

1강

JAVAFX





button



Button

❖ 이해하기

- 이벤트를 처리할 객체

❖ 사용예

- `new Button` : 생성자를 통한 문자열 처리
- `setPrefWidth` : 가로 크기 지정
- `setPrefHeight` : 세로 크기 지정
- `setLayoutX` : 위치 지정
- `setLayoutY` : 위치 지정
- `Label("", new ImageView(image))` : 이미지 처리
- `setGraphic` : 이미지 처리
- `DropShadow` : 그림자 설정
- `setEffect` : 그림자 설정 메소드
- `setStyle` : 스타일 적용

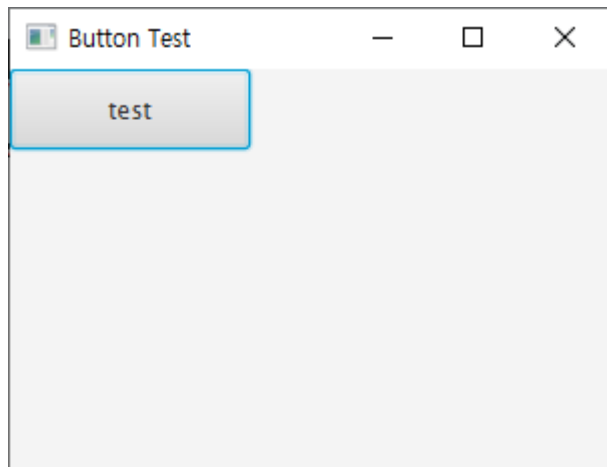


실습

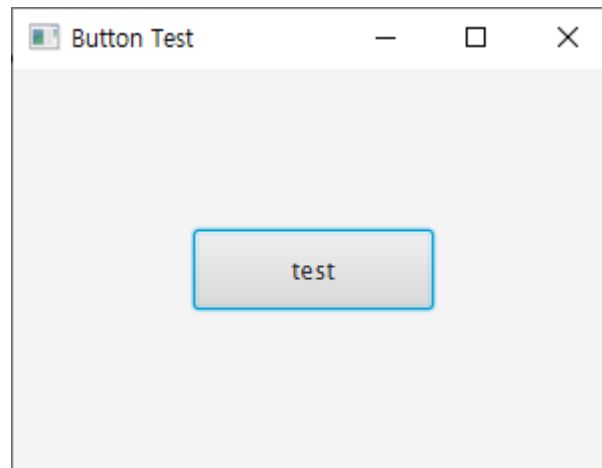


```
public void start(Stage primaryStage) {  
    Pane canvas = new Pane();  
    Button btn = new Button("test");  
  
    canvas.getChildren().add(btn);  
    canvas.setPrefSize(300, 200);  
  
    primaryStage.setTitle("Button Test");  
    primaryStage.setScene(new Scene(canvas));  
    primaryStage.show();  
}
```

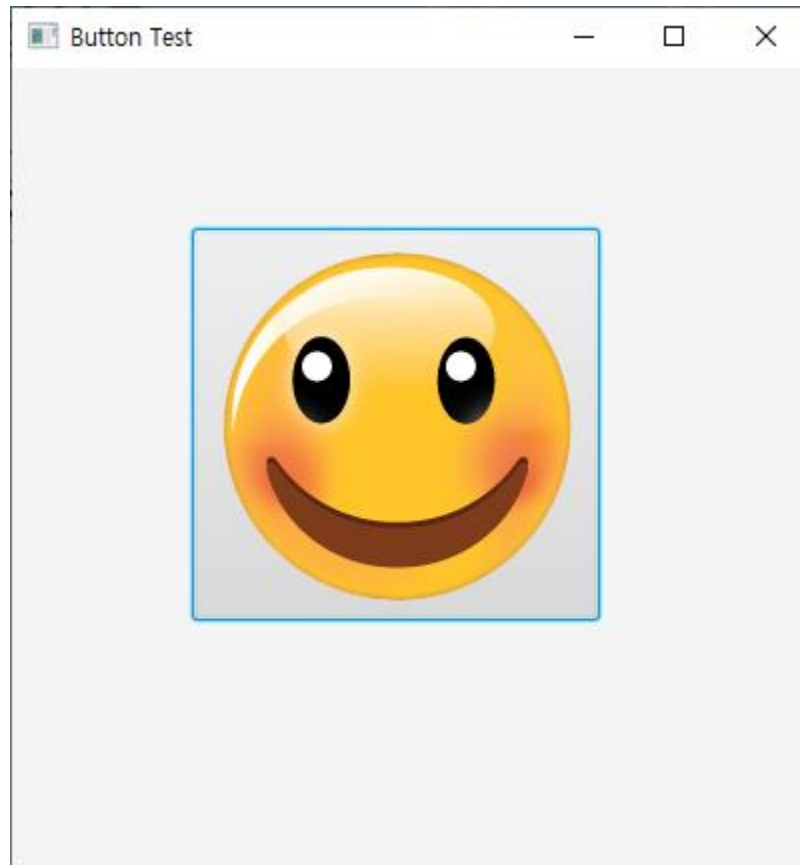
```
btn.setPreferredSize(120);  
btn.setPrefHeight(40);
```



