ASSIGNMENT 2

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CLASS : V ‘B’

1.

```
package assignment2;

import javafx.application.*;
import javafx.scene.*;
import javafx.stage.*;
import javafx.scene.layout.*;
import javafx.scene.control.*;
import javafx.event.*;
import javafx.geometry.*;

public class Assignment2_1 extends Application {

	String userId = "omkar";
	String pass = "smasher";
	TextField name,password;
	Label response,response2;
	Button validate,goback;

	public static void main(String[] args) {
		// TODO Auto-generated method stub
```

```
        launch(args);
}

public void start(Stage myStage) throws MyException {
        //setting the title for the Stage
        myStage.setTitle("Validating UserId and PassWord");

        //creating a Scene graph
        FlowPane rootNode = new FlowPane(Orientation.VERTICAL,10,20);

        //creating another Scene graph for another Scene
        FlowPane rootNode2 = new FlowPane(Orientation.VERTICAL,10,20);

        //setting the alignment for center
        rootNode.setAlignment(Pos.CENTER);

        rootNode2.setAlignment(Pos.CENTER);

        //creating a Scene for home page
        Scene myScene = new Scene(rootNode,450,200);

        //creating another Scene for second Welcome page
        Scene myScene2 = new Scene(rootNode2,450,200);

        //first setting the home page scene for stage
        myStage.setScene(myScene);

        //creating a TextField for taking name as input
        name = new TextField();

        //setting the prompt text for the name TextField
        name.setPromptText("Enter your name");

        //creating a TextField for taking password as input
```

```
password = new TextField();

//setting the prompt text for the password TextField
password.setPromptText("Enter your password");

//creating a button for validating the inout
validate = new Button("Validate");

//creating a button for going back to the Home page
goback = new Button("Go back");

//creating labels for giving the response
response = new Label();

response2 = new Label();

Separator separator = new Separator();

separator.setPrefWidth(100);

Separator separator2 = new Separator();
separator2.setPrefWidth(180);

//handling the event for validate button
validate.setOnAction(new EventHandler<ActionEvent>() {
        public void handle(ActionEvent ae) {
                try {   //if both entered name and password are correct then go to the second
Scene
                        if((name.getText().equals(userId)) && (password.getText().equals(pass))) {
                                myStage.setScene(myScene2);             //setting the second Scene

                                response2.setText("WelCome here");  //giving appropriate message
                        }
                        else    //else throwing a user defined Exception
                                throw new MyException();
```

```
                        }
                        catch(MyException e) {
                                //displaying the toString method of the MyException
                                response.setText(e.toString());
                        }
                }
        });

        //handling the event for goback button
        goback.setOnAction(new EventHandler<ActionEvent>() {
                public void handle(ActionEvent ae) {
                        //going back to the home page
                        myStage.setScene(myScene);
                }
        });

        //adding every element to the Scene
        rootNode.getChildren().addAll(name,password,separator,validate,response);

        //adding the Welcome message and goback button to the second Scene
        rootNode2.getChildren().addAll(response2,separator2,goback);

        myStage.show();
    }
}

class MyException extends Exception {
    public String toString() {
        return "Exception : Invalid userId or passWord";
    }
}
```

