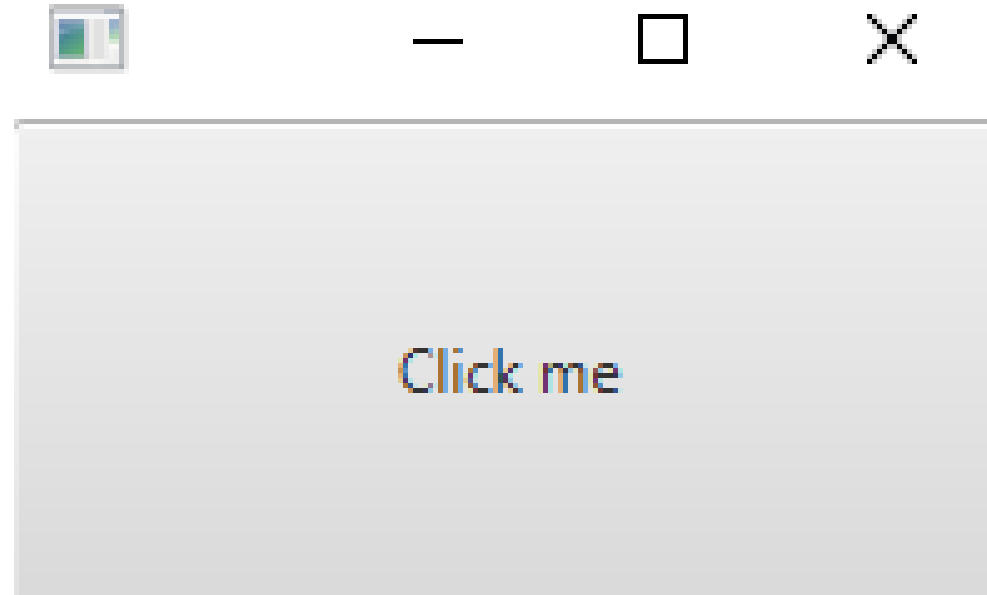


JavaFX Events

Fariz Darari



Button Event Handler



Button Event Handler #1: Standard Class

```
// ...  
  
    @Override  
    public void start(Stage mainStage) throws Exception {  
        Button but = new Button("Click me");  
        MyHandler handler = new MyHandler();  
        but.setOnAction(handler);  
        Scene sc = new Scene(but, 200, 100);  
        mainStage.setScene(sc);  
        mainStage.show();  
    }  
  
// ...
```

Button Event Handler #1: Standard Class

```
// ...  
  
class MyHandler implements EventHandler<ActionEvent> {  
  
    @Override  
    public void handle(ActionEvent e) {  
        System.out.println("Clicked");  
    }  
  
}
```