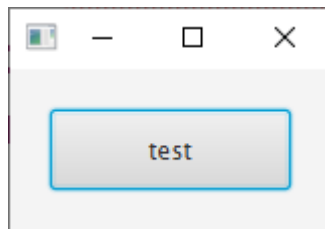
```
btn.setLayoutX(90);  
btn.setLayoutY(80);
```



```
btn.setGraphic(  
    new ImageView("/img/SmileReRe.png")  
);
```




```
btn.setOnAction(new EventHandler<ActionEvent>() {  
    @Override public void handle(ActionEvent e) {  
        Alert alert = new Alert(AlertType.INFORMATION);  
        alert.setTitle("경고");  
        alert.setHeaderText("버튼 이벤트");  
        alert.setContentText("버튼을 클릭했습니다");  
        alert.show();  
    }  
});
```

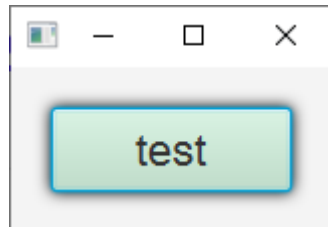


```
btn.setOnAction(new EventHandler<ActionEvent>() {  
    @Override public void handle(ActionEvent e) {  
        lbl.setText("Accepted");  
    }  
});  
//람다 표현식  
btn.setOnAction( e-> {  
    lbl.setText("Accepted");  
});
```

작성 후 람다식으로 변경

```
DropShadow shadow = new DropShadow();
btn.addEventHandler(MouseEvent.MOUSE_ENTERED,
    new EventHandler<MouseEvent>() {
        @Override public void handle(MouseEvent e) {
            btn.setEffect(shadow);
        }
    });
btn.addEventHandler(MouseEvent.MOUSE_EXITED,
    new EventHandler<MouseEvent>() {
        @Override public void handle(MouseEvent e) {
            btn.setEffect(null);
        }
    });
```

```
btn.setStyle(  
    "-fx-font: 22 arial; -fx-base: #b6e7c9;"  
);
```



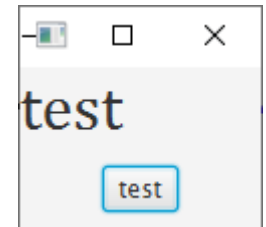
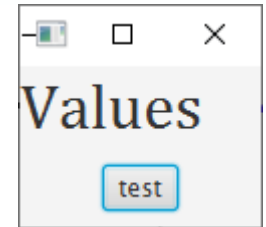
```
Label lbl = new Label ("Values");
```

```
lbl.setFont(new Font("Cambria", 32));
```

```
Button btn = new Button("test");
```

