**swings**

import javax.swing.\*;  
import java.awt.\*;  
import java.awt.event.\*;  
public class t1{  
 public static void main(String[] args){  
 JFrame f=new JFrame();  
 Container con=f.getContentPane();  
 con.setLayout(null);  
 JLabel n1=new JLabel("NAME ");  
 n1.setBounds(110, 90, 210, 30);  
 con.add(n1);  
 JTextField txn=new JTextField();  
 txn.setBounds(170, 90, 210, 30);  
 con.add(txn);  
 JLabel a1=new JLabel("ADDRESS");  
 a1.setBounds(110, 120, 210, 30);  
 con.add(a1);  
 JTextField txa=new JTextField();  
 txa.setBounds(170, 120, 210, 30);  
 con.add(txa);  
 JLabel p1=new JLabel("PHONE ");  
 p1.setBounds(110, 150, 210, 30);  
 con.add(p1);  
 JTextField txp=new JTextField();  
 txp.setBounds(170, 150, 210, 30);  
 con.add(txp);  
 f.setTitle("Address Book");  
 f.setBounds(9, 9, 400, 300);  
 f.setVisible(true);  
 JButton b=new JButton("SUBMIT");  
 b.setBounds(170, 180, 210, 30);  
 con.add(b);  
 JLabel na,ad,ph;  
 na=new JLabel();  
 na.setBounds(170, 240, 210, 30);  
 con.add(na);  
 ad=new JLabel();  
 ad.setBounds(170, 270, 210, 30);  
 con.add(ad);  
 ph=new JLabel();  
 ph.setBounds(170, 300, 210, 30);  
 con.add(ph);  
 b.addActionListener(new ActionListener(){  
 public void actionPerformed(ActionEvent ae){  
 String n=txn.getText();  
 String a=txa.getText();  
 String p=txp.getText();  
 if(!n.equals("")&&!a.equals("")&&!p.equals("") ){  
 if(ae.getSource()==b){  
 na.setText("NAME = "+txn.getText());  
 ad.setText("ADDRESS = "+txa.getText());  
 ph.setText("PHONE = "+txp.getText());  
 } }  
 }  
 });  
 } }

import javax.swing.\*;  
import java.awt.\*;  
import java.awt.event.\*;  
class frame extends JFrame implements ActionListener{  
 JTextField txn,txa,txe;  
 JLabel v;  
 JButton b;  
 frame(){  
 setTitle("Student Registration Form");  
 setBounds(9, 9, 400, 300);  
 Container con=getContentPane();  
 con.setLayout(null);  
 JLabel n=new JLabel("NAME");  
 n.setBounds(110, 90, 210, 30);  
 con.add(n);  
 txn=new JTextField();  
 txn.setBounds(170, 90, 210, 30);  
 con.add(txn);  
 JLabel a=new JLabel("AGE");  
 a.setBounds(110, 120, 210, 30);  
 con.add(a);  
 txa=new JTextField();  
 txa.setBounds(170, 120, 210, 30);  
 con.add(txa);  
 JLabel e=new JLabel("EMAIL");  
 e.setBounds(110, 150, 210, 30);  
 con.add(e);  
 txe=new JTextField();  
 txe.setBounds(170, 150, 210, 30);  
 con.add(txe);  
 b=new JButton("SUBMIT");  
 b.setBounds(170, 180, 210, 30);  
 con.add(b);  
 v=new JLabel();  
 v.setBounds(170, 210, 210, 30);  
 con.add(v);  
 b.addActionListener(this);  
 setVisible(true);  
 }  
 public void actionPerformed(ActionEvent e){  
 String n=txn.getText();  
 String ag=txa.getText();  
 String em=txe.getText();  
 if(!n.equals("")&&!ag.equals("")&&!em.equals("")){  
 if(e.getSource()==b){  
 txn.setText(" ");  
 txa.setText(" ");  
 txe.setText(" ");  
 v.setText("REGISTERED SUCCESSFULLY!!!");  
 } }  
 } }  
public class t2 {  
 public static void main(String[] args) {  
 frame fra=new frame();  
 } }

* **now some new components of swings:::::::::::**

**check box**

package SwingExamples;  
  
import javax.swing.\*;   
import java.awt.event.\*;  
public class CheckBoxExample extends JFrame implements ActionListener{   
 JLabel l;   
 JCheckBox cb1,cb2,cb3;   
 JButton b;

