



AOOP Assignment Submission Report

[Submitted as part of CTA Assignment No-2]

Course:	Advanced Object-Oriented Programming	Course Code:	18UCSE508
Semester:	V	Division:	A

Submitted by:

USN:	2SD20CS064	Name:	NIVEDITHA PISE
------	------------	-------	----------------

1.Problem Defination:

Q1. Write a Java program to build the GUI application using JavaFX for the following requirements:

- a) Read user name and password using appropriate JavaFX controls.
- b) Validate the input. If user name and password are matched with the assumed values, then display the welcome scene with proper text.
- c) If user name and password don't match, then raise appropriate exception.

application; Ans : import javafx.application.Application; import javafx.geometry.Pos; import javafx.scene.Scene; import javafx.scene.control.Button; import javafx.scene.control.Label; import javafx.scene.control.PasswordField; import javafx.scene.control.TextField; import javafx.scene.layout.FlowPane; import javafx.scene.layout.HBox; import javafx.scene.layout.VBox; import javafx.stage.Stage;

2. Java Program:

```
public class Question1 extends Application {  
    public static void main(String[] args) {  
        launch(args);  
    }  
    @Override  
    public void start(Stage myStage) {  
        // TODO Auto-generated method stub  
        myStage.setTitle("UserName and PassWord");  
  
        VBox vbox = new VBox();  
        HBox hbox = new HBox();
```

```

Label label = new Label("User Name : ");
TextField tf = new TextField();

// layout for component
HBox hbox2 = new HBox();

Label label2 = new Label(" password : ");
PasswordField pass = new PasswordField();

// to keep components center
hbox.setAlignment(Pos.CENTER);          hbox2.setAlignment(Pos.CENTER);

//adding components to the horizontal layout
hbox.getChildren().addAll(label,tf);      hbox2.getChildren().addAll(label2,pass);

// creating the button
Button btn = new Button("Submit");

// label for show results
Label label1 = new Label("");

// assumed value for validation
String username = "20cs107";
String password = "soumya";

// setting action on button
btn.setOnAction(e -> {

    // getting the values from the field
    String EUsername = tf.getText();
    String Epassword = pass.getText();

```


Scene

```
// if entered username and password are equal then create a new welcome
//
if(username.equals(EUsername) && password.equals(Epassword))
{
    label1.setText(" : WELCOME : ");
    FlowPane
    flowpane = new FlowPane();
        flowpane.setAlignment(Pos.CENTER);
    Label welcome
    = new Label(": Welcome :");
        flowpane.getChildren().add(welcome);
        Scene myScene1 = new Scene(flowpane,500,300);
        myStage.setScene(myScene1);
}
else {
    try { throw new MyException();
    }catch(MyException e1){
    });
    label1.setText(e1.toString());
    }
}

; horizontal components to the main vertical layout
tChildren().addAll(hbox,hbox2,btn,label1);

; layout to the scene
myScene = new Scene(vbox,500,300);
```

ig between the vartical components

```
lSpacing(10);
```

```
lAlignment(Pos.CENTER);
```

```
g.setScene(myScene);
```

3

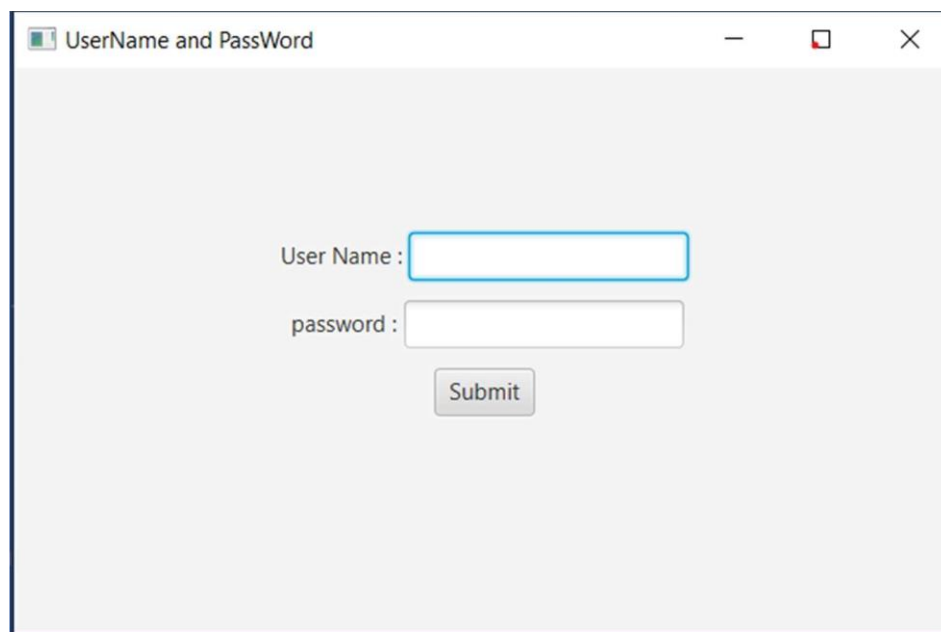
```

        myStage.show();
    }
}

class MyException extends Exception{    public String toString() {
    return "InvaId UserName and Password";
}
}