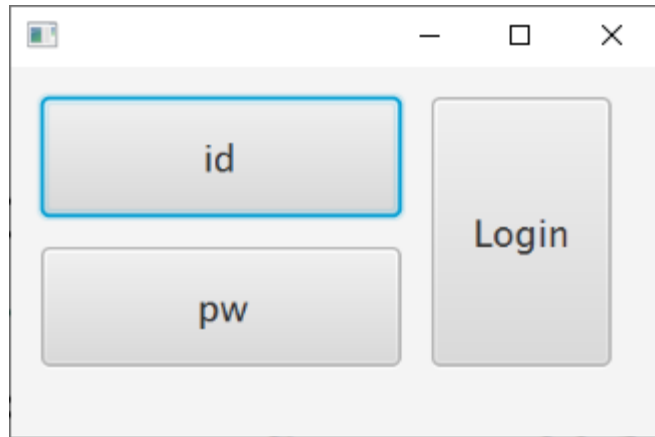
```
btn.setId("test");
```

```
btn.setOnAction(e->{  
    lbl.textProperty().bind(  
        new SimpleStringProperty(btn.getId())  
    );  
});
```



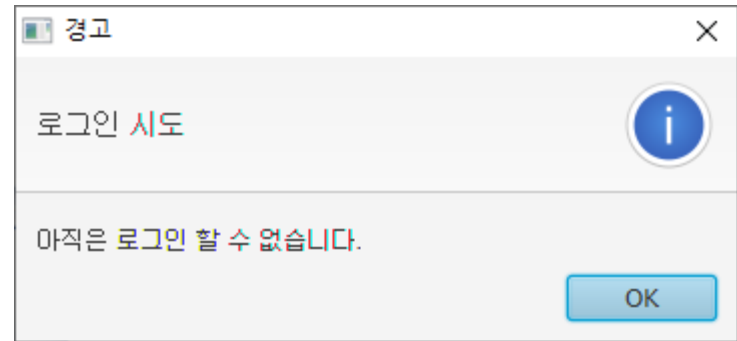
Quiz

Quiz

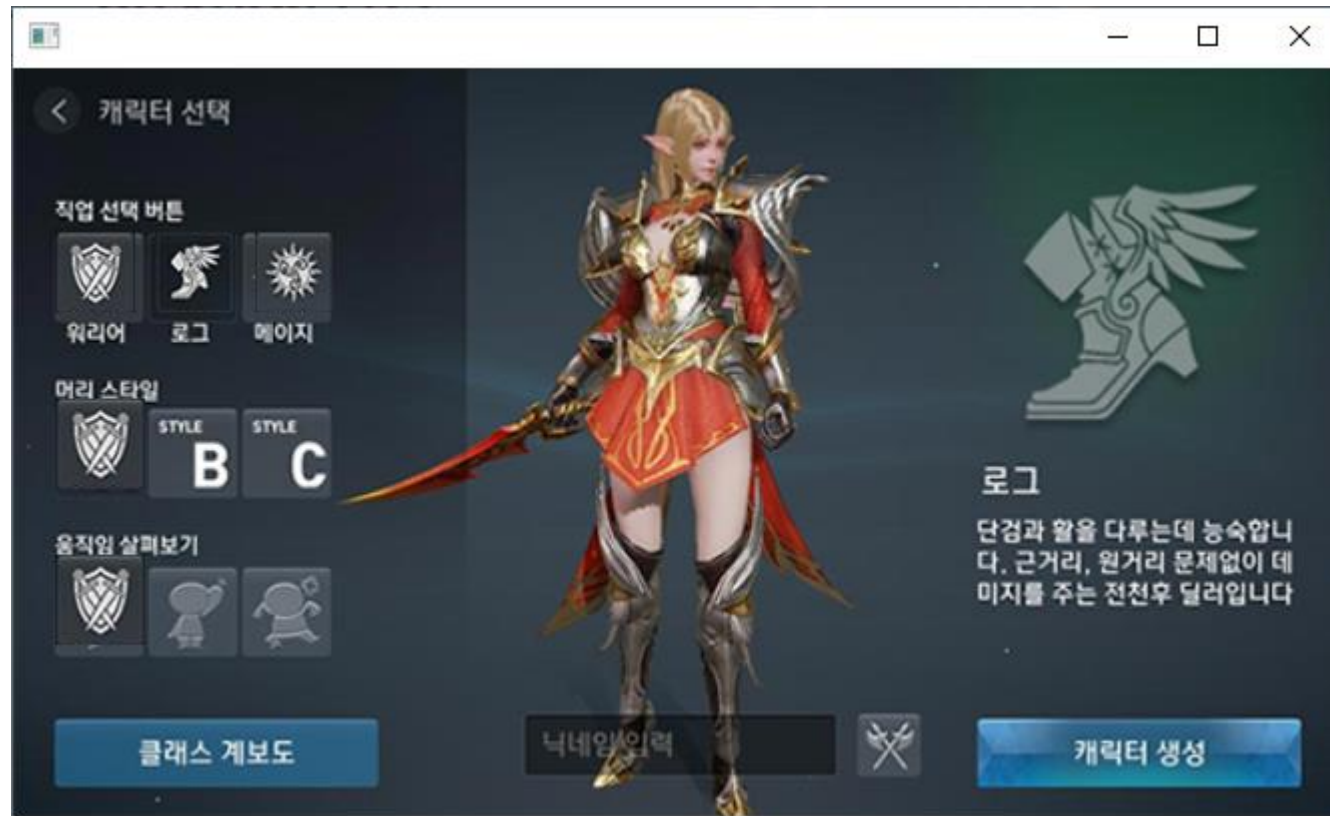


A screenshot of a login form window. It contains two input fields: the top one is labeled 'id' and is highlighted with a blue border, and the bottom one is labeled 'pw'. To the right of these fields is a button labeled 'Login'.

로그인 클릭



quiz





Checkbox

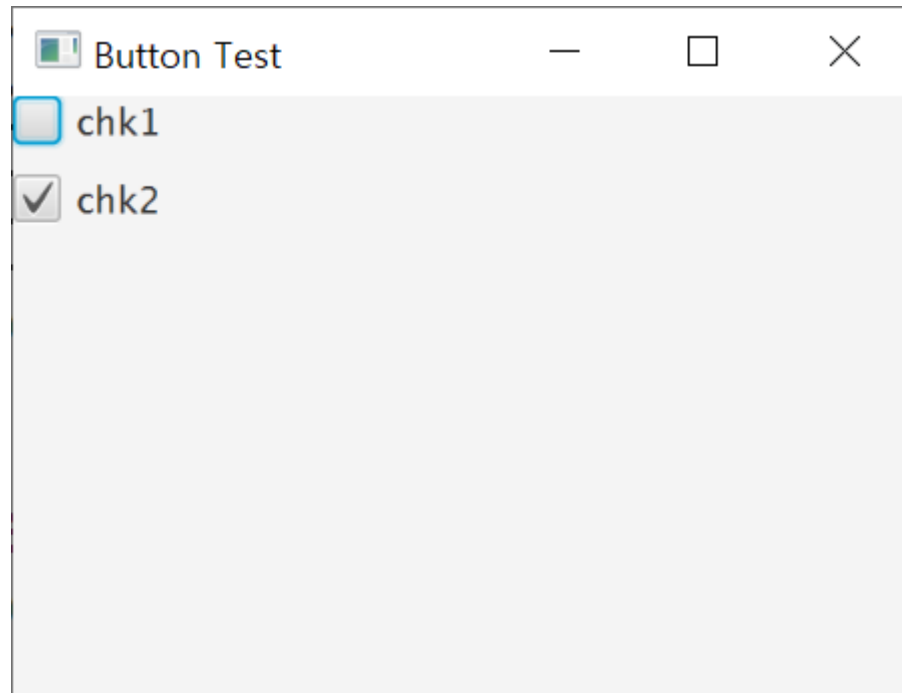


checkbox

- ❖ 이해하기
 - 여러 개를 중복 선택할 경우 사용
- ❖ 기본 코드

```
VBox vbox = new VBox(10);  
CheckBox chk1 = new CheckBox("chk1");  
CheckBox chk2 = new CheckBox("chk2");  
  
vbox.getChildren().addAll(chk1, chk2);  
vbox.setPrefSize(300, 200);  
  
primaryStage.setTitle("Button Test");  
primaryStage.setScene(new Scene(vbox));  
primaryStage.show();
```

