

Program 1:

//Write a Java program to design a Login Form using JavaFX Controls.

```
import javafx.application.Application;
import javafx.geometry.Insets;
import javafx.geometry.Pos;
import javafx.scene.Scene;
import javafx.scene.control.Button;
import javafx.scene.control.PasswordField;
import javafx.scene.control.TextField;
import javafx.scene.layout.GridPane;
import javafx.scene.text.Text;
import javafx.stage.Stage;
public class Login extends Application {
    Button submit;
    Button clear;
    TextField email;
    PasswordField pass;
    @Override
    public void start(Stage s){
        Text text1 = new Text("Email");
        Text text2 = new Text("Password");
        email = new TextField();
        pass = new PasswordField();
        submit = new Button("Submit");
        submit.setOnAction(e -> {
            System.out.println("Form Submitted Successfully");
        });
        clear = new Button("Clear");
        clear.setOnAction(e -> {
            email.clear();
            pass.clear();
        });
        //Creating a Grid Pane
        GridPane gridPane = new GridPane();

        //Setting size for the pane
        gridPane.setMinSize(400, 200);
```

```

//Setting the padding
gridPane.setPadding(new Insets(10, 10, 10, 10));

//Setting the vertical and horizontal gaps between the columns
gridPane.setVgap(5);
gridPane.setHgap(5);

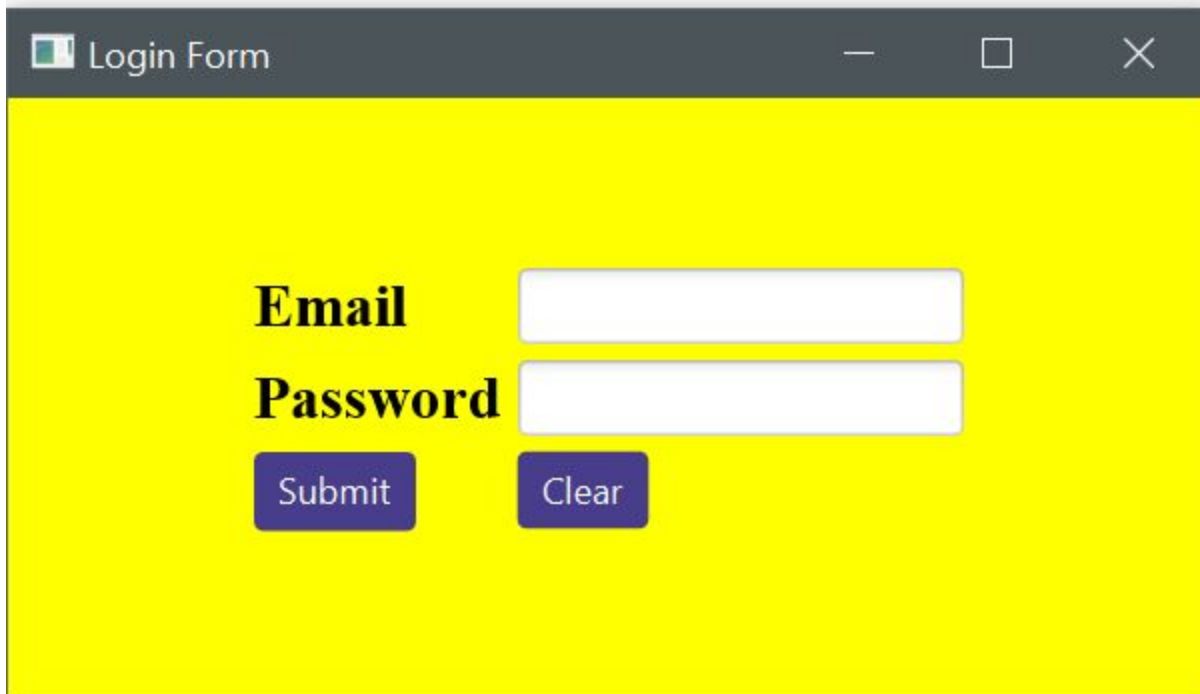
//Setting the Grid alignment
gridPane.setAlignment(Pos.CENTER);

//Arranging all the nodes in the grid
gridPane.add(text1, 0, 0);
gridPane.add(email, 1, 0);
gridPane.add(text2, 0, 1);
gridPane.add(pass, 1, 1);
gridPane.add(submit, 0, 2);
gridPane.add(clear, 1, 2);

//Styling nodes
submit.setStyle("-fx-background-color: darkslateblue; -fx-text-fill:
white;");
clear.setStyle("-fx-background-color: darkslateblue; -fx-text-fill:
white;");
text1.setStyle("-fx-font: normal bold 20px 'serif' ");
text2.setStyle("-fx-font: normal bold 20px 'serif' ");
gridPane.setStyle("-fx-background-color: YELLOW;");
//Creating a Scene by passing the group object, height and width
Scene scene = new Scene(gridPane);
//Setting the title to Stage.
s.setTitle("Login Form");
//Adding the scene to Stage
s.setScene(scene);
//Displaying the contents of the stage
s.show();
}
public static void main(String[] args) {
    launch(args);
}
}

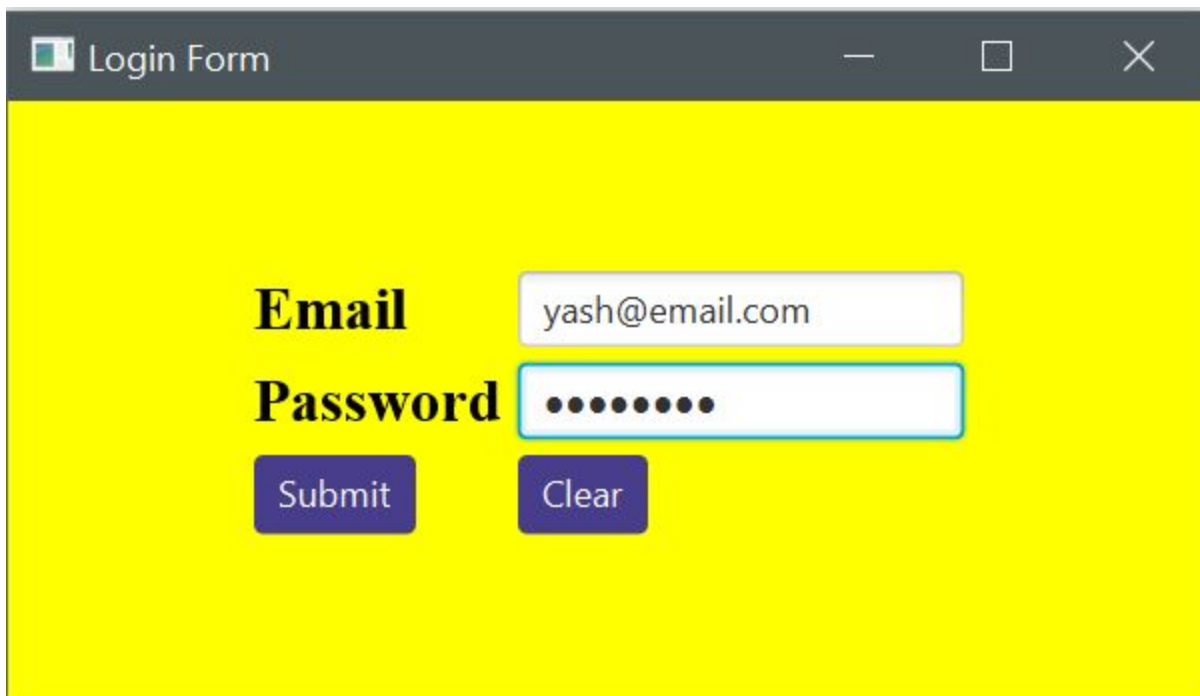
```