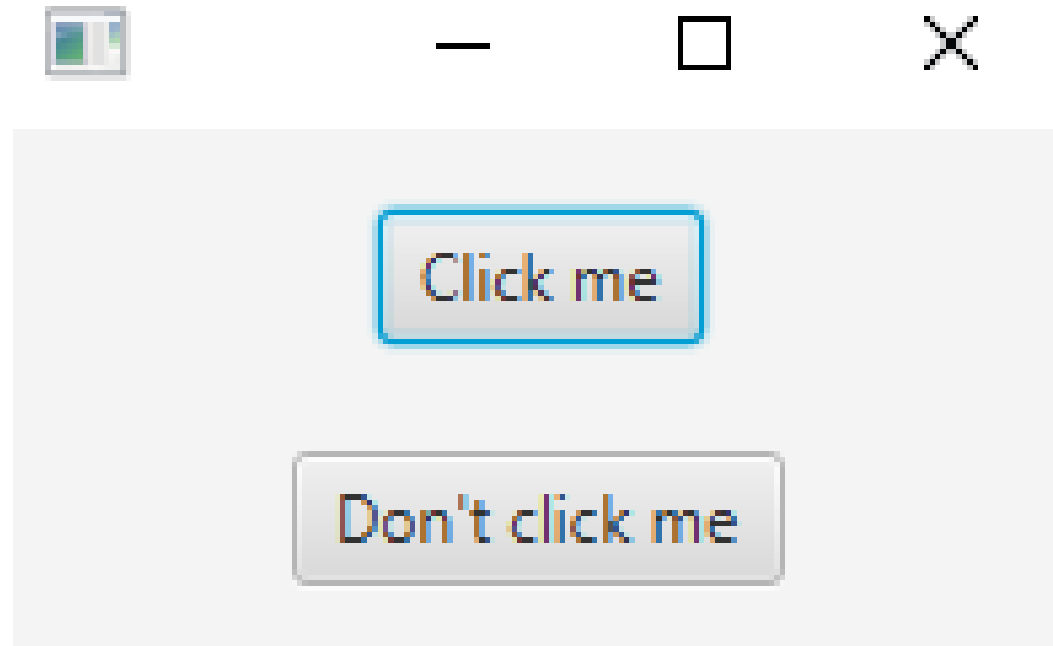
Button Event Handler #2: Anonymous Class

```
// ...
    @Override
    public void start(Stage mainStage) throws Exception {
        Button but = new Button("Click me");
        but.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent e) {
                System.out.println("Clicked");
            }
        });
        Scene sc = new Scene(but, 200, 100);
        mainStage.setScene(sc);
        mainStage.show();
    }
// ...
```

Button Event Handler #3: Lambda Expression

```
// ...
    @Override
    public void start(Stage mainStage) throws Exception {
        Button but = new Button("Click me");
        but.setOnAction((e) -> {
            System.out.println("Clicked");
        });
        Scene sc = new Scene(but, 200, 100);
        mainStage.setScene(sc);