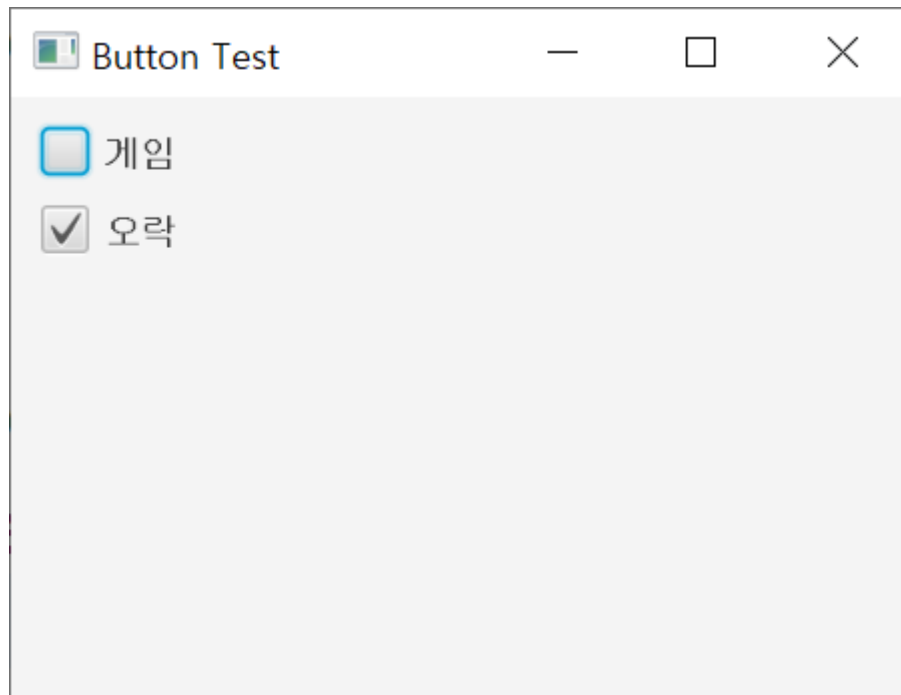
chk2.setSelected(true);



```
vbox.setPadding(new Insets(10));
```

```
chk1.setText("게임");
```

```
chk2.setText("오락");
```





RadioButton



RadioButton

- ❖ 이해하기
 - 여러 개 중 하나를 선택할 경우 사용
- ❖ 기본 코드

```
HBox hbox = new HBox(10);  
RadioButton rb1 = new RadioButton("rb1");  
RadioButton rb2 = new RadioButton("rb2");
```

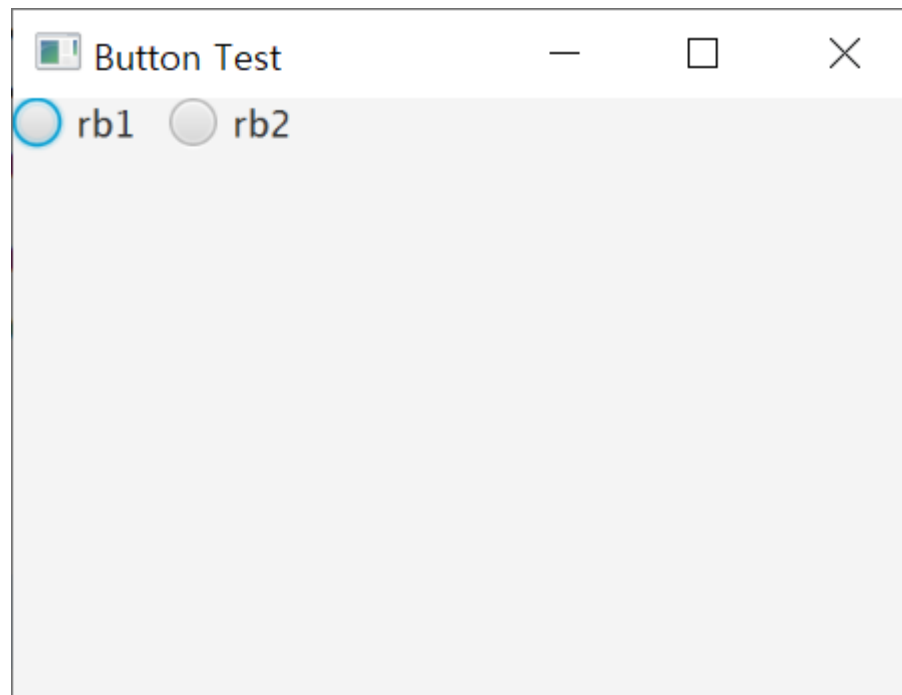
```
hbox.getChildren().addAll(rb1, rb2);  
hbox.setPrefSize(300, 200);
```

```
primaryStage.setTitle("Button Test");  
primaryStage.setScene(new Scene(hbox));  
primaryStage.show();
```