Output:



Email

Password



Email

Password

```
D:\College\JAVA\Experiments\Exp10\Exp\src>javac --module-path "C:\Program Files\Java\javafx-sdk-15.0.1\lib" --add-modules javafx.controls,javafx.fxml Login.java
```

```
D:\College\JAVA\Experiments\Exp10\Exp\src>java --module-path "C:\Program Files\Java\javafx-sdk-15.0.1\lib" --add-modules javafx.controls,javafx.fxml Login
Form Submitted Successfully
```

Questions:

Question 1:

//Write Java program to draw various shapes on Canvas using JavaFX.

```
import javafx.application.Application;
import javafx.scene.Scene;
import javafx.scene.canvas.Canvas;
import javafx.scene.canvas.GraphicsContext;
import javafx.scene.control.ColorPicker;
import javafx.scene.layout.StackPane;
import javafx.scene.paint.Color;
import javafx.stage.Stage;

public class CanvasDrawing extends Application {

    @Override
    public void start(Stage s) {
        Canvas c=new Canvas(800,500);
        GraphicsContext gc;
        gc=c.getGraphicsContext2D();
        ColorPicker cp=new ColorPicker();
        gc.setStroke(Color.BLUE);
        gc.setLineWidth(1);
        cp.setValue(Color.BLUE);
        cp.setOnAction(e->{
            gc.setStroke(cp.getValue());
        });

        StackPane root = new StackPane();

        Scene scene = new Scene(root, 800, 500);
        scene.setOnMousePressed(e->{
            gc.beginPath();
            gc.lineTo(e.getSceneX(),e.getSceneY());
            gc.stroke();
        });
        scene.setOnMouseDragged(e->{
            gc.lineTo(e.getSceneX(),e.getSceneY());
            gc.stroke();
        });
    }
}
```

```
});  
root.getChildren().addAll(c,cp);  
s.setTitle("Canvas Drawing");  
s.setScene(scene);  
s.show();  
}  
  
public static void main(String[] args) {  
    launch(args);  
}  
}
```

Output:

