(x); }

Valid.

1. <?> void print(Object x){ System.out.println(x); }

Invalid.

1. <T extends Object> void print(T x) { System.out.println(x); }

Valid.

1. <T> T getT(T t) { return null; }\

Valid.

# Problem 26.

//ColorChangingButtons.java

**import** javafx.application.Application;

**import** javafx.event.ActionEvent;

**import** javafx.event.Event;

**import** javafx.event.EventHandler;

**import** javafx.geometry.Insets;

**import** javafx.geometry.Pos;

**import** javafx.scene.Scene;

**import** javafx.scene.control.Button;

**import** javafx.scene.layout.HBox;

**import** javafx.stage.Stage;

**public** **class** ColorChangingButtons **extends** Application

{

**public** **void** start(Stage primaryStage)

{

// Create the Buttons

Button blueButton = **new** Button("Blue");

Button yellowButton = **new** Button("Yellow"); //1

// Create the Horizontal box and add the buttons

HBox hBox = **new** HBox(10);

hBox.setPadding(**new** Insets(10));

hBox.setAlignment(Pos.***CENTER***);

hBox.getChildren().addAll(blueButton, yellowButton);

// Create the Color changing event handler

**public** **void** handle(ActionEvent e) //2

{

Button target = (Button)e.getTarget();

// Set up a CSS style for the color determined by the target button

StringBuilder cssColor = **new** StringBuilder("-fx-background-color: ");

**if** (target == yellowButton)

{

cssColor.append("yellow"); //3

}

**else**

{

cssColor.append("blue");

}

// set the background color for the horizonatal box using CSS

hBox.setStyle(cssColor.toString());

};

// Set the event handler on the two buttons

yellowButton.setOnAction(handler);

blueButton.setOnAction(handler); //4

// Set up scene and show the stage

Scene scene = **new** Scene(hBox, 300, 250);

primaryStage.setTitle("Color Changing Buttons");

primaryStage.setScene(scene);

primaryStage.show();

}

**public** **static** **void** main(String[] args)

{

*launch*(args); //5

}

}