```

3. Screen Shorts Of Execution:



1. Problem Definition:

Q2. Write a Java program to build the GUI application using JavaFX for the following requirements:

- a) Create a Menu control to display the menu items: File, Edit & Help.
- b) Create sub menus in the order: File → New, Open & Save. Edit → Cut, Copy & Paste.
Help → Help Centre, About Us

2. Java Program:

```
package application; import  
javafx.application.Application; import  
javafx.scene.Group;
```



```

import javafx.scene.Scene; import
javafx.scene.control.Menu; import
javafx.scene.control.MenuBar; import
javafx.scene.control.MenuItem; import
javafx.scene.paint.Color; import
javafx.stage.Stage; public class Question2
extends Application {    public void
start(Stage stage) {    //Creating file menu

    Menu file = new Menu("File");
    //Creating file menu items

    MenuItem item1 = new MenuItem("New");
    MenuItem item2 = new MenuItem("Open");
    MenuItem item3 = new MenuItem("Save");

//Adding all the menu items to the file menu
file.getItems().addAll(item1, item2, item3);

    //Creating edit  menu

    Menu edit = new Menu("Edit");
    //Creating fileList menu items

    MenuItem item6 = new MenuItem("Cut");
    MenuItem item7 = new MenuItem("Copy");
    MenuItem item8 = new MenuItem("Paste");

//Adding all the items to File List menu
edit.getItems().addAll(item6, item7, item8);

    //Creating help menu

    Menu help = new Menu("Help");
    MenuItem item9 = new MenuItem("Help
center");    MenuItem item10 = new
MenuItem("About Us");
help.getItems().addAll(item9, item10);    //Creating
a menu bar

    MenuBar menuBar = new MenuBar();

```

```

        menuBar.setTranslateX(200);
menuBar.setTranslateY(20);

        //Adding all the menus to the menu bar
menuBar.getMenus().addAll(file, edit, help);

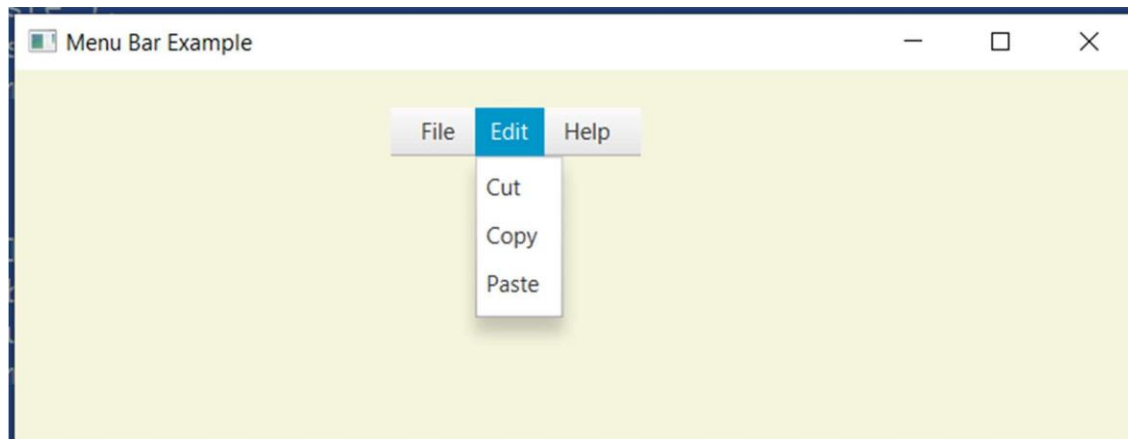
        //Setting the stage
        Group root = new Group(menuBar);

        Scene scene = new Scene(root, 595, 200,
Color.BEIGE);    stage.setTitle("Menu Bar Example");
stage.setScene(scene);    stage.show();
    }

    public static void main(String args[]){
launch(args);
    }
}

```

3. Screen Shorts Of Execution:



1.Problem Defination:

Q3. Write a Java program to build the GUI application using JavaFX for the following requirements:

- a) Create Context menu involving the menu items in the order: New & View.
- b) Create sub menus for the above main context menu: New → File, Folder & Image.
View → Large, Medium & Small.