2.

```
package assignment2;

import javafx.application.*;
import javafx.scene.*;
import javafx.stage.*;
import javafx.scene.layout.*;
import javafx.scene.control.*;
import javafx.scene.input.KeyCombination;
import javafx.event.*;

public class Assignment2_2 extends Application {

	Label response;
	public static void main(String[] args) {
		// TODO Auto-generated method stub
		launch(args);
	}

	public void start(Stage myStage) {
```

```
//setting the title for the Stage
myStage.setTitle("Menu Demo");

//creating a Scene graph
BorderPane rootNode = new BorderPane();

//creating a Scene
Scene myScene = new Scene(rootNode,300,300);

//setting the scene for stage
myStage.setScene(myScene);

//creating labels for giving the response
response = new Label("Menu Demo");

//creating a MenuBar for the Menu
MenuBar mb = new MenuBar();

//creating a Menu
Menu fileMenu = new Menu("_File");

//creating multiple MenuItems for the fileMenu
MenuItem new1 = new MenuItem("New");
MenuItem open = new MenuItem("Open");
MenuItem save = new MenuItem("Save");

//creating shortcuts for the MenuItems
new1.setAccelerator(KeyCombination.keyCombination("shortcut+N"));
open.setAccelerator(KeyCombination.keyCombination("shortcut+O"));
save.setAccelerator(KeyCombination.keyCombination("shortcut+S"));

fileMenu.setMnemonicParsing(true);

//adding MenuItems to the fileMenu
```

```
fileMenu.getItems().addAll(new1,open,save);

//creating a Menu
Menu edit = new Menu("_Edit");

//creating multiple MenuItems for the fileMenu
MenuItem cut = new MenuItem("Cut");
MenuItem copy = new MenuItem("Copy");
MenuItem paste = new MenuItem("Paste");

//creating shortcuts for the MenuItems
cut.setAccelerator(KeyCombination.keyCombination("shortcut+X"));
copy.setAccelerator(KeyCombination.keyCombination("shortcut+C"));
paste.setAccelerator(KeyCombination.keyCombination("shortcut+V"));
edit.setMnemonicParsing(true);
edit.getItems().addAll(cut,copy,paste);

//creating a Menu
Menu help = new Menu("_About");

//creating multiple MenuItems for the fileMenu
MenuItem helpCenter = new MenuItem("Help Center");
MenuItem about = new MenuItem("About Us");

//creating shortcuts for the MenuItems
helpCenter.setAccelerator(KeyCombination.keyCombination("shortcut+H"));
about.setAccelerator(KeyCombination.keyCombination("shortcut+B"));
help.setMnemonicParsing(true);
help.getItems().addAll(helpCenter,about);

//adding the Menus for MenuBar
mb.getMenus().addAll(fileMenu,edit,help);

//handling ActionEvent for the selection of any MenuItem
```

```
        EventHandler<ActionEvent> MEHandler = new EventHandler<ActionEvent>() {
            public void handle(ActionEvent ae) {
                String name = ((MenuItem) ae.getTarget()).getText();
                //giving the appropriate message on the selection
                response.setText(name + " selected");
            }
        };

        //adding the action event for the MenuItems
        new1.setOnAction(MEHandler);
        open.setOnAction(MEHandler);
        save.setOnAction(MEHandler);
        cut.setOnAction(MEHandler);
        copy.setOnAction(MEHandler);
        paste.setOnAction(MEHandler);
        helpCenter.setOnAction(MEHandler);
        about.setOnAction(MEHandler);

        //setting the MenuBar in the Scene Graph
        rootNode.setTop(mb);

        //setting the label in the Scene graph
        rootNode.setCenter(response);

        myStage.show();
    }
}
```

3.

```
package assignment2;

import javafx.application.*;
import javafx.scene.*;
import javafx.stage.*;
import javafx.scene.layout.*;
import javafx.scene.control.*;
import javafx.scene.input.ContextMenuEvent;
import javafx.event.*;
import javafx.geometry.Pos;

public class Assignment2_3 extends Application {

	Label response;

	public static void main(String[] args) {
		// TODO Auto-generated method stub
		launch(args);
```

```
}

public void start(Stage myStage) {
        //setting the title for the Stage
        myStage.setTitle("Context Menu Demo");

        //creating a Scene graph
        FlowPane rootNode = new FlowPane();

        //creating a Scene
        Scene myScene = new Scene(rootNode,300,300);

        //setting the scene for stage
        myStage.setScene(myScene);

        //creating label for giving the response
        response = new Label("Menu Demo");

        //creating a Menu
        Menu new1 = new Menu("New");

        //creating multiple MenuItems for the new1
        MenuItem file = new MenuItem("File");
        MenuItem folder = new MenuItem("Folder");
        MenuItem image = new MenuItem("Image");

        //adding MenuItems to the new1
        new1.getItems().addAll(file,folder,image);

        //creating a Menu
        Menu view = new Menu("View");

        //creating multiple MenuItems for the view
        MenuItem large = new MenuItem("Large");
```

```
MenuItem medium = new MenuItem("Medium");
MenuItem small = new MenuItem("Small");

//adding MenuItems to the view
view.getItems().addAll(large,medium,small);

//creating a context menu for the above created menus
ContextMenu editMenu = new ContextMenu(new1,view);

//action handling for context menu for entire scene
rootNode.setOnContextMenuRequested(new EventHandler<ContextMenuEvent>() {
        public void handle(ContextMenuEvent ae) {
                editMenu.show(rootNode,ae.getScreenX(),ae.getScreenY());
        }
});

//handling ActionEvent for the selection of any MenuItem
EventHandler<ActionEvent> MEHandler = new EventHandler<ActionEvent>() {
        public void handle(ActionEvent ae) {
                String name = ((MenuItem) ae.getTarget()).getText();
                response.setText(name + " selected");
        }
};

//adding the action event for the MenuItems
file.setOnAction(MEHandler);
folder.setOnAction(MEHandler);
image.setOnAction(MEHandler);
large.setOnAction(MEHandler);
medium.setOnAction(MEHandler);
small.setOnAction(MEHandler);

rootNode.setAlignment(Pos.CENTER);
```

```
                //setting the label in the Scene graph
                rootNode.getChildren().add(response);

                myStage.show();
        }
}
```

