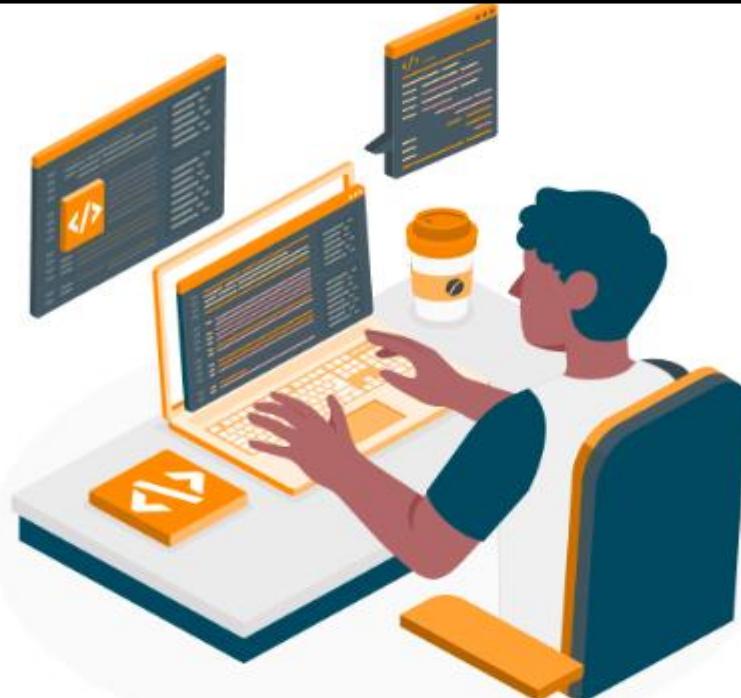




**Build Your IT Skill**

## Java GUI (Graphic User Interface) Java Swing



យោបាយនៅរាយ  
ប្រពេលឃើញិត្ត  
អនុបណ្ឌិត RUPP, TKU  
(Software Engineering)  
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ជំនួយការនៅរាយ  
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# GUI Java

## ( Graphic User Interface )

### I. ចូលរួមទៅស្វែនយក GUI?

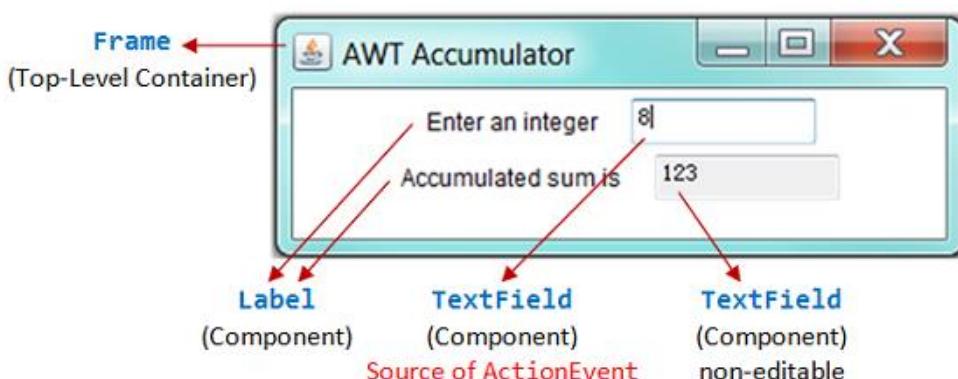
ពាក្យជា GUI សំដេរលើការបញ្ចូល និងបញ្ចូលទីន៍យលក្តុណៈជា Form Interface ដែលអ្នកប្រើប្រាស់អាចរាយបញ្ហាលទត្តិមាន និងបញ្ចូលមានបានដោយភាពជាយ ប្រើប្រាស់ Java ផ្តល់លទ្ធភាពអ្នក Design នូវ GUI ដោយមានភាពជាយស្ថិតពេលអ្នកអាច មានជំរឿសពីការសរសេរក្នុង បង្កើត ឬ អាជីតមានបាប់ទាញនូវ ToolBox មកដាក់ចិត្ត សំណង់ ឬ រាយការ។