        mainStage.show();
    }
// ...
```

Quiztime: Create two buttons, and bind different event handlers



Quiztime: Create two buttons, and bind different event handlers

```
public void start(Stage mainStage) throws Exception {
    VBox vb = new VBox();
    vb.setAlignment(Pos.CENTER);
    vb.setSpacing(20);

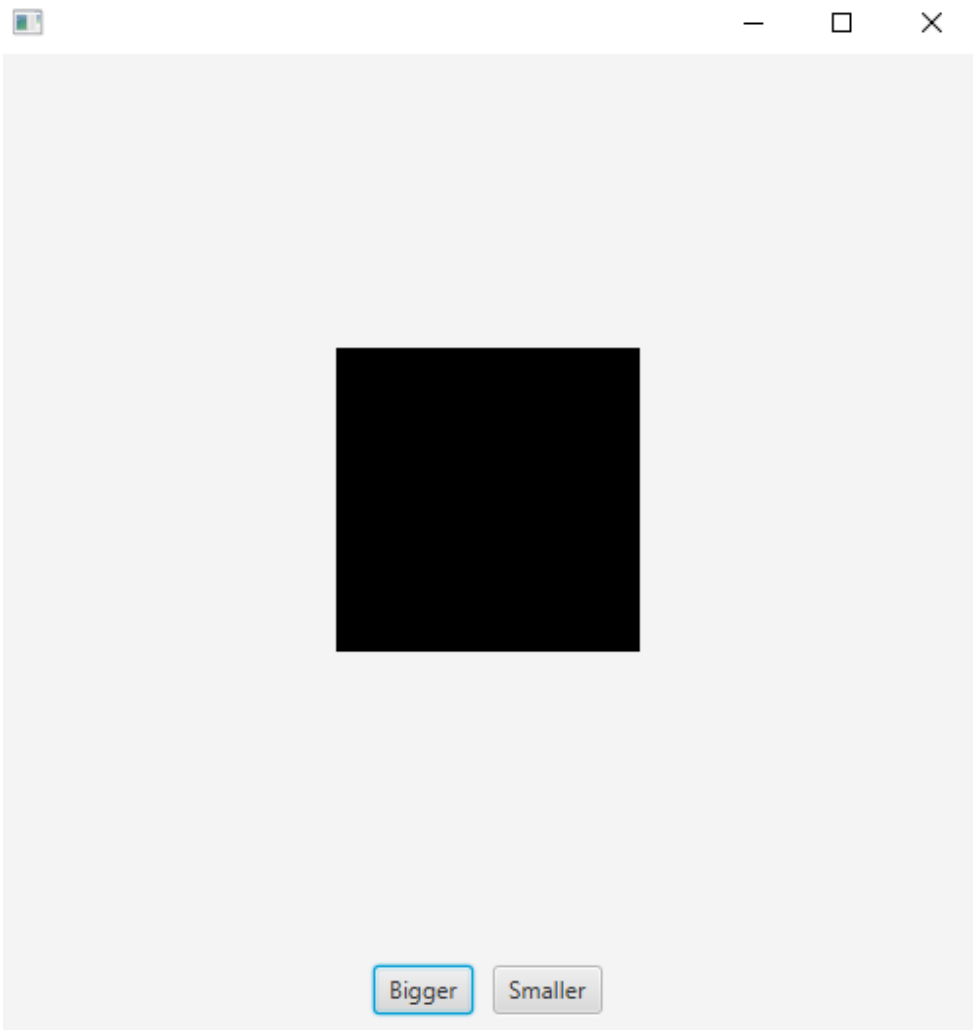
    Button clickBut = new Button("Click me");
    clickBut.setOnAction((e) -> { System.out.println("Nais boi ( ° ͜ °)"); });

    Button noClickBut = new Button("Don't click me");
    noClickBut.setOnAction((e) -> {
        System.out.println("Nooooo ͜ ~ ͜ ° ͜");
        System.exit(0);
    });

    vb.getChildren().add(clickBut);
    vb.getChildren().add(noClickBut);

    Scene sc = new Scene(vb, 200, 100);
    mainStage.setScene(sc);
    mainStage.show();
}
```