4.

```
package assignment2;

import javafx.application.*;
import javafx.collections.FXCollections;
import javafx.collections.ObservableList;
import javafx.scene.*;
import javafx.stage.*;
import javafx.scene.control.*;
import javafx.scene.control.Alert.AlertType;
import javafx.scene.layout.*;
import javafx.scene.text.*;
import javafx.event.*;
import javafx.geometry.*;

public class Assignment2_4 extends Application {

        Label lheading;
        Label lname;
        Label lgender;
```

```
Label ldob;
Label lstate;
Label lquali;
TextField tname;
Button bregister;
ComboBox<String> cbState;

public static void main(String[] args) {
        // TODO Auto-generated method stub
        launch(args);
}

public void start(Stage myStage) {
        //setting the title for the Stage
        myStage.setTitle("JavaFx Registration Form");

        //creating a Scene graph
        GridPane rootNode = new GridPane();

        //creating a Scene
        Scene myScene = new Scene(rootNode,550,325);

        //setting the scene for stage
        myStage.setScene(myScene);

        myStage.show();

        //creating label for setting the heading
        lheading = new Label("Employee Registration Form");

        //setting the font for the heading
        lheading.setFont(Font.font("Arial",FontWeight.BOLD,20));

        //creating the labels for all the details
```

```
lname =   new Label("          Enter Your Name:");

lgender = new Label("       Select Your Gender:");

ldob =    new Label("        Enter Date of Birth:");

lstate =  new Label("          Select Your State:");

lquali =  new Label("Select Your Qualification:");

//creating TextField for taking the name inout
tname = new TextField();

//setting minimum width for the TextField
tname.setMinWidth(240);

//setting the PromtText in the TextField
tname.setPromptText("Enter Your Name");

//creating a button
bregister = new Button("Register");

//creating a toggle group for RadioButtons
ToggleGroup tg = new ToggleGroup();

//creating the RadioButtons for male and female
RadioButton r1 = new RadioButton("Male");

RadioButton r2 = new RadioButton("Female");

//adding the RadioButtons to the toggle group
r1.setToggleGroup(tg);

r2.setToggleGroup(tg);
```

```
        //creating the DatePicker for selecting the date
        DatePicker dp = new DatePicker();

        //creating the ObservableList for selecting the states
        ObservableList<String> states =
FXCollections.observableArrayList("Karnataka","Maharastra","Gujarat","Kerala","Goa");

        //adding the list to the ComboBox
        cbState = new ComboBox<String>(states);

        //setting up the initial state for ComboBox
        cbState.setValue("Karnataka");

        //creating the CheckBoxes for selecting the courses
        CheckBox c1 = new CheckBox("UG");
        CheckBox c2 = new CheckBox("PG");
        CheckBox c3 = new CheckBox("PhD");

        //creating the HBoxes for each pair of information
        HBox hb0 = new HBox(15);
        HBox hb1 = new HBox(15);
        HBox hb2 = new HBox(15);
        HBox hb3 = new HBox(15);
        HBox hb4 = new HBox(15);
        HBox hb5 = new HBox(15);
        HBox hb6 = new HBox(15);

        //setting the gap between the rows and columns
        rootNode.setHgap(15);
        rootNode.setVgap(15);

        //adding the components into each group of HBoxes
        hb0.getChildren().add(lheading);
        hb1.getChildren().addAll(lname,tname);
```

```
hb2.getChildren().addAll(lgender,r1,r2);
hb3.getChildren().addAll(ldob,dp);
hb4.getChildren().addAll(lstate,cbState);
hb5.getChildren().addAll(lquali,c1,c2,c3);
hb6.getChildren().add(bregister);

rootNode.setAlignment(Pos.TOP_CENTER);

//setting the HBoxes according to the requirement
hb0.setAlignment(Pos.TOP_CENTER);
hb6.setAlignment(Pos.BOTTOM_CENTER);

//adding the padding for the first HBox
hb0.setPadding(new Insets(20,0,0,0));

//adding the HBoxes into the Scene graph according to the requirement
rootNode.add(hb0, 1, 0,1,1);
rootNode.add(hb1, 1, 2,1,1);
rootNode.add(hb2, 1, 3,1,1);
rootNode.add(hb3, 1, 4,1,1);
rootNode.add(hb4, 1, 5,1,1);
rootNode.add(hb5, 1, 6,1,1);
rootNode.add(hb6, 1, 8,1,1);

//creating an Alert DialogueBox for the response
Alert alert = new Alert(AlertType.INFORMATION);

//setting up the title for the DialogueBox
alert.setTitle("Registration Scuccessful");

//setting the info in the DialogueBox
alert.setHeaderText("Registration Status");

alert.setContentText("Employee Registration is Successful!!");
```

```
                //handling the ActionEvent for the button bregister
                bregister.setOnAction(new EventHandler<ActionEvent>() {
                        public void handle(ActionEvent ae) {
                                alert.show();
                        }
                });
        }
}
```