CheckBoxExample(){   
 l=new JLabel("Food Ordering System");   
 l.setBounds(50,50,300,20);   
   
 cb1=new JCheckBox("Pizza @ 100");   
 cb1.setBounds(100,100,150,20);   
   
 cb2=new JCheckBox("Burger @ 30");   
 cb2.setBounds(100,150,150,20);   
   
 cb3=new JCheckBox("Tea @ 10");   
 cb3.setBounds(100,200,150,20);   
   
 b=new JButton("Order");   
 b.setBounds(100,250,80,30);   
 b.addActionListener(this);   
   
 add(l);add(cb1);add(cb2);add(cb3);add(b);   
   
 setSize(400,400);   
 setLayout(null);   
 setVisible(true);   
 setDefaultCloseOperation(EXIT\_ON\_CLOSE);   
 }   
   
   
 public void actionPerformed(ActionEvent e){   
 float amount=0;   
 String msg="";   
 if(cb1.isSelected()){   
 amount+=100;   
 msg="Pizza: 100\n";   
 }   
 if(cb2.isSelected()){   
 amount+=30;   
 msg+="Burger: 30\n";   
 }   
 if(cb3.isSelected()){   
 amount+=10;   
 msg+="Tea: 10\n";   
 }   
 msg+="-----------------\n";   
 JOptionPane.showMessageDialog(this,msg+"Total: "+amount);   
 }   
   
 public static void main(String[] args) {   
 new CheckBoxExample();   
 }   
}

**password field**

import javax.swing.\*;   
import java.awt.event.\*;   
  
public class E3PasswordField {   
   
 public static void main(String[] args) {   
 JFrame f=new JFrame("Password Field Example");   
   
 final JLabel label = new JLabel();  
 label.setBounds(20,150, 300,50);  
   
 JPasswordField value = new JPasswordField();  
 value.setBounds(100,75,100,30);  
   
 JLabel l1=new JLabel("Username:");  
 l1.setBounds(20,20, 80,30);  
   
 JLabel l2=new JLabel("Password:");  
 l2.setBounds(20,75, 80,30);   
   
 JButton b = new JButton("Login");   
 b.setBounds(100,120, 80,30);   
   
 final JTextField text = new JTextField();   
 text.setBounds(100,20, 100,30);  
   
 f.add(value); f.add(l1); f.add(label); f.add(l2); f.add(b); f.add(text);   
   
 f.setSize(400, 400);   
 f.setLayout(null);   
 f.setVisible(true);   
   
 b.addActionListener(new ActionListener() {   
 public void actionPerformed(ActionEvent e) {   
 String data = "Username " + text.getText();   
 data += ", Password: "   
 + new String(value.getPassword());   
 label.setText(data);   
 }  
 });   
 }   
}

**combo box**

import javax.swing.\*;  
  
public class ta5\_arr {  
 JFrame f;  
  
 ta5\_arr(){  
 f=new JFrame("ComboBox Example");  
 String country[]={"Pakistan","Australia","U.S.A","England","New Zealand"};  
 JComboBox cb=new JComboBox(country);  
 cb.setBounds(50, 50,100,20);  
 f.add(cb);  
 f.setLayout(null);  
 f.setSize(400,500);  
 f.setVisible(true);  
 }  
  
 public static void main(String[] args) {  
 new ta5\_arr();  
 }  
  
  
}

**option pane and radio button**

import javax.swing.\*;  
import java.awt.event.\*;  
  
class ta5 extends JFrame implements ActionListener{  
 JRadioButton rb1,rb2;  
 JButton b;  
 ta5(){  
 rb1=new JRadioButton("Cat");  
 rb1.setBounds(100,50,100,30);  
  
 rb2=new JRadioButton("Dog");  
 rb2.setBounds(100,100,100,30);  
  
 ButtonGroup bg=new ButtonGroup();  
 bg.add(rb1);bg.add(rb2);  
  
 b=new JButton("click");  
 b.setBounds(100,150,80,30);  
 b.addActionListener(this);  
  
 add(rb1);add(rb2);add(b);  
  
 setSize(300,300);  
 setLayout(null);  
 setVisible(true);  
  
 }  
  
 public void actionPerformed(ActionEvent e){  
 if(rb1.isSelected()){  
 JOptionPane.*showMessageDialog*(this,"Cat.");  
 }  
 if(rb2.isSelected()){  
 JOptionPane.*showMessageDialog*(this,"Dog.");  
 }  
 }  
  
 public static void main(String args[]){  
 new ta5();  
 }  
  
}

**Mouse events**

import java.awt.\*;  
import java.awt.event.\*;  
  
public class MouseEventsDemo extends Frame implements MouseListener, MouseMotionListener {  
 String msg = "";  
 int mouseX = 0, mouseY = 0;  
   
 public MouseEventsDemo() {  
 addMouseListener(this);  
 addMouseMotionListener(this);  
 addWindowListener(new MyWindowAdapter());  
 }  
  
