

Tutorial Image & ImageView:

In JavaFX Image and ImageView classes works together to display and resize an image. In this tutorial we are going to create a button with an image, and change the image of the button when it is clicked.

Download Download: [tutorial_lab_8.zip](#)

Note that we use Image and ImageView of JavaFX here.

Part A: Create button with an image

Check the imported classes first.

The following lines create image objects from image files.

```
img1 = new Image("horse1.jpg");  
img2 = new Image("horse2.jpg");
```

Method getImage() choose one of the images by random and attach it to an ImageVeiw and return is.

```
private ImageView getImage(){  
    int x = new Random().nextInt(100);  
    if(x<50)  
        return new ImageView(img1);  
    return new ImageView(img2);  
}
```

Finally, we created a button, attach the imageView to the button, set the size of the button to fit the imageview size, and add it to the panel.

```
ImageView img = getImage();  
Button b1 = new Button();  
b1.setGraphic(img);  
b1.setPrefSize(img.getFitWidth(), img.getFitHeight());  
root.getChildren().addAll(b1);
```

Compile and run the program. Now you should see a button with an image attached to it.

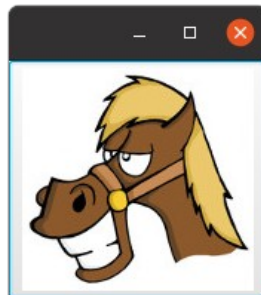
Part B: implement listener

create inner class as an event handler:

```
private class PhotoChanger implements EventHandler<ActionEvent> {  
    @Override  
    public void handle(ActionEvent e) {  
        Button bf = (Button)e.getSource();  
        ImageView theView= (ImageView)bf.getGraphic();  
        Image img = theView.getImage();  
        if(img == img1)  
            theView.setImage(img2);  
        else  
            theView.setImage(img1);  
    }  
}
```

Note that the we invoke `getGraphics()` method and type cast it to `ImageView` object.

And finally create an instance of the class and attach it to the button to see everything in action. The program now should display a button, and whenever you click it it should change the image of the button to the next image.

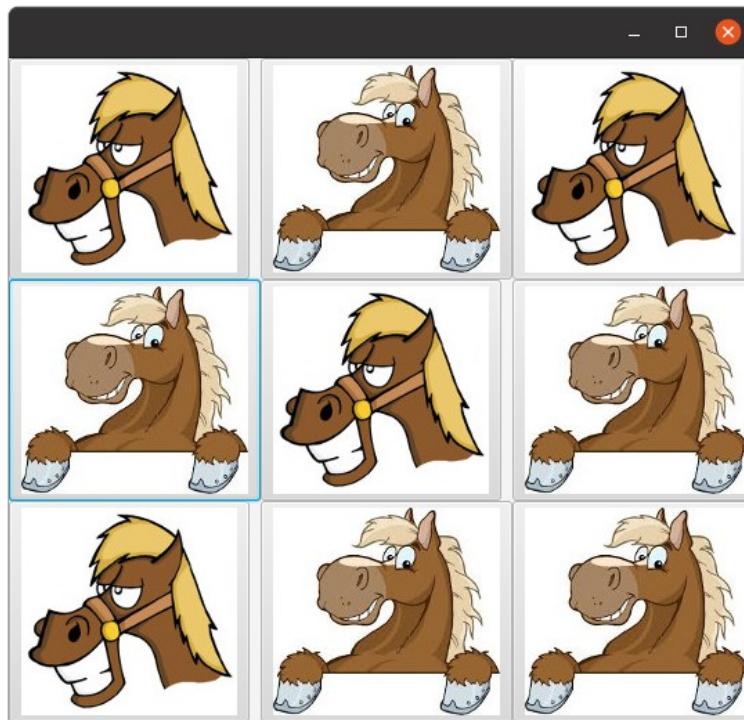


Part c: Multiple Buttons

Change the Pane to a GridPane 3 x 3, create instances of the buttons and add each button to each cell.

Note: You only need one instance of the class listener.

The program should look like as shown below, and whenever you click each button the image of the button should be changed to the next one.



Part D: Add your own preferred photos

Study Image and ImageView of JavaFX library.

Download two images from internet and use them instead of the photos provided.

Study of ImageView to learn how you can set the preferred size of the image.

Zip the source code with the images you have used to create your application, and upload it to tut_lab8 in D2L.

Marks : 7