

Lab12

L1 slot

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Develop a Menu Based GUI using Swings:

Menus:

-Country

-Font

-Color

Menu Items:

-Any 7 country names under Country.

-Name,Type,Size are Menu items under Font.

---Any four font names under Name Menu

---Type should contain Bold,Italic

---Size may contain 12,14,16,18

-Any standard seven colors as Menu items under Color Menu.

If a user clicks any menu item, It should be displayed with specified color and font in window area.

Provide shortcut keys to every menus and menu items like ctrl+o, ctrl+s.

Provide a popup menu to contain two options, clear and exit. When user clicks clear, it should clear the window area and when user clicks exit, it should terminate the application.

Save the file as MenuWithSwings.java

```
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
import javax.swing.event.*;

public class MenuWithSwing implements ActionListener{

    static JFrame f;

    static Panel p;

    static JMenuBar mb;
```

```

        static JMenu country,font,name,type,size,colour;

        static JMenuItem
times,dia,sansserif,courier,bold,italic,size12,size14,size16,size18,india,aus,brazil,germ,ice,mal,rus,blu
,bro,gray,green,org,red,yel,clc,exit;

        static JLabel disp;

        static JPopupMenu pop;

        public static void main(String[] args) {

            MenuWithSwing m = new MenuWithSwing();

            f = new JFrame("MenuWithSwings ");

f.setSize(150,250);

        Panel p = new Panel();

        p.setLayout(new FlowLayout());

        pop =new JPopupMenu();

        clc=new JMenuItem("Clear");

        clc.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK_C, KeyEvent.CTRL_MASK));

        exit=new JMenuItem("Exit");

        exit.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK_E, KeyEvent.CTRL_MASK));

        pop.add(clc);

        clc.addActionListener(m);

        pop.add(exit);

        exit.addActionListener(m);

        mb = new JMenuBar();

        country =new JMenu("Country");

        font = new JMenu("Font");

        colour = new JMenu("Colour");

        name = new JMenu("Name");

        type = new JMenu("Type");

        size = new JMenu("Size");

        country.setMnemonic('C');

        font.setMnemonic('F');

        colour.setMnemonic('L');

        name.setMnemonic('N');