 @Override  
 public void mouseDragged(MouseEvent e) {  
 // mouse dragged  
 mouseX = e.getX();  
 mouseY = e.getY();  
 msg = "\*" + "mouse at " + mouseX + ", " + mouseY;  
 repaint();  
 }  
  
 @Override  
 public void mouseMoved(MouseEvent e) {  
 // mouse moved  
 msg = "Moving mouse at " + e.getX() + ", " + e.getY();  
 repaint();  
   
 }  
  
 @Override  
 public void mouseClicked(MouseEvent e) {  
 // mouse clicked  
 msg = msg + " -- click received";  
 repaint();  
   
 }  
  
 @Override  
 public void mousePressed(MouseEvent e) {  
 // mouse button pressed  
 mouseX = e.getX();  
 mouseY = e.getY();  
 msg = "Button Down";  
 repaint();  
 }  
  
 @Override  
 public void mouseReleased(MouseEvent e) {  
 // mouse button released  
 mouseX = e.getX();  
 mouseY = e.getY();  
 msg = "Button Released";  
 repaint();  
   
 }  
  
 @Override  
 public void mouseEntered(MouseEvent e) {  
 // mouse entered  
 mouseX = 100;  
 mouseY = 100;  
 msg = "Mouse Entered";  
 repaint();  
   
 }  
  
 @Override  
 public void mouseExited(MouseEvent e) {  
 // mouse exited  
 mouseX = 100;  
 mouseY = 100;  
 msg = "Mouse Exited";  
 repaint();  
 }  
   
 public void paint(Graphics g) {  
 g.drawString(msg, mouseX, mouseY);  
 }  
   
 public static void main(String args[]) {  
 MouseEventsDemo appwin = new MouseEventsDemo();  
 appwin.setSize(new Dimension(300,300));  
 appwin.setTitle("Mouse Events Demo");  
 appwin.setVisible(true);  
 }  
}  
  
class MyWindowAdapter extends WindowAdapter {  
 public void windowClosing (WindowEvent we) {  
 System.exit(0);  
 }  
}

**Java fx**

**Task 01**

package com.example.t1;  
import javafx.application.Application;  
import javafx.event.\*;  
import javafx.scene.\*;  
import javafx.scene.Group;  
import javafx.scene.Scene;  
import javafx.scene.control.\*;  
import javafx.scene.effect.\*;  
import javafx.scene.layout.\*;  
import javafx.stage.Stage;  
import javafx.scene.image.\*;  
import javafx.scene.input.KeyCombination;  
import javafx.scene.paint.Color;  
import javafx.scene.text.\*;  
public class t1 extends Application{  
 @Override  
 public void start(Stage ps) {  
 HBox p=new HBox();  
 HBox q=new HBox();  
 HBox r=new HBox();  
 VBox pa=new VBox();  
 Label n=new Label("NAME");  
 Label ph=new Label("PHONE");  
 Label a=new Label("ADDRESS");  
 TextField txn=new TextField();  
 txn.setMaxWidth(230);  
 TextField txp=new TextField();  
 txp.setMaxWidth(230);  
 TextField txa=new TextField();  
 txa.setMaxWidth(230);  
 Label n1=new Label(" ");  
 Label a1=new Label(" ");  
 Label p1=new Label(" ");  
 Button b=new Button("SUBMIT");  
 b.setMaxWidth(200);  
 pa.setSpacing(10);  
 p.getChildren().add(txn);  
 p.getChildren().add(n1);  
 p.setSpacing(10);  
 q.getChildren().add(txp);  
 q.getChildren().add(p1);  
 q.setSpacing(10);  
 r.getChildren().add(txa);  
 r.getChildren().add(a1);  
 r.setSpacing(10);  
 pa.getChildren().add(n);  
 pa.getChildren().add(p);  
 pa.getChildren().add(ph);  
 pa.getChildren().add(q);  
 pa.getChildren().add(a);  
 pa.getChildren().add(r);  
 pa.getChildren().add(b);  
 Label re=new Label();  
 Label la=new Label();  
 Label lb=new Label();  
 Label lc=new Label();  
 pa.getChildren().add(re);  
 pa.getChildren().add(la);  
 pa.getChildren().add(lb);  
 pa.getChildren().add(lc);  
 b.setOnAction(new EventHandler<ActionEvent>(){  
 public void handle(ActionEvent ae){  
 String n=txn.getText();  
 String p=txp.getText();  
 String a=txa.getText();  
 if(ae.getSource()==b){  
 if(!n.equals("")){  
 n1.setText(""); }  
 if(!p.equals("")) {  
 p1.setText(""); }  
 if(!a.equals("")) {  
 a1.setText(""); }  
 if(!n.equals("")&&!p.equals("")&&!a.equals("")){  
 la.setText("NAME = "+n);  
 lb.setText("PHONE = "+p);  
 lc.setText("ADDRESS = "+a);  
 txn.setText("");  
 txp.setText("");  
 txa.setText("");  
 }  
 }  
 if(ae.getSource()==b){  
 if(n.equals("")){  
 n1.setText("name not filled"); }  
 else if(p.equals("")){  
 p1.setText("phone no not filled"); }  
 else if(a.equals("")){  
 a1.setText("address not filled"); }  
 } }  
 });  
 Scene sc=new Scene(pa);  
 ps.setScene(sc);  
 ps.setTitle("ADDRESS BOOK");  
 ps.setWidth(510);  
 ps.setHeight(610);  
 ps.show();}  
 public static void main(String[] args) {  
 *launch*(args);  
 }