Square Size Control



Square Size Control

```
public class GUI018 extends Application {  
  
    int l = 50;  
  
    @Override  
    public void start(Stage mainStage) throws Exception {  
        BorderPane bp = new BorderPane();  
  
        Rectangle r = new Rectangle(0,0,l,l);  
        bp.setCenter(r);  
  
        HBox hb = new HBox();  
        hb.setAlignment(Pos.CENTER);  
        hb.setPadding(new Insets(10,10,10,10));  
        hb.setSpacing(10);  
  
        // ...  
    }  
}
```

```
// ...
```

```
    Button clickBut = new Button("Bigger");  
    clickBut.setOnAction((e) -> {  
        l += 5;  
        r.setWidth(l);  
        r.setHeight(l);  
    });  
    hb.getChildren().add(clickBut);
```

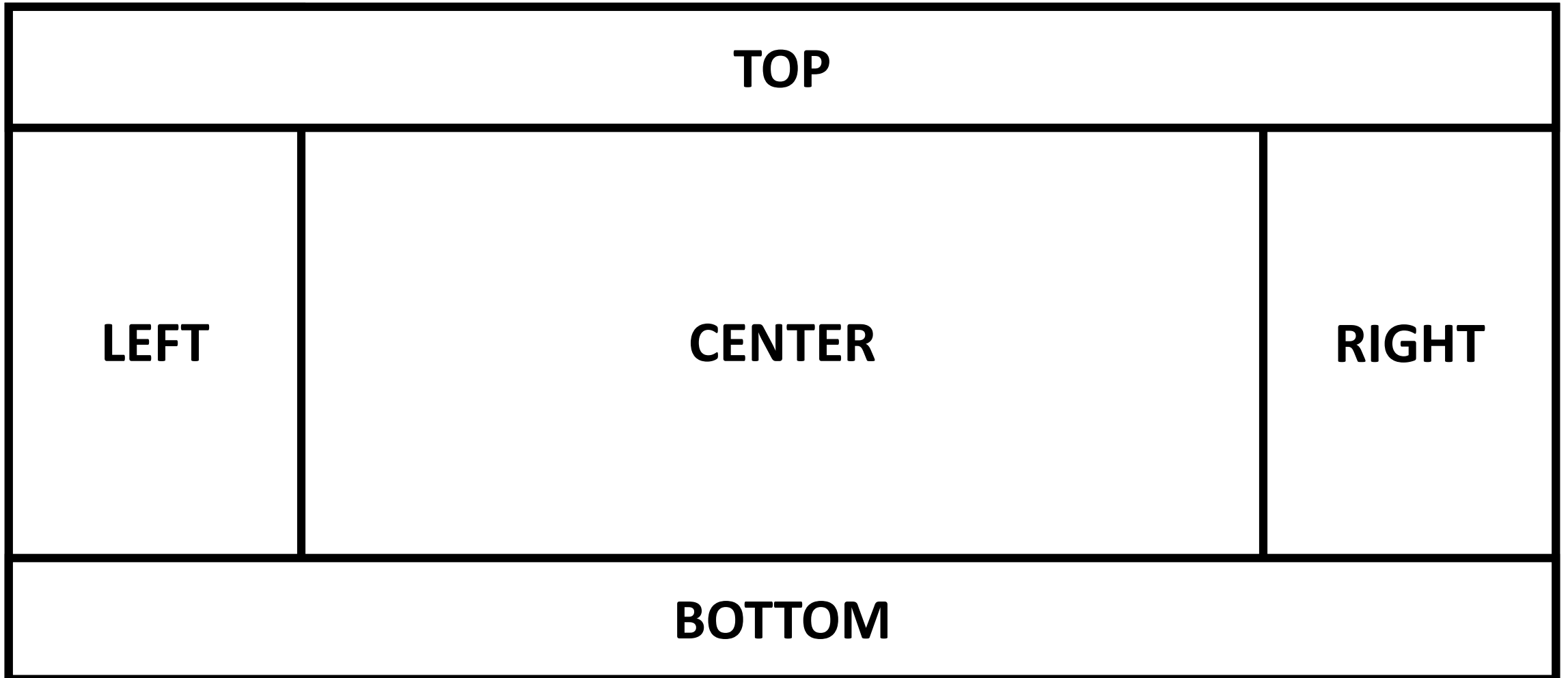
```
    Button noClickBut = new Button("Smaller");  
    noClickBut.setOnAction((e) -> {  
        l -= 5;  
        r.setWidth(l);  
        r.setHeight(l);  
    });  
    hb.getChildren().add(noClickBut);
```

```
    bp.setBottom(hb);
```