នៅក្នុង Java API សំរាប់ graphic form រាយការបង្កើតដល់ ៣ Version ដូចជា៖

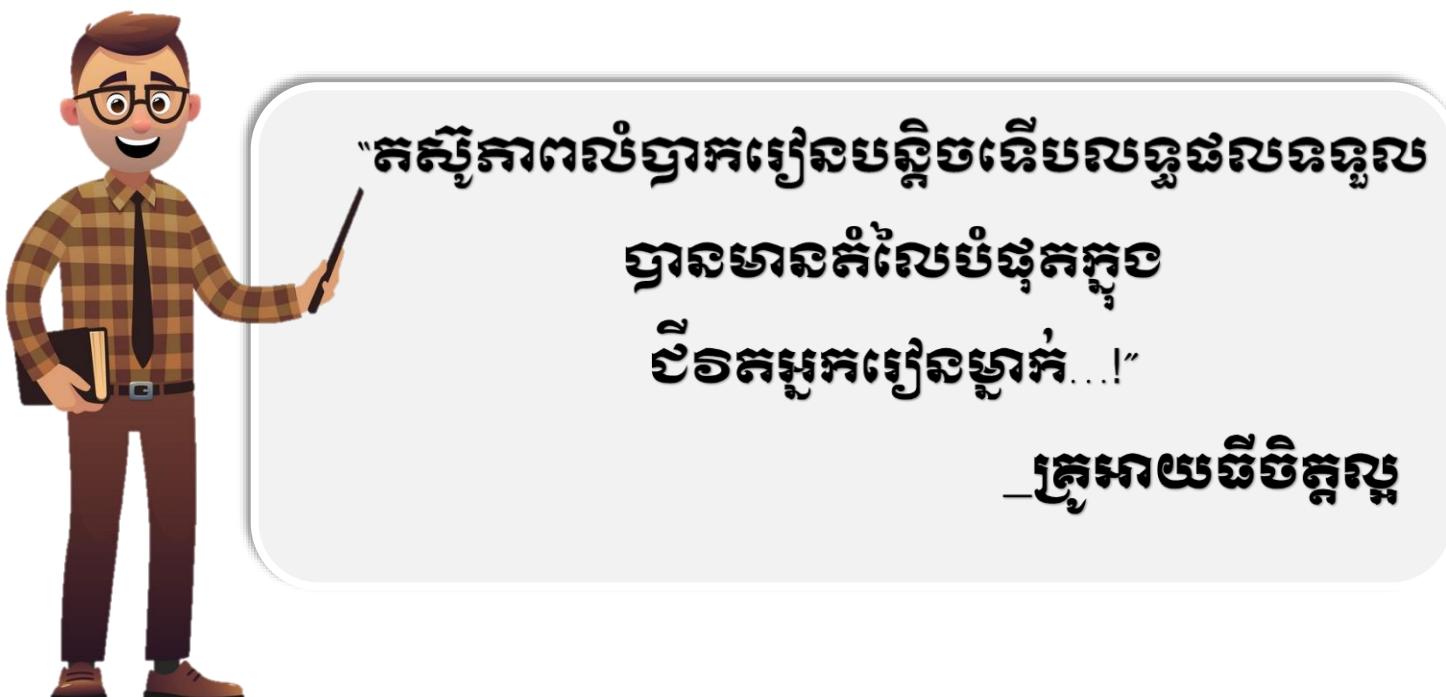
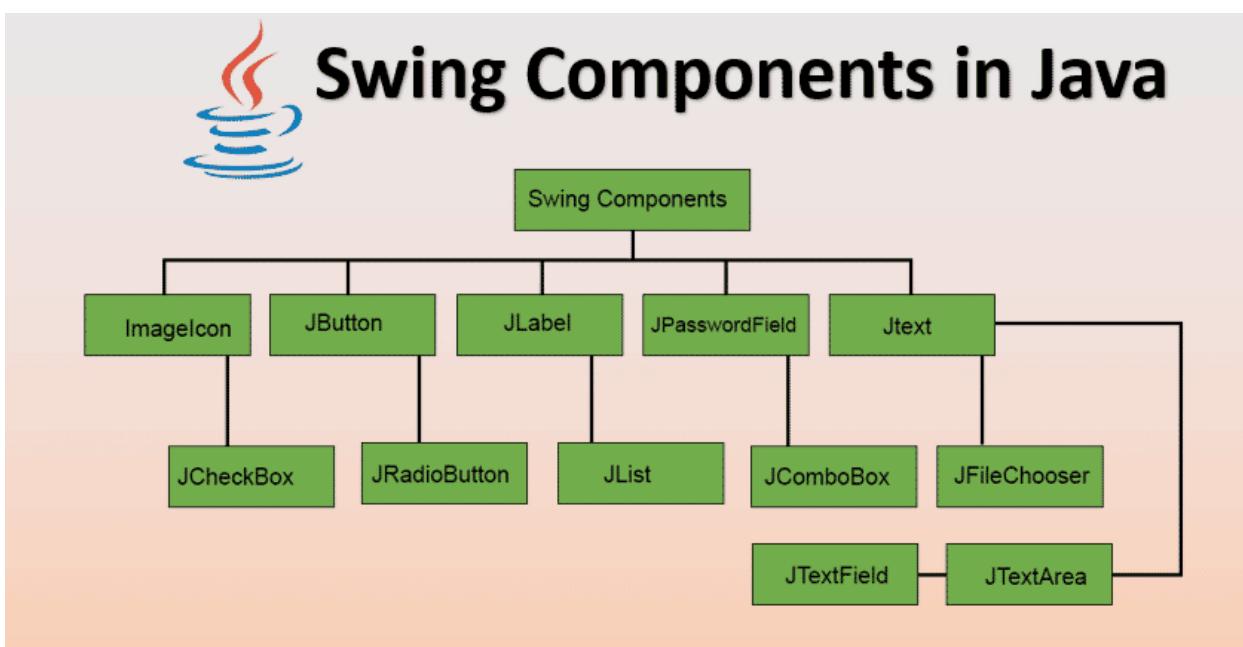
១) AWT(Abstract Windowing Toolkit): គឺជាប្រព័ន្ធដំនាន់ដំបូងគេនៃការសរសេរ Java តាំងពី JDK ដំនាន់ទី ១មក។