```

```
type.setMnemonic('T');
size.setMnemonic('S');

times=new JMenuItem("TimesRoman");
dia=new JMenuItem("Dialog");
sansserif = new JMenuItem("SansSerif");
courier=new JMenuItem("Courier");
bold = new JMenuItem("Bold");
italic = new JMenuItem("Italic");
size12 = new JMenuItem("Size 12");
size14 = new JMenuItem("Size 14");
size16 = new JMenuItem("Size 16");
size18 = new JMenuItem("Size 18");
india = new JMenuItem("India");
aus =new JMenuItem("Australia");
brazil = new JMenuItem("Brazil");
germ = new JMenuItem("Germany");
ice = new JMenuItem("Iceland");
mal = new JMenuItem("Malaysia");
rus = new JMenuItem("Russia");
blu = new JMenuItem("Blue");
bro =new JMenuItem("Brown");
gray = new JMenuItem("Gray");
green = new JMenuItem("Green");
org = new JMenuItem("Orange");
red = new JMenuItem("Red");
yel=new JMenuItem("Yellow");

times.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK_I, KeyEvent.CTRL_MASK));
dia.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK_D, KeyEvent.CTRL_MASK));
sansserif.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK_A, KeyEvent.CTRL_MASK));
courier.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK_U, KeyEvent.CTRL_MASK));
bold.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK_B, KeyEvent.CTRL_MASK));
```

```
italic.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK_R, KeyEvent.CTRL_MASK));
size12.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK_F2, 0));
size14.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK_F4, 0));
size16.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK_F6, 0));
size18.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK_F8, 0));
india.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK_G, KeyEvent.CTRL_MASK));
aus.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK_H, KeyEvent.CTRL_MASK));
brazil.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK_J, KeyEvent.CTRL_MASK));
germ.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK_K, KeyEvent.CTRL_MASK));
ice.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK_M, KeyEvent.CTRL_MASK));
mal.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK_P, KeyEvent.CTRL_MASK));
rus.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK_Q, KeyEvent.CTRL_MASK));
blu.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK_V, KeyEvent.CTRL_MASK));
bro.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK_W, KeyEvent.CTRL_MASK));
gray.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK_X, KeyEvent.CTRL_MASK));
green.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK_Y, KeyEvent.CTRL_MASK));
org.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK_Z, KeyEvent.CTRL_MASK));
red.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK_F1, 0));
yel.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK_F3, 0));

disp = new JLabel();
country.add(india);
country.add(aus);
country.add(brazil);
country.add(germ);
country.add(ice);
country.add(mal);
country.add(rus);
mb.add(country);
name.add(times);
name.add(dia);
name.add(sansserif);
```

```
name.add(courier);
font.add(name);
type.add(bold);
type.add(italic);
font.add(type);
size.add(size12);
size.add(size14);
size.add(size16);
size.add(size18);
font.add(size);
mb.add(font);
colour.add(blu);
colour.add(bro);
colour.add(gray);
colour.add(green);
colour.add(org);
colour.add(red);
colour.add(yel);
mb.add(colour);
india.addActionListener(m);
aus.addActionListener(m);
brazil.addActionListener(m);
germ.addActionListener(m);
ice.addActionListener(m);
mal.addActionListener(m);
rus.addActionListener(m);
times.addActionListener(m);
dia.addActionListener(m);
sansserif.addActionListener(m);
courier.addActionListener(m);
bold.addActionListener(m);
```

```
italic.addActionListener(m);
size12.addActionListener(m);
size14.addActionListener(m);
size16.addActionListener(m);
size18.addActionListener(m);
blu.addActionListener(m);
bro.addActionListener(m);
gray.addActionListener(m);
green.addActionListener(m);
org.addActionListener(m);
red.addActionListener(m);
yel.addActionListener(m);
p.addMouseListener(new MouseAdapter() {
    public void mouseClicked(MouseEvent e) {
        pop.show(p , e.getX(), e.getY());
    }
});
p.add(mb);
p.add(dis);
p.add(pop);
f.add(p);
f.setVisible(true);
}

public void actionPerformed(ActionEvent o) {
    if(o.getSource()==clc){
        disp.setText("");
    }
    if(o.getSource()==exit){
        System.exit(0);
    }
    if(o.getSource()==times){
```

```

        disp.setFont(new
Font("TimesRoman",disp.getFont().getStyle(),disp.getFont().getSize()));
    }
    if(o.getSource()==dia){
        disp.setFont(new
Font("Dialog",disp.getFont().getStyle(),disp.getFont().getSize()));
    }
    if(o.getSource()==sansserif){
        disp.setFont(new
Font("SansSerif",disp.getFont().getStyle(),disp.getFont().getSize()));
    }
    if(o.getSource()==courier){
        disp.setFont(new
Font("Courier",disp.getFont().getStyle(),disp.getFont().getSize()));
    }
    if(o.getSource()==bold){
        disp.setFont(new
Font(disp.getFont().getName(),Font.BOLD,disp.getFont().getSize()));
    }
    if(o.getSource()==italic){
        disp.setFont(new
Font(disp.getFont().getName(),Font.ITALIC,disp.getFont().getSize()));
    }
    if(o.getSource()==size12){
        disp.setFont(new
Font(disp.getFont().getName(),disp.getFont().getStyle(),12));
    }
    if(o.getSource()==size14){
        disp.setFont(new
Font(disp.getFont().getName(),disp.getFont().getStyle(),14));
    }
    if(o.getSource()==size16){
        disp.setFont(new
Font(disp.getFont().getName(),disp.getFont().getStyle(),16));
    }

```

```

    }
    if(o.getSource()==size18){
        disp.setFont(new
Font(disp.getFont().getName(),disp.getFont().getStyle(),18));
    }
    if(o.getSource()==blu){
        disp.setForeground(new Color(0,0,255));
    }
    if(o.getSource()==bro){
        disp.setForeground(new Color(165,42,42));
    }
    if(o.getSource()==gray){
        disp.setForeground(new Color(128,128,128));
    }
    if(o.getSource()==green){
        disp.setForeground(new Color(0,255,0));
    }
    if(o.getSource()==org){
        disp.setForeground(new Color(255,165,0));
    }
    if(o.getSource()==red){
        disp.setForeground(new Color(255,0,0));
    }
    if(o.getSource()==yel){
        disp.setForeground(new Color(255,255,0));
    }

    if(o.getSource()==india | | o.getSource()==aus | | o.getSource()==brazil | | o.getSource()==germ |
| o.getSource()==ice | | o.getSource()==mal | | o.getSource()==rus){
        disp.setText(o.getActionCommand());
    }
}

```


}



2.