The context menu must be displayed on right-click of the mouse button.

2. Java Program:

```
package application;

import java.io.FileNotFoundException; import
import javafx.application.Application; import javafx.geometry.Insets;
import javafx.scene.Group; import javafx.scene.Scene; import
import javafx.scene.control.Button; import
import javafx.scene.control.ContextMenu; import
import javafx.scene.control.MenuItem; //import
import javafx.scene.control.TextField; import
import javafx.scene.layout.HBox; import javafx.scene.paint.Color;
import javafx.stage.Stage; public class Question3 extends
Application { public void start(Stage stage) throws
FileNotFoundException {
    //Creating the image view
    Button button1 = new Button("new");
    Button button2 = new Button("view");
    //TextField textField = new TextField();
    //Creating a context menu
    ContextMenu contextMenu1 = new ContextMenu();
    //Creating the menu Items for the context menu
    MenuItem item1 = new MenuItem("file");
    MenuItem item2 = new MenuItem("folder");
    MenuItem item3 = new MenuItem("image");
    contextMenu1.getItems().addAll(item1, item2,item3);
```

```

//Adding the context menu to the button and the text field
ContextMenu contextMenu2 = new ContextMenu();

//Creating the menu Items for the context menu
MenuItem item11 = new MenuItem("large");
MenuItem item21 = new MenuItem("medium");
MenuItem item31 = new MenuItem("small");
contextMenu2.getItems().addAll(item11, item21,item31);

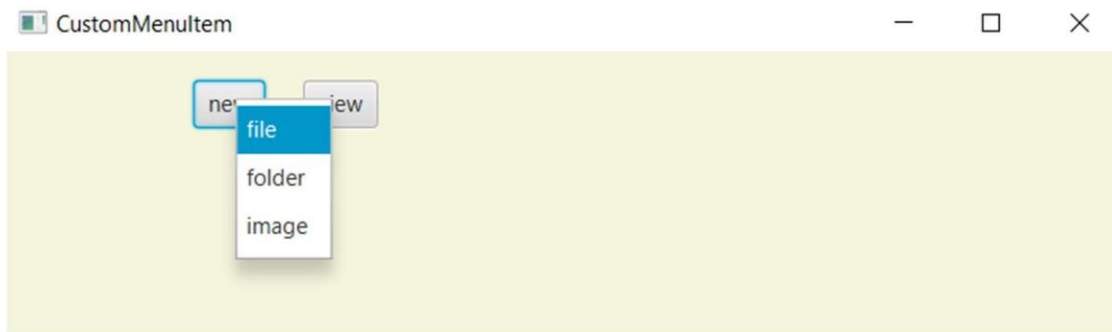

//      textField.setContextMenu(contextMenu);
button1.setContextMenu(contextMenu1);
button2.setContextMenu(contextMenu2);
HBox layout = new HBox(20);
layout.setPadding(new Insets(15, 15, 15, 100));
layout.getChildren().addAll( button1,button2);

//Setting the stage
Scene scene = new Scene(new Group(layout), 595, 150,
Color.BEIGE); stage.setTitle("CustomMenuItem");
stage.setScene(scene); stage.show();
}

public static void main(String args[]){
launch(args);
}
}

```

3. Screen Shorts Of Execution:



Q4. Write a JavaFX program that produces the following output when executed and displays Dialog Box

(as shown in Figure.2) on click of Register button (as shown in Figure.1):