២) Swing: ជាដំនាន់បន្ទាប់ពី AWT ដែលរាយការបង្កើតមន្ត្រីសមាសធាតុ ToolBox ដើរីជាប្រព័ន្ធដំនាន់ដំបូងគេនៃការសរសេរ Java មានភាពស្រួលស្ថាតនិងទាក់ទង្វើ សំណងក់អ្នកប្រើប្រាស់ និង អ្នកបង្កើត។ រាយការបង្កើតនេះនឹងក្នុង JDK ដំនាន់ទី ១.៨។

៣) ដំនាន់បុងគ្រាយនៃ Java គឺ JavaFxដែលបានកំពុងប្រព័ន្ធដំនាន់ដំបូងគេនៃការសរសេរ Java តាំងពី JDK 8 សម្រាប់ប្រើប្រាស់។



- II. Java Swing: គឺជាប្រពេទ Version ម្អាយទៅតែដែលបង្កើតចេញពី AWT ដែលវាតានបន្ថែមទាំងរូបភាព និង ToolBox បន្ថី។ ជាប្រើប្រាស់សំណង់បំផើកុងការធ្វើរបៀបដឹងទូទៅនៃការងារ។ Java Swing គឺជាប្រពេទ Version ម្អាយមានការនិយមប្រើប្រាស់ខ្លាំងពីសំណងកំអ្នកប្រើប្រាស់ផ្សេងៗ។ ដោយសារវាគារ Support ជាមួយនឹង MVC, Plugin ហើយ Platform របស់វាគិន អាណ្វ៉ាយ គ្នានេះទេ។

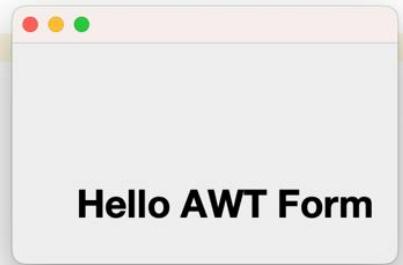


សៀវភៅក្រុងផែនយោលត្រាតាមរបាយការណ៍ និងការគ្រប់គ្រងសម្រាប់អាជីវកម្ម និងការបង្កើតរឹងចាំបាច់  
H/P: 096 226 888 4 / 077 35 888 4 / 097 226 888 4

## ខាងក្រោមនេះ គឺជាគម្រោង Component នៃ Swing Java

### ឧទាហរណ៍ ១: គាមប្លើកលូត JLabel

```
1 package awt;
2 import java.awt.Font;
3 import javax.swing.JFrame;
4 import javax.swing.JLabel;
5
6 public class Test1 extends JFrame{
7     JLabel lbid;
8     public Test1()
9     {
10         lbid=new JLabel("Hello AWT Form");
11         lbid.setFont(new Font("Helvetica Neue",Font.BOLD,30));
12         lbid.setBounds(50, 100, 300, 50);
13         add(lbid);
14
15         setLayout(null);
16         setVisible(true);
17         setSize(300, 200);
18         setLocationRelativeTo(null);
19     }
20     public static void main(String[] args) {
21         new Test1();
22     }
23 }
24
```



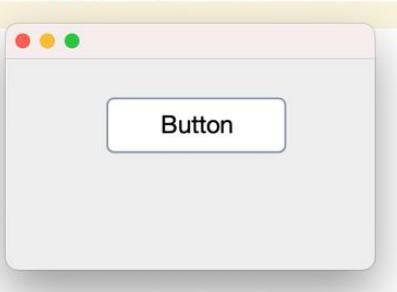
### - គាមប្លើកលូត JTextField

```
1 package awt;
2 import java.awt.Font;
3 import javax.swing.JFrame;
4 import javax.swing.JTextField;
5 public class Test1 extends JFrame{
6     JTextField txt;
7     public Test1()
8     {
9         txt=new JTextField();
10        txt.setFont(new Font("Helvetica Neue",Font.PLAIN,20));
11        txt.setBounds(40, 30, 250, 50);
12        add(txt);
13        setLayout(null);
14        setVisible(true);
15        setSize(300, 200);
16        setLocationRelativeTo(null);
17    }
18    public static void main(String[] args) {
19        new Test1();
20    }
21 }
22
```