Develop Question 1 using JavaFX. Save the file as MenuWithJavaFX.java

```
import javafx.application.Application;
import javafx.scene.Scene;
import javafx.scene.control.Label;
import javafx.scene.layout.*;
import javafx.event.ActionEvent;
import javafx.event.EventHandler;
import javafx.scene.control.*;
import javafx.stage.Stage;
import javafx.scene.text.*;
import javafx.scene.text.FontWeight;
import javafx.scene.paint.*;
import javafx.scene.input.*;

public class MenuWithJavaFX extends Application{
    MenuBar mb;
    Menu country,font,name,type,size,colour;
```

```

        MenuItem
times, dia, sansserif, courier, bold, italic, size12, size14, size16, size18, india, aus, brazil, germ, ice, mal, rus, blu
, bro, gray, green, org, red, yel, clc, exit;

        Label disp;

        ContextMenu pop;

        public static void main(String args[]){

            launch(args);

        }

        public void start(Stage s){

            s.setTitle("creating MenuBar");

            pop= new ContextMenu();

            clc=new MenuItem("Clear");

            clc.setAccelerator(new KeyCodeCombination(KeyCode.C,
            KeyCodeCombination.CONTROL_DOWN));

            exit=new MenuItem("Exit");

            exit.setAccelerator(new KeyCodeCombination(KeyCode.E,
            KeyCodeCombination.CONTROL_DOWN));

            pop.getItems().addAll(clc, exit);

            mb = new MenuBar();

            country =new Menu("Country");

            country.setAccelerator(new KeyCodeCombination(KeyCode.C, KeyCodeCombination.ALT_DOWN));

            font = new Menu("Font");

            font.setAccelerator(new KeyCodeCombination(KeyCode.F, KeyCodeCombination.ALT_DOWN));

            colour = new Menu("Colour");

            colour.setAccelerator(new KeyCodeCombination(KeyCode.L, KeyCodeCombination.ALT_DOWN));

            name = new Menu("Name");

            name.setAccelerator(new KeyCodeCombination(KeyCode.N, KeyCodeCombination.ALT_DOWN));

            type = new Menu("Type");

            type.setAccelerator(new KeyCodeCombination(KeyCode.T, KeyCodeCombination.ALT_DOWN));

            size = new Menu("Size");

            size.setAccelerator(new KeyCodeCombination(KeyCode.S, KeyCodeCombination.ALT_DOWN));

            times=new MenuItem("TimesRoman");