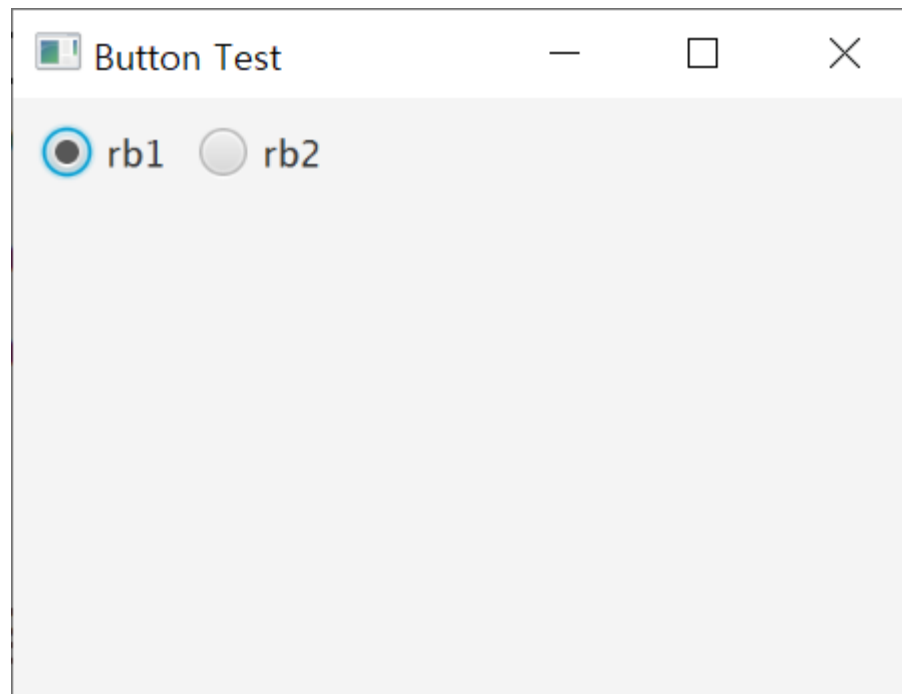
```
ToggleGroup tg = new ToggleGroup();
```

```
rb1.setToggleGroup(tg);
```

```
rb2.setToggleGroup(tg);
```



```
hbox.setPadding(new Insets(10));  
rb1.setSelected(true);
```