## - ការបង្កើតលួន JButton

```
1 package awt;
2 import java.awt.Font;
3 import javax.swing.JButton;
4 import javax.swing.JFrame;
5 public class Test1 extends JFrame{
6     JButton btn;
7     public Test1()
8     {
9         btn=new JButton("Button");
10        btn.setFont(new Font("Helvetica Neue",Font.PLAIN,20));
11        btn.setBounds(80, 30, 150, 50);
12        add(btn);
13        setLayout(null);
14        setVisible(true);
15        setSize(300, 200);
16        setLocationRelativeTo(null);
17    }
18    public static void main(String[] args) {
19        new Test1();
20    }
21 }
```

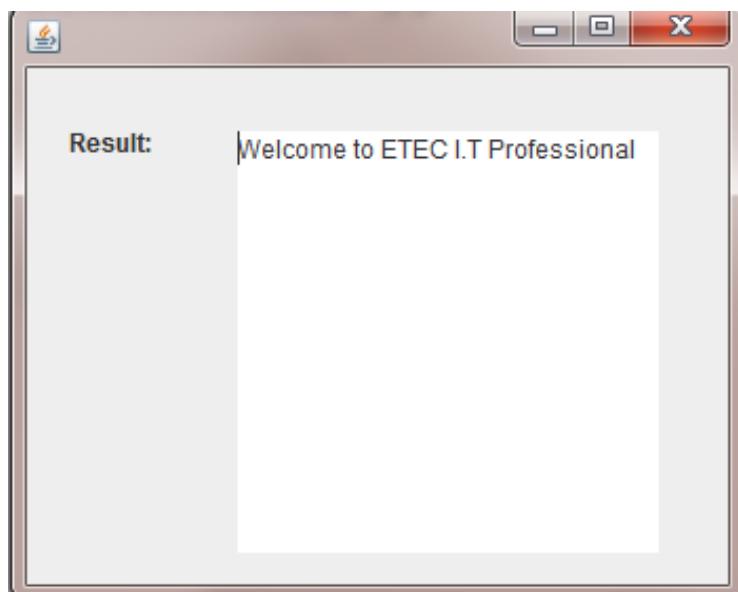


ឧទានេរណ៍ ២៖ ការបង្កើតលួន JTextArea(សំណុំបញ្ជាញText ឬ ចាប់ផ្តើម Text  
ប្រាកដពី Record)

```
Start Page AWTFirstPro.java x
import java.awt.event.*;
import javax.swing.*;
class AWTFirstPro{

    public static void main(String args[])
    {
        JFrame f= new JFrame();
        JTextArea area=new JTextArea("Welcome to ETEC I.T Professional");
        JLabel lbl=new JLabel("Result:");
        lbl.setBounds(20,20,100,30);
        area.setBounds(100,30, 200,200);
        f.add(area);
        f.add(lbl);
        f.setSize(300,300);
        f.setLayout(null);
        f.setVisible(true);
    }
}
```