Ans :

```
import javafx.application.Application;
import javafx.geometry.Insets; import
javafx.geometry.Pos; import
javafx.scene.control.Dialog; import
javafx.scene.control.DialogPane; import
javafx.scene.Scene; import
javafx.scene.control.Button; import
javafx.scene.control.CheckBox; import
javafx.scene.control.ChoiceBox; import
javafx.scene.control.DatePicker; import
javafx.scene.layout.BorderPane; //import
javafx.scene.control.Button; import
javafx.scene.image.Image; import
javafx.scene.image.ImageView; import
javafx.scene.control.ButtonType; import
javafx.scene.control.Label; //import
javafx.scene.control.Label; //import
javafx.scene.control.ListView; import
javafx.scene.control.RadioButton; import
javafx.scene.layout.GridPane; import
javafx.scene.text.Text; import
javafx.scene.control.TextField; import
javafx.scene.control.ToggleGroup;
//import
javafx.scene.control.ToggleButton;
import javafx.stage.Stage;

public class Question4 extends Application {
```

```

@Override
public void start(Stage stage) {
    //Label for name
    BorderPane root = new BorderPane();
    stage.setTitle(" JavaFX Registration form");    // label
    headerLabel = new Label("Registration Form");
    Label label = new Label("Employee Registration Form");
    // Object root;
    root.setTop(label);
    //root.setAlignment(label, Pos.CENTER);

    Text nameLabel = new Text("Enter your Name");

    //Text field for name
    TextField nameText = new TextField();

    //Label for date of birth
    Text dobLabel = new Text("Enter Date of birth");

    //date picker to choose date
    DatePicker datePicker = new DatePicker();

    //Label for gender
    Text genderLabel = new Text("Enter your Gender");

    //Toggle group of radio buttons
    ToggleGroup groupGender = new ToggleGroup();
    RadioButton maleRadio = new RadioButton("male");
    maleRadio.setToggleGroup(groupGender);
    RadioButton femaleRadio = new RadioButton("female");
    femaleRadio.setToggleGroup(groupGender);

    Text selectyourqualificationLabel = new Text("Select your qualification");

    //check box for education
    CheckBox ugCheckBox = new CheckBox("UG");
    ugCheckBox.setIndeterminate(false);

    //check box for education
    CheckBox pgCheckBox = new
    CheckBox("PG");
    pgCheckBox.setIndeterminate(false);

```

```
CheckBox phdCheckBox = new
CheckBox("PhD");
    phdCheckBox.setIndeterminate(false);

//Label for location
Text locationLabel = new Text("select your state");

//Choice box for location
ChoiceBox locationchoiceBox = new ChoiceBox();
locationchoiceBox.getItems().addAll
    ("Karnataka", "Tamilnadu", "Delhi", "Mumbai", "AP");

Button buttonRegister = new Button("Register");

//Creating a Grid Pane
GridPane gridPane = new GridPane();

//Setting size for the pane
gridPane.setMinSize(500, 500);

//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(nameLabel, 0, 0);
gridPane.add(nameText, 1, 0);

gridPane.add(dobLabel, 0, 3);
gridPane.add(datePicker, 1, 3);

gridPane.add(genderLabel, 0, 2);
gridPane.add(maleRadio, 1, 2);
gridPane.add(femaleRadio, 2, 2);    //
gridPane.add(reservationLabel, 0, 3);
```

```

//gridPane.add(yes, 1, 3);

gridPane.add(selectyourqualificationLabel , 0, 5);
gridPane.add(ugCheckBox, 1, 5);
gridPane.add(pgCheckBox, 2, 5);
gridPane.add(phdCheckBox,3, 5);

gridPane.add(locationLabel, 0, 4);
gridPane.add(locationchoiceBox, 1, 4);

gridPane.add(buttonRegister, 1, 8);

//Styling nodes
buttonRegister.setStyle(
    "-fx-font: normal bold 15px 'serif' " );

nameLabel.setStyle("-fx-font: normal bold 15px 'serif' ");
dobLabel.setStyle("-fx-font: normal bold 15px 'serif' ");
genderLabel.setStyle("-fx-font: normal bold 15px 'serif' ");

selectyourqualificationLabel.setStyle("-fx-font: normal bold 15px 'serif' ");

locationLabel.setStyle("-fx-font: normal bold 15px 'serif' ");
gridPane.setStyle("-fx-background-color: white;");

buttonRegister.setOnAction(e->{
    // creating a dialog box
    Dialog dialog = new Dialog();
    dialog.setTitle("Registration Successfull");
    dialog.setHeaderText("Registration Status");
    dialog.setContentText("Employee Registration is successfull");

    // adding image to the dialog box
    // Image img = new Image("",50,50,true,true);
    //ImageView imageview = new ImageView(img);
    //
    //dialog.setGraphic(imageview);

    // adding button to the dialog box
    dialog.getDialogPane().getButtonTypes().add(ButtonType.OK);
    dialog.show();
});

```



```

Scene scene = new Scene(gridPane);

// stage.setTitle("Registration Form");

//Adding scene to the stage
stage.setScene(scene);

//Displaying the contents of the stage
stage.show();
}
public static void main(String args[]){
    launch(args);
}
}

```

Output:



Enter your Name

Enter your Gender ☐ male ☐ female

Enter Date of birth 

select your state

Select your qualification ☐ UG ☐ PG ☐ PhD

Register