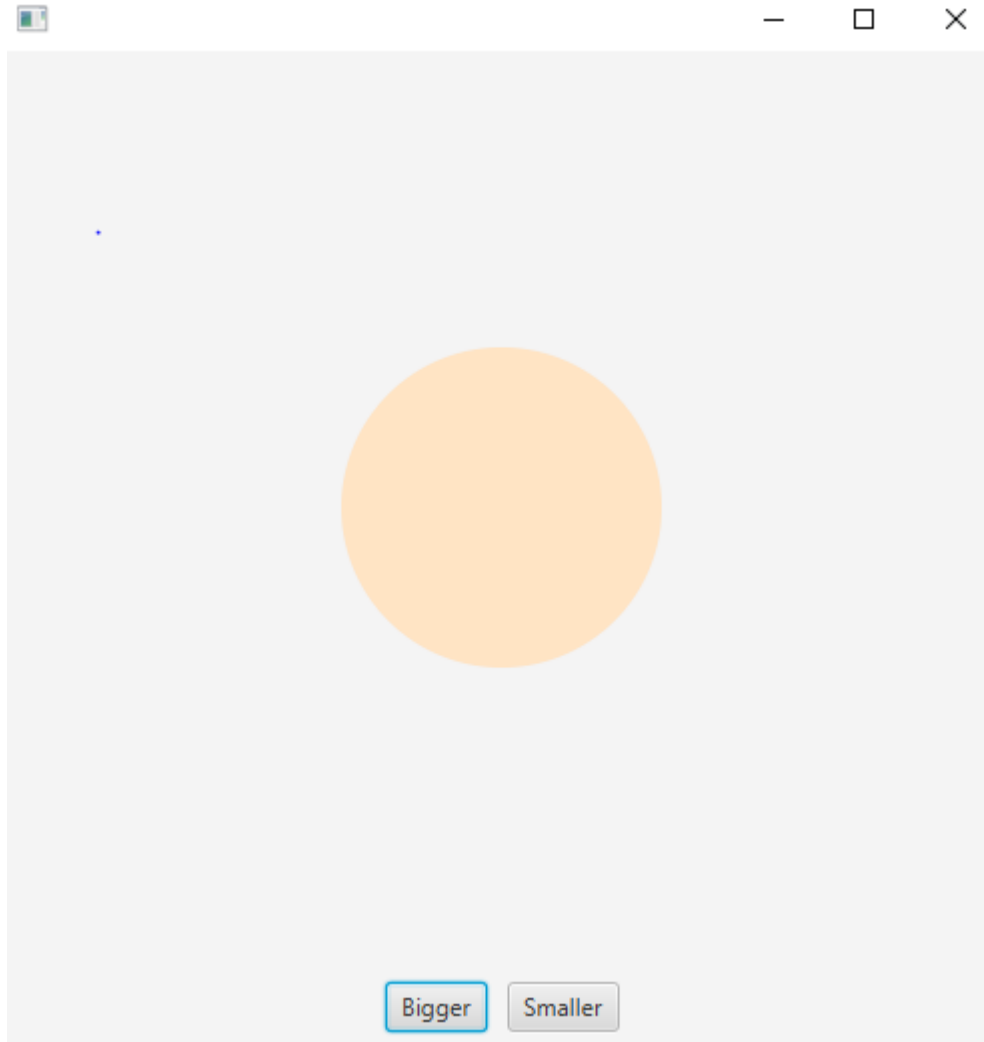
```
    Scene sc = new Scene(bp, 500, 500);  
    mainStage.setScene(sc);  
    mainStage.show();
```

```
}
```