## របៀបធ្វើដំឡើង JPasswordField

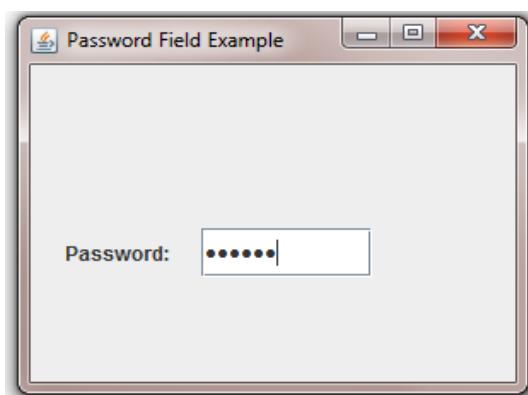


ឧទាហរណ៍ នៃការបង្កើតលូត JPasswordField(សំណង់បញ្ជាញិត្យល័យបាន Password) ។

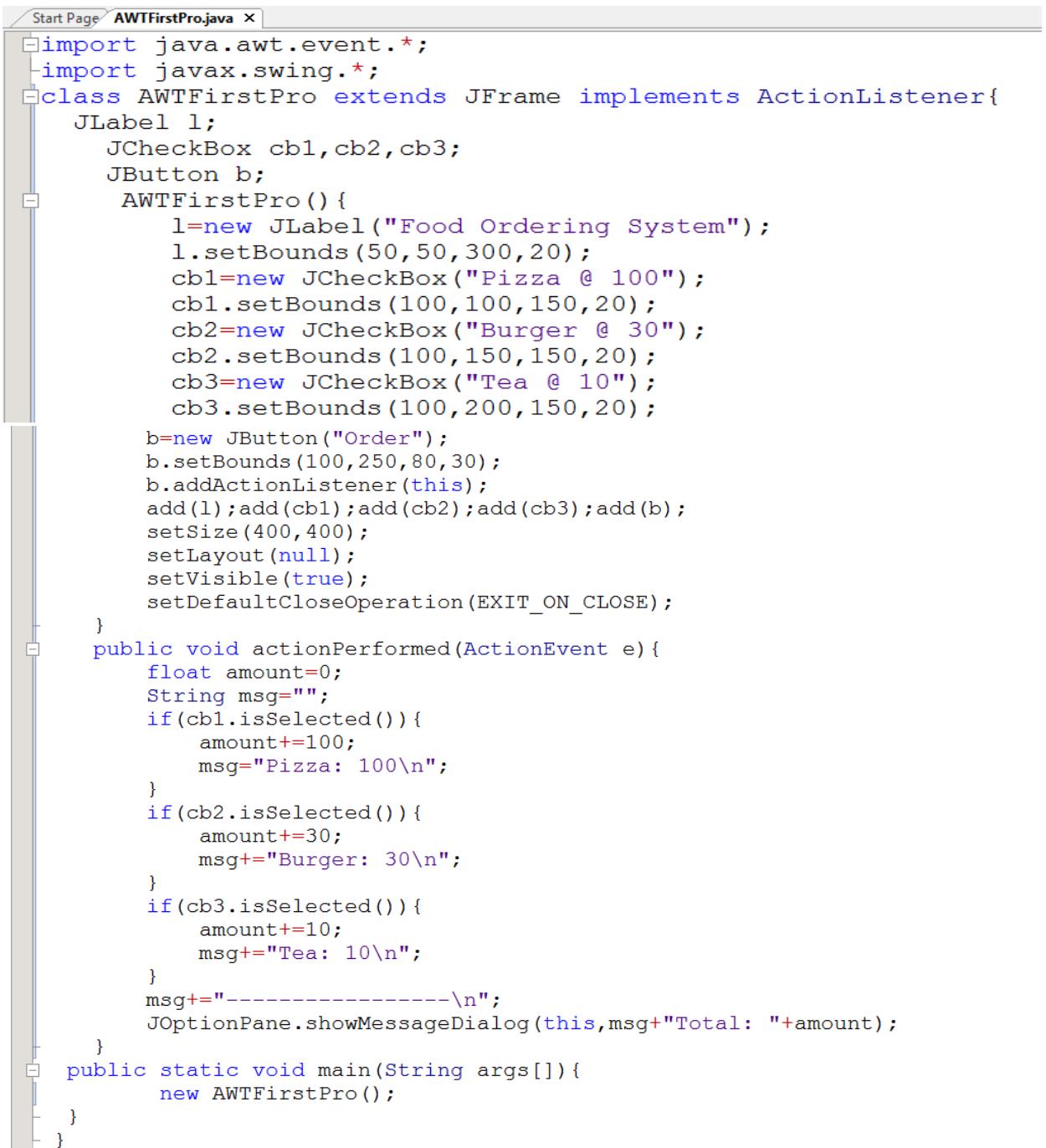
```
Start Page AWTFirstPro.java ×
import java.awt.event.*;
import javax.swing.*;
class AWTFirstPro{

    public static void main(String args[]){
        JFrame f=new JFrame("Password Field Example");
        JPasswordField value = new JPasswordField();
        JLabel l1=new JLabel("Password:");
        l1.setBounds(20,100, 80,30);
        value.setBounds(100,100,100,30);
        f.add(value); f.add(l1);
        f.setSize(300,300);
        f.setLayout(null);
        f.setVisible(true);
    }
}
```

## របៀបធ្វើដំឡើង JPasswordField

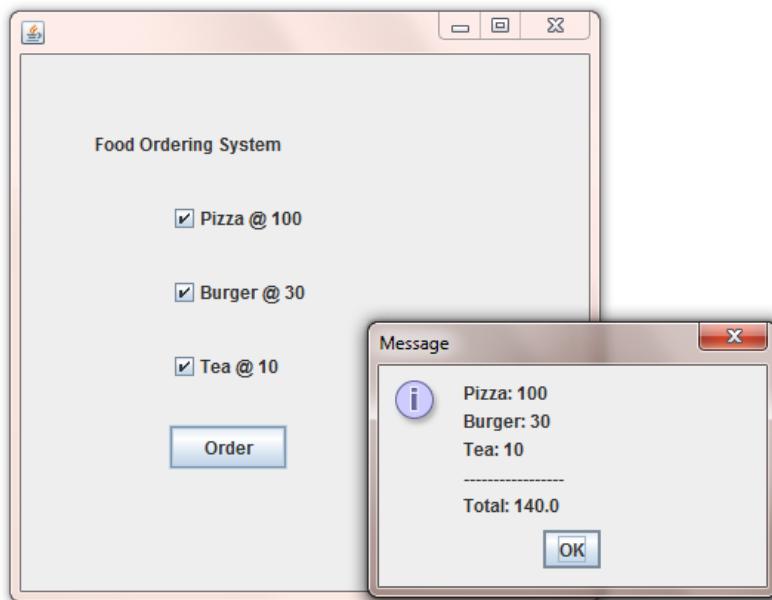


## មុខងារនេះ និង ការបង្កើតឡើងCheckBox(សំរាប់ការប្រើប្រាស់នៃជួលុយ)



```
Start Page AWTFirstPro.java x
import java.awt.event.*;
import javax.swing.*;
class AWTFirstPro extends JFrame implements ActionListener{
    JLabel l;
    JCheckBox cb1,cb2,cb3;
    JButton b;
    AWTFirstPro() {
        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 AWTFirstPro();
    }
}
```