```

```
dia=new MenuItem("Dialog");
sansserif = new MenuItem("SansSerif");
courier=new MenuItem("Courier");
bold = new MenuItem("Bold");
italic = new MenuItem("Italic");
size12 = new MenuItem("Size 12");
size14 = new MenuItem("Size 14");
size16 = new MenuItem("Size 16");
size18 = new MenuItem("Size 18");
india = new MenuItem("India");
aus =new MenuItem("Australia");
brazil = new MenuItem("Brazil");
germ = new MenuItem("Germany");
ice = new MenuItem("Iceland");
mal = new MenuItem("Malaysia");
rus = new MenuItem("Russia");
blu = new MenuItem("Blue");
bro =new MenuItem("Brown");
gray = new MenuItem("Gray");
green = new MenuItem("Green");
org = new MenuItem("Orange");
red = new MenuItem("Red");
yel=new MenuItem("Yellow");
disp = new Label();

times.setAccelerator(new KeyCodeCombination(KeyCode.I,
KeyCodeCombination.CONTROL_DOWN));

dia.setAccelerator(new KeyCodeCombination(KeyCode.D, KeyCodeCombination.CONTROL_DOWN));

sansserif.setAccelerator(new KeyCodeCombination(KeyCode.A,
KeyCodeCombination.CONTROL_DOWN));

courier.setAccelerator(new KeyCodeCombination(KeyCode.U,
KeyCodeCombination.CONTROL_DOWN));
```

```
bold.setAccelerator(new KeyCodeCombination(KeyCode.B,
KeyCombination.CONTROL_DOWN));

italic.setAccelerator(new KeyCodeCombination(KeyCode.R,
KeyCombination.CONTROL_DOWN));

size12.setAccelerator(new KeyCodeCombination(KeyCode.F2));
size14.setAccelerator(new KeyCodeCombination(KeyCode.F4));
size16.setAccelerator(new KeyCodeCombination(KeyCode.F6));
size18.setAccelerator(new KeyCodeCombination(KeyCode.F8));

india.setAccelerator(new KeyCodeCombination(KeyCode.G,
KeyCombination.CONTROL_DOWN));

aus.setAccelerator(new KeyCodeCombination(KeyCode.H, KeyCombination.CONTROL_DOWN));

brazil.setAccelerator(new KeyCodeCombination(KeyCode.J,
KeyCombination.CONTROL_DOWN));

germ.setAccelerator(new KeyCodeCombination(KeyCode.K,
KeyCombination.CONTROL_DOWN));

ice.setAccelerator(new KeyCodeCombination(KeyCode.M, KeyCombination.CONTROL_DOWN));
mal.setAccelerator(new KeyCodeCombination(KeyCode.P, KeyCombination.CONTROL_DOWN));
rus.setAccelerator(new KeyCodeCombination(KeyCode.Q, KeyCombination.CONTROL_DOWN));
blu.setAccelerator(new KeyCodeCombination(KeyCode.V, KeyCombination.CONTROL_DOWN));
bro.setAccelerator(new KeyCodeCombination(KeyCode.W, KeyCombination.CONTROL_DOWN));
gray.setAccelerator(new KeyCodeCombination(KeyCode.X, KeyCombination.CONTROL_DOWN));
green.setAccelerator(new KeyCodeCombination(KeyCode.Y,
KeyCombination.CONTROL_DOWN));

org.setAccelerator(new KeyCodeCombination(KeyCode.Z, KeyCombination.CONTROL_DOWN));
red.setAccelerator(new KeyCodeCombination(KeyCode.F1));
yel.setAccelerator(new KeyCodeCombination(KeyCode.F3));

country.getItems().add(india);
country.getItems().add(aus);
country.getItems().add(brazil);
country.getItems().add(germ);
country.getItems().add(ice);
country.getItems().add(mal);
country.getItems().add(rus);
```

```

mb.getMenus().add(country);
name.getItems().add(times);
name.getItems().add(dia);
name.getItems().add(sansserif);
name.getItems().add(courier);
font.getItems().add(name);
type.getItems().add(bold);
type.getItems().add(italic);
font.getItems().add(type);
size.getItems().add(size12);
size.getItems().add(size14);
size.getItems().add(size16);
size.getItems().add(size18);
font.getItems().add(size);
mb.getMenus().add(font);
colour.getItems().add(blue);
colour.getItems().add(brown);
colour.getItems().add(gray);
colour.getItems().add(green);
colour.getItems().add(orange);
colour.getItems().add(red);
colour.getItems().add(yellow);
mb.getMenus().add(colour);
EventHandler<ActionEvent> m = new EventHandler<ActionEvent>() {
    Font font;
    FontWeight fw;
    FontPosture fw1;
    public void handle(ActionEvent o)
    {
        if(o.getSource()==cl){
            disp.setText("");