}

**Task 02**

package com.example.ta2;  
import javafx.application.Application;  
import javafx.event.ActionEvent;  
import javafx.event.EventHandler;  
import javafx.scene.Scene;  
import javafx.scene.control.Button;  
import javafx.scene.control.Label;  
import javafx.scene.control.TextField;  
import javafx.scene.layout.HBox;  
import javafx.scene.layout.StackPane;  
import javafx.scene.layout.VBox;  
import javafx.scene.text.Font;  
import javafx.scene.text.FontWeight;  
import javafx.stage.Stage;  
public class ta2 extends Application{  
 @Override  
 public void start(Stage ps){  
 HBox p=new HBox();  
 HBox q=new HBox();  
 HBox r=new HBox();  
 HBox s=new HBox();  
 VBox pa=new VBox();  
 Label n=new Label("NAME ");  
 Label a=new Label("AGE ");  
 Label e=new Label("EMAIL");  
 TextField txn=new TextField();  
 txn.setMaxWidth(230);  
 TextField txa=new TextField();  
 txa.setMaxWidth(230);  
 TextField txe=new TextField();  
 txe.setMaxWidth(230);  
 Label n1=new Label(" ");  
 Label a1=new Label(" ");  
 Label e1=new Label(" ");  
 Button b=new Button("REGISTER");  
 b.setMaxWidth(200);  
 pa.setSpacing(10);  
 p.getChildren().add(n);  
 p.getChildren().add(txn);  
 p.getChildren().add(n1);  
 p.setSpacing(10);  
 q.getChildren().add(a);  
 q.getChildren().add(txa);  
 q.getChildren().add(a1);  
 q.setSpacing(10);  
 r.getChildren().add(e);  
 r.getChildren().add(txe);  
 r.getChildren().add(e1);  
 r.setSpacing(10);  
 s.getChildren().add(b);  
 pa.getChildren().add(p);  
 pa.getChildren().add(q);  
 pa.getChildren().add(r);  
 pa.getChildren().add(s);  
 pa.setSpacing(20);  
 Label l=new Label();  
 pa.getChildren().add(l);  
 b.setOnAction(new EventHandler<ActionEvent>(){  
 public void handle(ActionEvent ae) {  
 String n=txn.getText();  
 String p=txa.getText();  
 String a=txe.getText();  
 if(ae.getSource()==b){  
 if(!n.equals("")){  
 n1.setText(""); }  
 if(!p.equals("")) {  
 e1.setText(""); }  
 if(!a.equals("")){  
 a1.setText(""); }  
 if(!n.equals("")&&!p.equals("")&&!a.equals("")){  
 l.setText("REGISTERED SUCESSFULLY!!!");  
 txn.setText("");  
 txe.setText("");  
 txa.setText("");  
 } }  
 if(ae.getSource()==b){  
 if(n.equals("")){  
 n1.setText("name is null"); }  
 else if(p.equals("")){  
 a1.setText("age is null"); }  
 else if(a.equals("")){  
 e1.setText("email is null"); }  
 } }  
 });  
 Scene sc=new Scene(pa);  
 ps.setScene(sc);  
 ps.setTitle("STUDENT REGISTRATION FORM");  
 ps.setWidth(600);  
 ps.setHeight(400);  
 ps.show(); }  
 public static void main(String[] args) {  
 *launch*(args); }  
}