## លម្អិតលទ្ធផ្លែតម្រានេះ



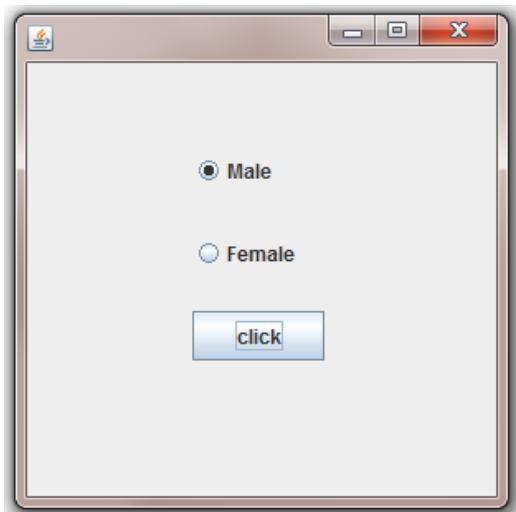
## ឧបាទាន់ និង ការប្រើប្រាស់លាម្អិត JRadioButton

```

Start Page AWTFirstPro.java X
import java.awt.event.*;
import javax.swing.*;
class AWTFirstPro extends JFrame implements ActionListener{
JRadioButton rb1,rb2;
JButton b;
AWTFirstPro(){
rb1=new JRadioButton("Male");
rb1.setBounds(100,50,100,30);
rb2=new JRadioButton("Female");
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,"You are Male.");
}
if(rb2.isSelected()){
 JOptionPane.showMessageDialog(this,"You are Female.");
}
}
public static void main(String args[]){
new AWTFirstPro();
}
}

```

## លទ្ធផលនៃការបង្កើត



## ឧទាហរណ៍ ៦: ការបង្កើតកម្មសែវភាព JComboBox

```

Start Page DemoSwing.java X
import java.awt.event.*;
import javax.swing.*;
class DemoSwing {
    JFrame f;
    DemoSwing() {
        f=new JFrame("ComboBox Example");
        final JLabel label = new JLabel();
        label.setHorizontalAlignment(JLabel.CENTER);
        label.setSize(400,100);
        JButton b=new JButton("Show");
        b.setBounds(200,100,75,20);
        String languages[]={"C","C++","C#","Java","PHP"};
        final JComboBox cb=new JComboBox(languages);
        cb.setBounds(50, 100, 90, 20);
        f.add(cb); f.add(label); f.add(b);
        f.setLayout(null);
        f.setSize(350,350);
        f.setVisible(true);
        b.addActionListener(new ActionListener() {
            public void actionPerformed(ActionEvent e) {
                String data = "Programming language Selected: "
                    + cb.getSelectedItem();
                label.setText(data);
            }
        });
    }
    public static void main(String args[]){
        new DemoSwing();
    }
}

```

បច្ចុប្បន្នបច្ចុប្បន្ន



## លើហាត់អនុវត្តន័យ

៩)



ចូលចិត្ត Button Submit នៅមួយច្បាប់នាក្ស័ត្រា Data Saved Successfully?



## ឯកសារអនុបត្តិវេលា

Built using Netbeans 7.0 GUI Builder

User Information Form

First Name	<input type="text" value="First Name"/>		
Last Name	<input type="text" value="Last Name"/>		
Gender	<input type="radio"/> Male <input type="radio"/> Female		
Street 1	<input type="text" value="Street 1"/>		
Street 2	<input type="text" value="Street 2"/>		
City	<input type="text" value="City"/>	Zip Code	<input type="text" value="Zip Code"/>
Country	<input type="text" value="Item 1"/>		

OK    Cancel    Register me later

## ឯកសារអនុបត្តិវេលា

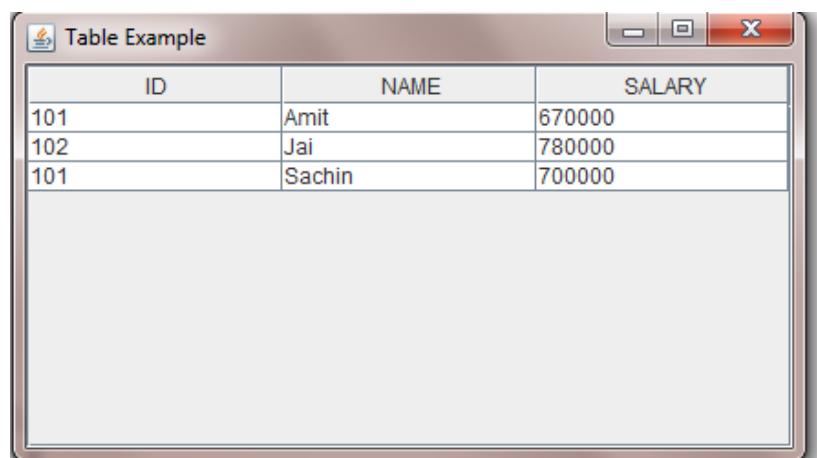
Login

UserName	<input type="text" value=""/>
Password	<input type="password"/>
<input type="button" value="Login"/>	