```

```

    }

    if(o.getSource()==exit){
        System.exit(0);
    }

    if(o.getSource()==times){
        FontPosture str = FontPosture.findByName(disp.getFont().getStyle());
        FontWeight str1=FontWeight.findByName(disp.getFont().getStyle());
        font=Font.font("TimesRoman",str1,str,disp.getFont().getSize());
        disp.setFont(font);
    }

    if(o.getSource()==dia){
        FontPosture str =
FontPosture.findByName(disp.getFont().getStyle());
        FontWeight str1=FontWeight.findByName(disp.getFont().getStyle());
        font=Font.font("Dialog",str1,str,disp.getFont().getSize());
        disp.setFont(font);
    }

    if(o.getSource()==sansserif){
        FontPosture str =
FontPosture.findByName(disp.getFont().getStyle());
        FontWeight str1=FontWeight.findByName(disp.getFont().getStyle());
        font=Font.font("SansSerif",str1,str,disp.getFont().getSize());
        disp.setFont(font);
    }

    if(o.getSource()==courier){
        FontPosture str =
FontPosture.findByName(disp.getFont().getStyle());
        FontWeight str1=FontWeight.findByName(disp.getFont().getStyle());
        font=Font.font("Courier",str1,str,disp.getFont().getSize());
        disp.setFont(font);
    }

    if(o.getSource()==bold){

```

```

        fw=FontWeight.EXTRA_BOLD;

disp.setFont(Font.font(disp.getFont().getName(),fw,disp.getFont().getSize()));

    }

    if(o.getSource()==italic){
        fw1=FontPosture.ITALIC;

disp.setFont(Font.font(disp.getFont().getName(),fw1,disp.getFont().getSize()));

    }

    if(o.getSource()==size12){
        FontPosture str =
FontPosture.findByName(disp.getFont().getStyle());
        FontWeight str1=FontWeight.findByName(disp.getFont().getStyle());
        disp.setFont(Font.font(disp.getFont().getName(),str1,str,12));
    }

    if(o.getSource()==size14){
        FontPosture str =
FontPosture.findByName(disp.getFont().getStyle());
        FontWeight str1=FontWeight.findByName(disp.getFont().getStyle());
        disp.setFont(Font.font(disp.getFont().getName(),str1,str,14));
    }

    if(o.getSource()==size16){
        FontPosture str =
FontPosture.findByName(disp.getFont().getStyle());
        FontWeight str1=FontWeight.findByName(disp.getFont().getStyle());
        disp.setFont(Font.font(disp.getFont().getName(),str1,str,16));
    }

    if(o.getSource()==size18){
        FontPosture str =
FontPosture.findByName(disp.getFont().getStyle());
        FontWeight str1=FontWeight.findByName(disp.getFont().getStyle());
        disp.setFont(Font.font(disp.getFont().getName(),str1,str,18));
    }

```

```

        if(o.getSource()==blu){
            disp.setTextFill(Color.web("#0000FF"));
        }
        if(o.getSource()==bro){
            disp.setTextFill(Color.web("#A52A2A"));
        }
        if(o.getSource()==gray){
            disp.setTextFill(Color.web("#808080"));
        }
        if(o.getSource()==green){
            disp.setTextFill(Color.web("#008000"));
        }
        if(o.getSource()==org){
            disp.setTextFill(Color.web("#FFA500"));
        }
        if(o.getSource()==red){
            disp.setTextFill(Color.web("#FF0000"));
        }
        if(o.getSource()==yel){
            disp.setTextFill(Color.web("#FFFF00"));
        }

        if(o.getSource()==india | |o.getSource()==aus | |o.getSource()==brazil | |o.getSource()==germ |
|o.getSource()==ice | |o.getSource()==mal | |o.getSource()==rus){
            disp.setText(((MenuItem)o.getSource()).getText());
        }

    }

};

india.setAction(m);
aus.setAction(m);
brazil.setAction(m);
germ.setAction(m);

```



```
ice.setOnAction(m);
mal.setOnAction(m);
rus.setOnAction(m);
times.setOnAction(m);
dia.setOnAction(m);
sansserif.setOnAction(m);
courier.setOnAction(m);
bold.setOnAction(m);
italic.setOnAction(m);
size12.setOnAction(m);
size14.setOnAction(m);
size16.setOnAction(m);
size18.setOnAction(m);
blu.setOnAction(m);
bro.setOnAction(m);
gray.setOnAction(m);
green.setOnAction(m);
org.setOnAction(m);
red.setOnAction(m);
yel.setOnAction(m);
clc.setOnAction(m);
exit.setOnAction(m);

TilePane tilePane = new TilePane(mb);
mb.setContextMenu(pop);

VBox vb = new VBox(mb, disp, tilePane);

Scene sc = new Scene(vb, 300, 200);
s.setScene(sc);
s.show();
    }
}
```