ToggleButton



ToggleButton

- ❖ 이해하기
 - 버튼이 눌러졌다 해제되는 것이 반복되는 버튼

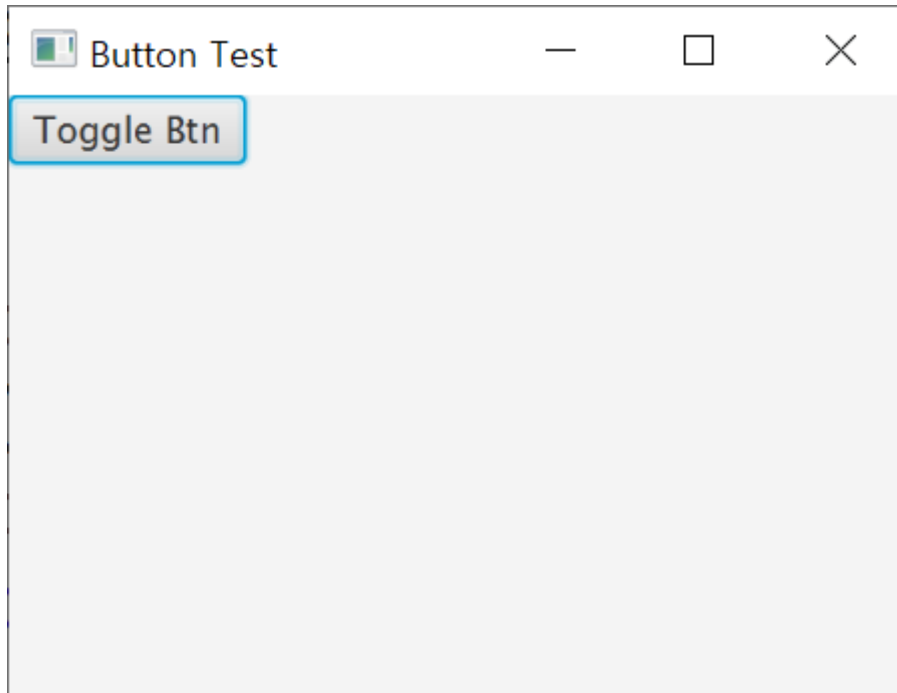
- ❖ 기본 코드

```
HBox hbox = new HBox(10);  
ToggleButton toggleBtn = new  
ToggleButton("Toggle Btn");
```

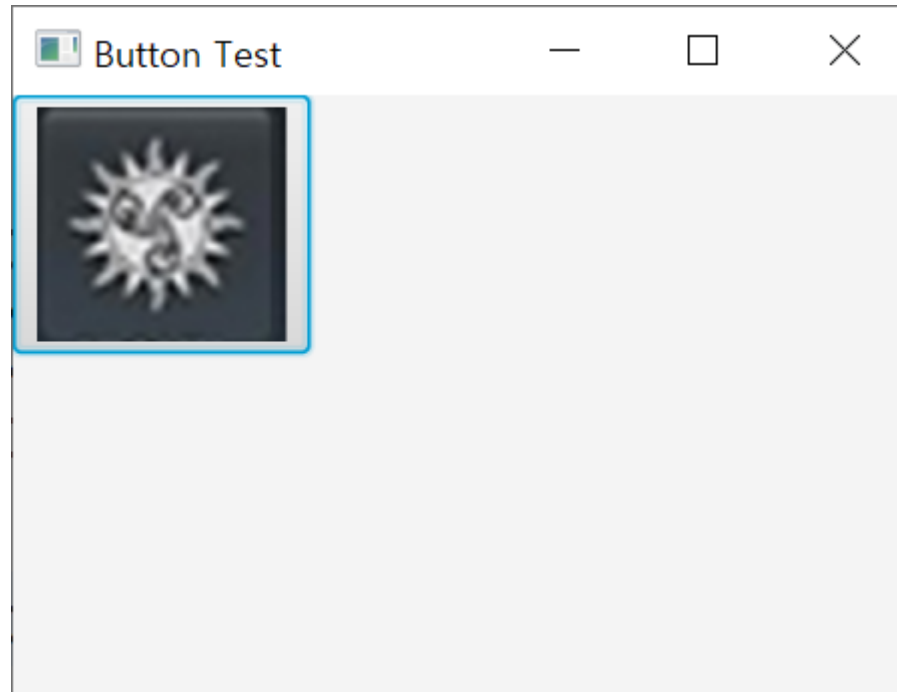
```
hbox.getChildren().add(toggleBtn);  
hbox.setPrefSize(300, 200);
```

```
primaryStage.setTitle("Button Test");  
primaryStage.setScene(new Scene(hbox));  
primaryStage.show();
```