## ឧទាហរណ៍ លទៃការប្រើប្រាស់ជាមួយនឹង JTABLE

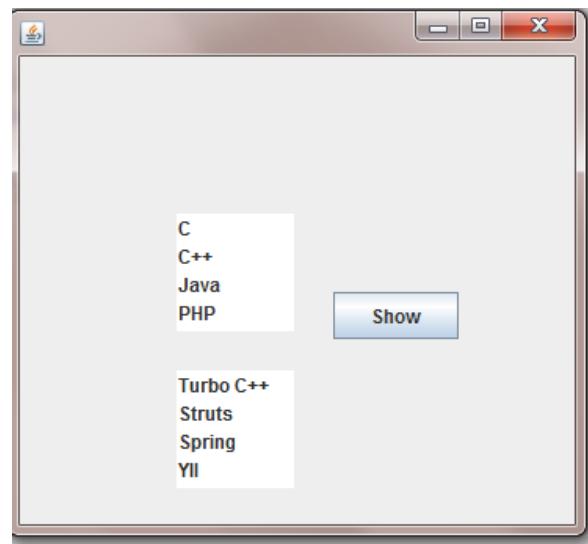
```
Start Page DemoSwing.java X
import javax.swing.event.*;
import javax.swing.*;
class DemoSwing {
    public static void main(String args[]){
        JFrame f = new JFrame("Table Example");
        String data[][]={{ "101", "Amit", "670000" },
                        { "102", "Jai", "780000" },
                        { "101", "Sachin", "700000" }};
        String column[]={"ID", "NAME", "SALARY"};
        final JTable jt=new JTable(data,column);
        jt.setCellSelectionEnabled(true);
        ListSelectionModel select= jt.getSelectionModel();
        select.setSelectionMode(ListSelectionModel.SINGLE_SELECTION);
        select.addListSelectionListener(new ListSelectionListener() {
            public void valueChanged(ListSelectionEvent e) {
                String Data = null;
                int[] row = jt.getSelectedRows();
                int[] columns = jt.getSelectedColumns();
                for (int i = 0; i < row.length; i++) {
                    for (int j = 0; j < columns.length; j++) {
                        Data = (String) jt.getValueAt(row[i], columns[j]);
                    }
                }
                System.out.println("Table element selected is: " + Data);
            }
        });
        JScrollPane sp=new JScrollPane(jt);
        f.add(sp);
        f.setSize(300, 200);
        f.setVisible(true);
    }
}
```

លទ្ធផលនេះ



## ឧទាហរណ៍ ធន់ការប្រើប្រាស់ជាមួយនឹង JLIST

```
import java.awt.event.*;
import javax.swing.*;
class DemoSwing {
    DemoSwing() {
        JFrame f = new JFrame();
        final JLabel label = new JLabel();
        label.setSize(500,100);
        JButton b=new JButton("Show");
        b.setBounds(200,150,80,30);
        final DefaultListModel<String> l1 = new DefaultListModel<>();
        l1.addElement("C");
        l1.addElement("C++");
        l1.addElement("Java");
        l1.addElement("PHP");
        final JList<String> list1 = new JList<>(l1);
        list1.setBounds(100,100, 75,75); |
        DefaultListModel<String> l2 = new DefaultListModel<>();
        l2.addElement("Turbo C++");
        l2.addElement("Struts");
        l2.addElement("Spring");
        l2.addElement("YII");
        final JList<String> list2 = new JList<>(l2);
        list2.setBounds(100,200, 75,75);
        f.add(list1); f.add(list2); f.add(b); f.add(label);
        f.setSize(450,450);
        f.setLayout(null);
        f.setVisible(true);
        b.addActionListener(new ActionListener() {
            public void actionPerformed(ActionEvent e) {
                String data = "";
                if (list1.getSelectedIndex() != -1) {
                    data = "Programming language Selected: " + list1.getSelectedValue();
                    label.setText(data);
                }
                if(list2.getSelectedIndex() != -1){
                    data += ", FrameWork Selected: ";
                    for(Object frame :list2.getSelectedValues()){
                        data += frame + " ";
                    }
                }
                label.setText(data);
            }
        });
    }
    public static void main(String args[]){
        new DemoSwing();
    }
}
```