**Servlet**

**Cookie**

**.java**

import java.io.IOException;

import java.io.PrintWriter;

import java.util.UUID;

import jakarta.servlet.ServletException;

import jakarta.servlet.http.Cookie;

import jakarta.servlet.http.HttpServlet;

import jakarta.servlet.http.HttpServletRequest;

import jakarta.servlet.http.HttpServletResponse;

public class cr\_servlet extends HttpServlet {

@Override

protected void doGet(HttpServletRequest request, HttpServletResponse response)

throws ServletException, IOException {

response.setContentType("text/html");

PrintWriter out=response.getWriter();

String co\_n="Cookies";

Cookie[] c=request.getCookies();

if(c!=null){

for(Cookie co:c){

if (co.getName().equals(co\_n)) {

String c\_val=co.getValue();

out.println(co\_n+" = "+" "+c\_val);

return; }

} }

String uc=UUID.randomUUID().toString();

Cookie ucc=new Cookie(co\_n, uc);

ucc.setMaxAge(60\*60);

response.addCookie(ucc);

out.println("Cookies = " + co\_n+ " "+uc);

}

}

**.html**

<!DOCTYPE html>

<html>

<head>

</head>

<body>

<p>Click for cookie!!!</p>

<form action="cr\_servlet" method="get">

<input type="submit" value="CLICK">

</form>

</body>

</html>

**Form creation**

package com.practise;  
import jakarta.servlet.\*;  
import jakarta.servlet.http.\*;  
import java.io.IOException;  
import java.io.PrintWriter;  
public class ResgisterServlet extends HttpServlet  
{  
 public void doPost(HttpServletRequest req, HttpServletResponse res)  
 throws ServletException, IOException   
 {  
 res.setContentType("text/html");  
 PrintWriter out = res.getWriter();  
 out.println("<h2> Welcome to Register Servlet<h2>");  
 String name=req.getParameter("user\_name");  
 String password=req.getParameter("password");  
 String email=req.getParameter("email");  
 String gender=req.getParameter("user\_gender");  
 String course=req.getParameter("user\_course");  
 String cond=req.getParameter("condition");  
 if(cond !=null )  
 {  
 if(cond.equals("checked"))  
 {  
 out.println("<h2> Name: "+name+"</h2>");  
 out.println("<h2> Password: "+password+"</h2>");  
 out.println("<h2> Email: "+email+"</h2>");  
 out.println("<h2> Gender: "+gender+"</h2>");  
 out.println("<h2> Course: "+course+"</h2>");  
 out.println("<h2> Condition: "+cond+"</h2>");  
 }  
 else  
 {  
 out.println("<h2>You have not accepted terms and conditions</h2>");  
 }  
 }  
 else  
 {  
 out.println("<h2>You have not accepted terms and conditions</h2>");   
 }  
 }  
}

**htmll////////////**

**<html>**

**<head>**

**<title>Form Page</title>**

**<meta charset="UTF-8">**

**<meta name="viewport" content="width=device-width, initial-scale=1.0">**

**<style>**

**.container{**

**width: 40%;**

**border: 1px solid black;**

**margin: auto;**

**padding: 20px;**

**font-size: 20px;**

**}**

**.myform table tr td input{**

**font-size: 20px;**

**}**

**</style>**

**</head>**

**<body>**

**<center>**

**<div class="container">**

**<h1> My From</h1>**

**<form id="myform" action="RegisterServlet" method="post">**

**<table>**

**<tr>**

**<td>Enter your name:</td>**

**<td><input type="text" name="user\_name" placeholder="Enter your username"></td>**

**</tr>**

**<tr>**

**<td>Enter your password:</td>**

**<td><input type="password" name="password" placeholder="Enter your password"></td>**

**</tr>**

**<tr>**

**<td>Enter your Email:</td>**

**<td><input type="email" name="email" placeholder="Enter your email"></td>**

**</tr>**

**<tr>**

**<td>Select Gender</td>**

**<td><input type="radio" name="user\_gender" value="male">Male &nbsp; &nbsp;<input type="radio" name="user\_gender" value="female"> Female</td>**

**</tr>**

**<tr>**

**<td>Select your course</td>**

**<td>**

**<select name="user\_course">**

**<option value="Java">Java</option>**

**<option value="Php">Php</option>**

**<option value="Python">Python</option>**

**<option value="Android">Android</option>**

**</select>**

**</td>**

**</tr>**

**<tr>**

**<td style="text-align: right">**

**<input type="checkbox" value="checked" name="condition">**

**</td>**

**<td>**

**Agree terms and conditions**

**</td>**

**</tr>**

**<tr>**

**<td>**

**</td>**

**<td>**

**<button type="submit">Register</button>**

**<button type="reset">Reset</button>**

**</td>**

**</tr>**

**</table>**

**</form>**

**</div>**

**</center>**

**</body>**

**</html>**