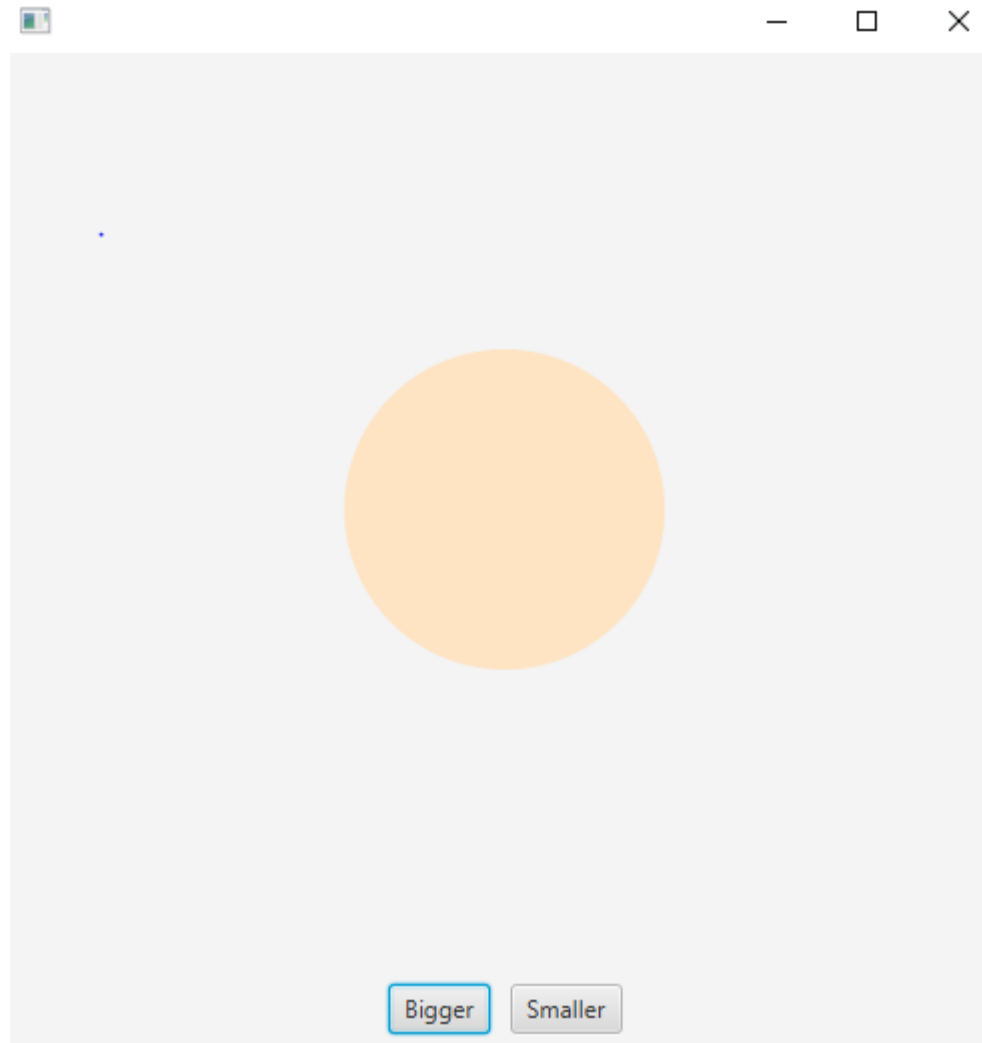
BorderPane



Quiztime: Circle Size Control



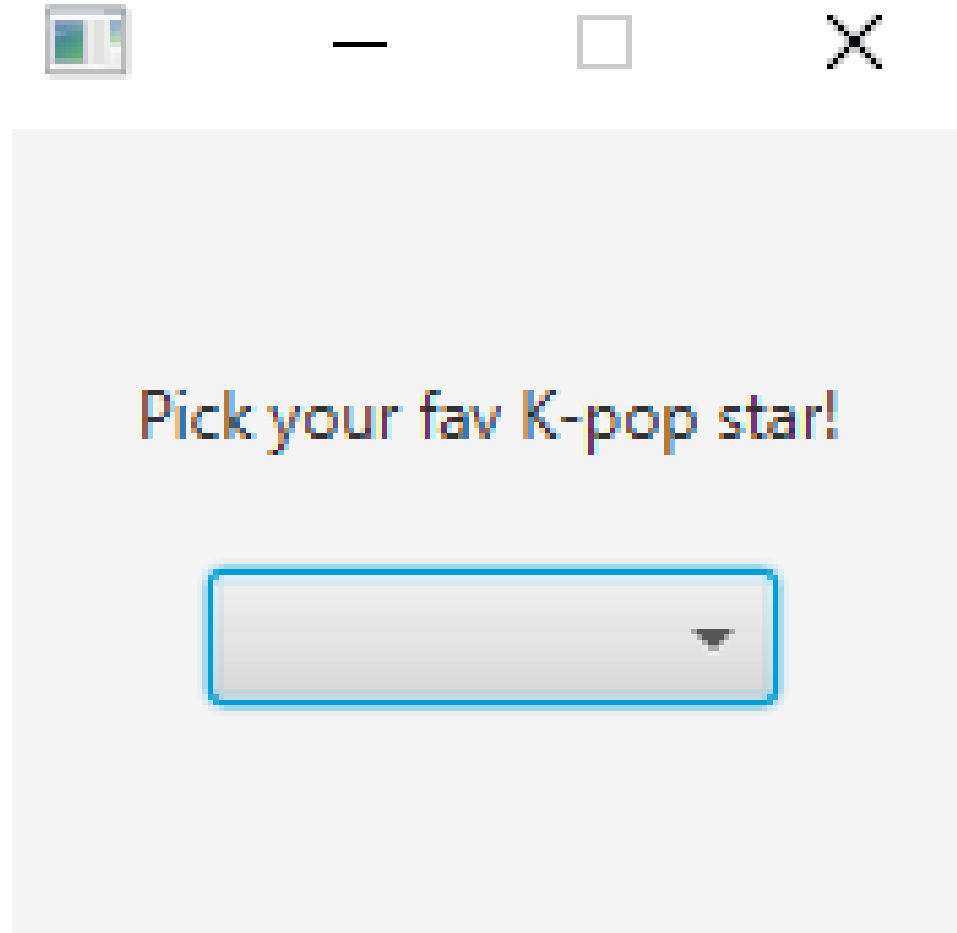
Quiztime: Circle Size Control



Solution:

<http://ocw.ui.ac.id/mod/resource/view.php?id=1122>

ChoiceBox with Event Handler



```
public class GUI019 extends Application {

    Text t = new Text();

    @Override
    public void start(Stage stg1) throws Exception {
        VBox pn = new VBox();
        pn.setAlignment(Pos.CENTER);
        pn.setSpacing(20);
        pn.getChildren().add(new Label("Pick your fav K-pop star!"));
        ChoiceBox cb = new ChoiceBox(FXCollections.observableArrayList("Joo Ko-Wee",
"Park Bo-Wow"));
        cb.setOnAction(e -> {
            t.setText("사랑해, " + ((ChoiceBox) e.getSource()).getValue() + "
Oppa!");
        });
        pn.getChildren().add(cb);
        pn.getChildren().add(t);
        Scene scn = new Scene(pn, 180, 150);
        stg1.setScene(scn); stg1.setResizable(false); stg1.show();
    }

    // ... usual
```