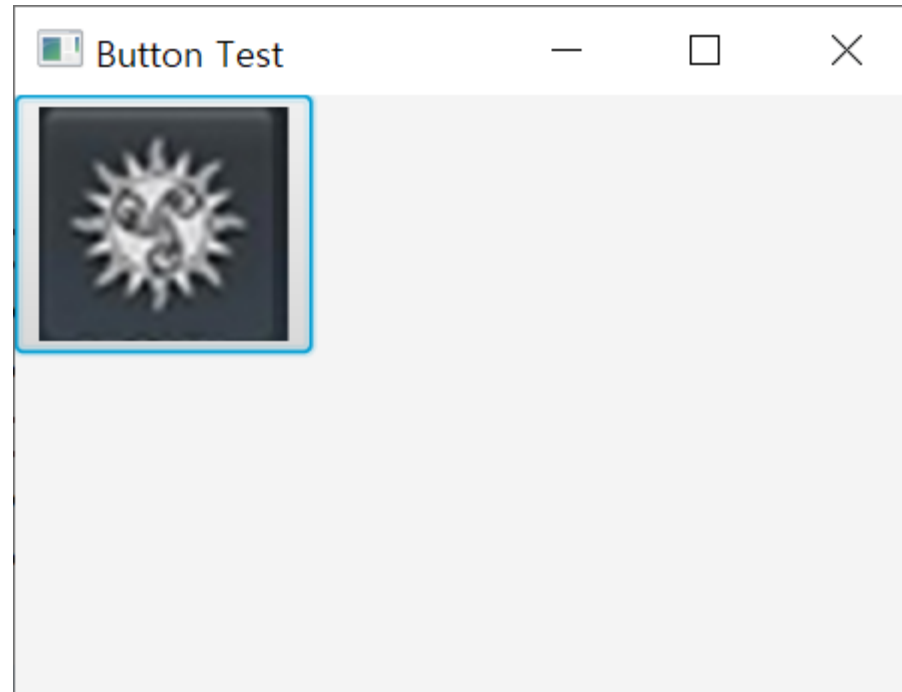
```
toggleBtn.setText("Toggle Btn");
```

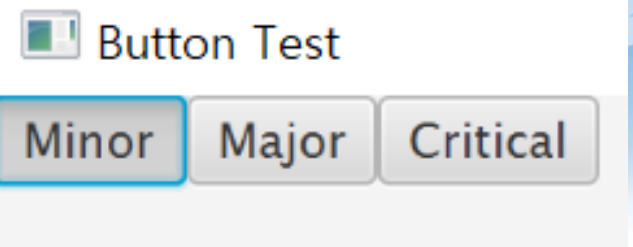


```
ToggleButton toggleBtn = new ToggleButton("", new  
ImageView("/img/magi.png"));
```



```
toggleBtn.setGraphic(new ImageView("/img/magi.png"));
```





```
final ToggleGroup group = new ToggleGroup();
```

```
ToggleButton tb1 = new ToggleButton("Minor");  
tb1.setToggleGroup(group);  
tb1.setSelected(true);
```

```
ToggleButton tb2 = new ToggleButton("Major");  
tb2.setToggleGroup(group);
```

```
ToggleButton tb3 = new ToggleButton("Critical");  
tb3.setToggleGroup(group);
```

t1	t2	t3

```
tb1.setUserData(Color.LIGHTGREEN);  
tb2.setUserData(Color.LIGHTBLUE);  
tb3.setUserData(Color.SALMON);
```

```
final Rectangle rect = new Rectangle(155, 50, Color.LIGHTGREEN);
```

```
group.selectedToggleProperty().addListener(new  
ChangeListener<Toggle>(){  
    public void changed(ObservableValue<? extends Toggle> ov,  
        Toggle toggle, Toggle new_toggle) {  
        if (new_toggle == null)  
            rect.setFill(Color.WHITE);  
        else  
            rect.setFill(  
                (Color) group.getSelectedToggle().getUserData()  
            );  
    }  
});
```

```
tb1.setStyle("-fx-base: lightgreen;");  
tb2.setStyle("-fx-base: lightblue;");  
tb3.setStyle("-fx-base: salmon;");
```