Wedding Guest Book

Welcome to Our Wedding! — □ ×



Guest name

Atta

Affiliation

Youtube

Register


wedding-guests.csv ×

1 Atta, Youtube

2

Wedding Guest Book

Welcome to Our Wedding! — □ ×



Guest name

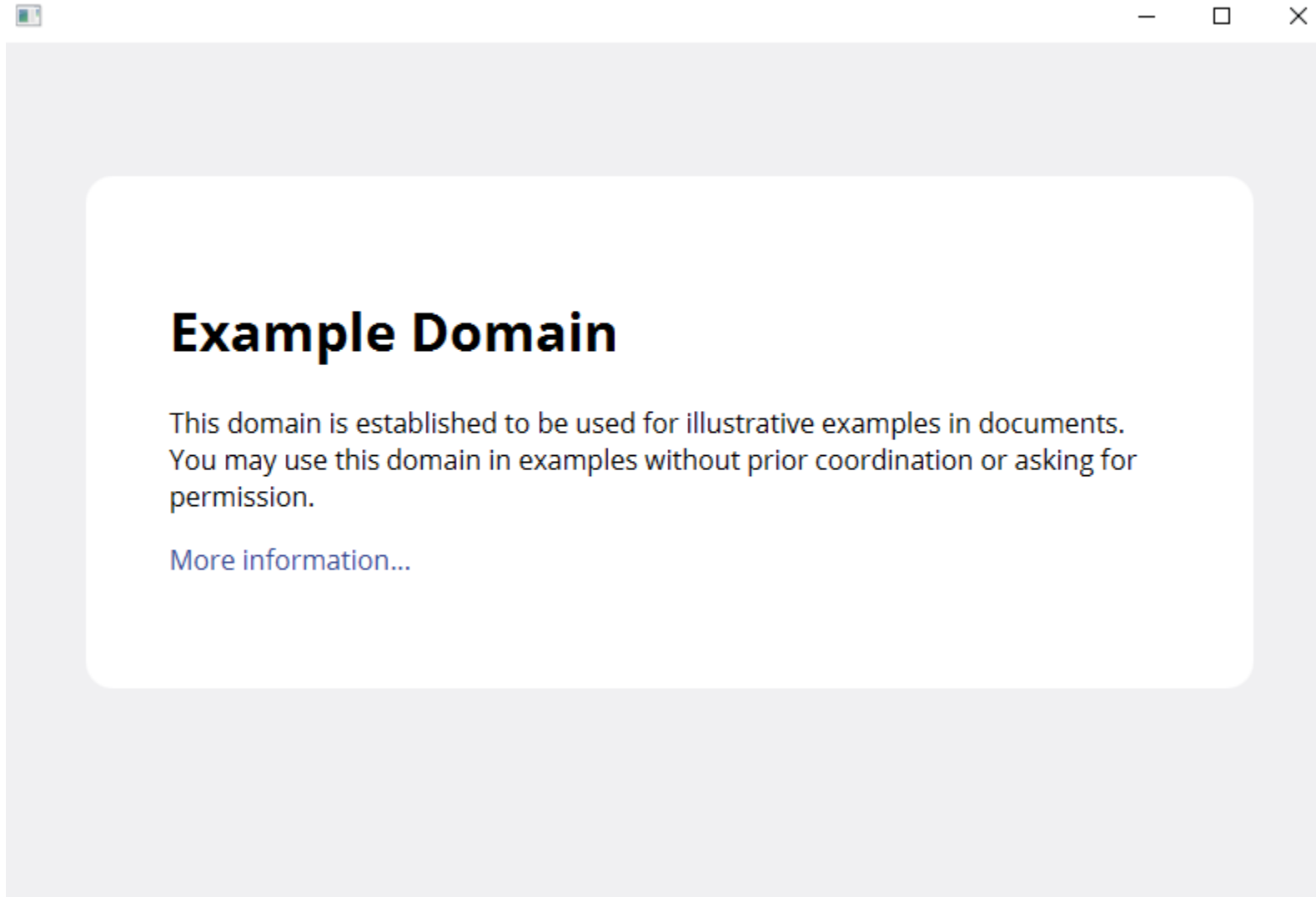
Affiliation

| wedding-guests.csv | |
|--------------------|---------------|
| 1 | Atta, Youtube |
| 2 | |

Solution:

<http://ocw.ui.ac.id/mod/resource/view.php?id=1119>

WebView



```
public void start(Stage stg) throws Exception {  
  
    WebView wv = new WebView();  
    WebEngine we = wv.getEngine();  
    we.load("http://example.com/");  
    VBox vb = new VBox(wv);  
    Scene sc = new Scene(vb);  
    stg.setScene(sc);  
    stg.show();  
  
}
```

MediaPlayer

The screenshot shows a web browser window displaying the COOL-WD website. The main heading reads "The completeness tool for Wikidata". Below this, there are two prominent buttons: "Watch tutorial" and "Search entity". A section titled "Featured entities" displays a horizontal scrollable list of entities, including Bolzano, Apollo 11, LeBron James, Lionel Messi, Lugano, Jupiter, and World. Below the featured entities, a quote reads "to complete or not to complete, that is the question". At the bottom, there are three columns of text describing the tool's features: "Entity information", "Completeness statement management", and "Completeness statement management".

The completeness tool for Wikidata

Watch tutorial Search entity

Featured entities

Bolzano Apollo 11 LeBron James Lionel Messi Lugano Jupiter World

"to complete or not to complete, that is the question"

Entity information

Completeness statement management

Completeness statement management

Entity information: Entity enriched information for each property

Completeness statement management: Help COOL-WD improve by adding new completeness statements or by removing incorrect ones

Completeness statement management: Aggregate all completeness statements, sort them, and display your results

```
public void start(Stage stg) throws Exception {  
  
    StackPane root = new StackPane();  
    File f = new File("vids/video.mp4");  
    MediaPlayer player = new MediaPlayer(new Media(f.toURI().toURL().toString()));  
    MediaView mediaView = new MediaView(player);  
    root.getChildren().add(mediaView);  
    Scene scene = new Scene(root, 800, 600);  
    stg.setScene(scene);  
    stg.show();  
    player.play();  
  
}
```



THANK
YOU

Inspired by:

Liang, Introduction to Java, 10th edition, Pearson.

Javadoc.