## ឧទាហរណ៍ នៃ ការប្រើប្រាស់ជាមួយនឹង JMenu or Sub Menu

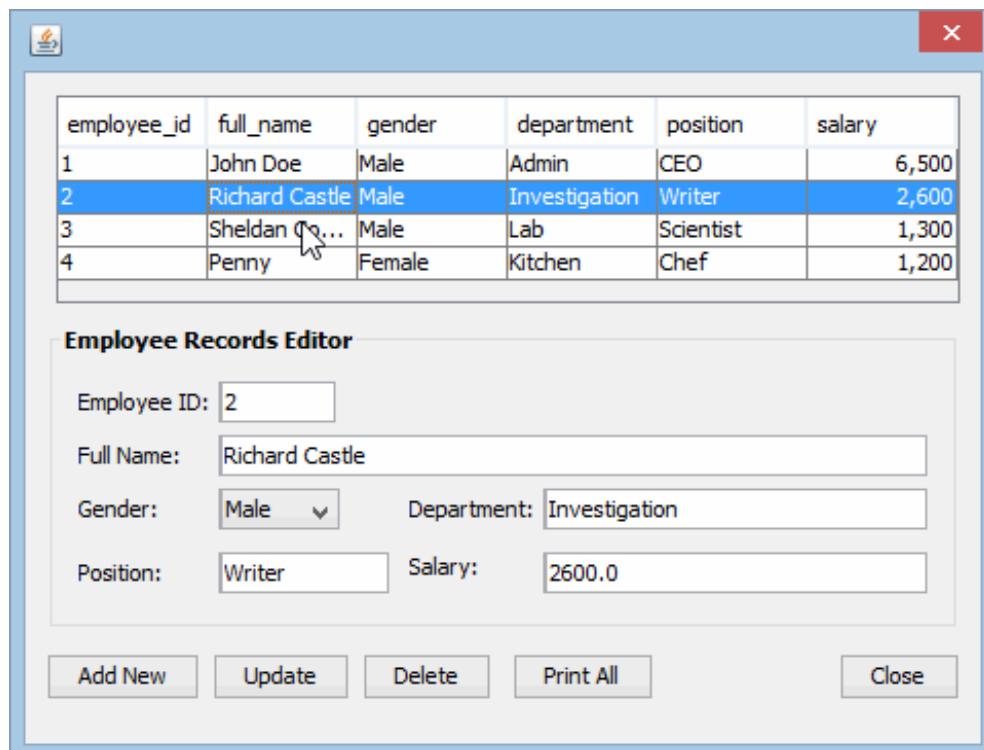
The image shows a Java code editor with the file `DemoSwing.java` open. The code implements a `JFrame` with a `JMenuBar` containing a `File` menu and an `Edit` menu. The `Edit` menu has four items: `cut`, `copy`, `paste`, and `selectAll`. The `actionPerformed` method handles these actions.

```
Start Page DemoSwing.java x
import java.awt.event.*;
import javax.swing.*;
public class DemoSwing implements ActionListener{
JFrame f;
JMenuBar mb;
JMenu file,edit,help;
JMenuItem cut,copy,paste,selectAll;
JTextArea ta;
DemoSwing(){
f=new JFrame();
cut=new JMenuItem("cut");
copy=new JMenuItem("copy");
paste=new JMenuItem("paste");
selectAll=new JMenuItem("selectAll");
cut.addActionListener(this);
copy.addActionListener(this);
paste.addActionListener(this);
selectAll.addActionListener(this);
mb=new JMenuBar();
file=new JMenu("File");
edit=new JMenu("Edit");
help=new JMenu("Help");
edit.add(cut);edit.add(copy);edit.add(paste);edit.add(selectAll);
mb.add(file);mb.add(edit);mb.add(help);
ta=new JTextArea();
ta.setBounds(5,5,360,320);
f.add(mb);f.add(ta);
f.setJMenuBar(mb);
f.setLayout(null);
f.setSize(400,400);
f.setVisible(true);
}
public void actionPerformed(ActionEvent e) {
if(e.getSource() ==cut)
ta.cut();
if(e.getSource() ==paste)
ta.paste();
if(e.getSource() ==copy)
ta.copy();
if(e.getSource() ==selectAll)
ta.selectAll();
}
public static void main(String[] args) {
new DemoSwing();
}
}
```

**លទ្ធផលនៃកម្រិតបញ្ជី**

សូមមេច <https://www.javatpoint.com/java-jmenutem-and-jmenu>

## នំបាត់អនុវត្តន៍



employee_id	full_name	gender	department	position	salary
1	John Doe	Male	Admin	CEO	6,500
2	Richard Castle	Male	Investigation	Writer	2,600
3	Sheldon Cooper	Male	Lab	Scientist	1,300
4	Penny	Female	Kitchen	Chef	1,200

**Employee Records Editor**

Employee ID:

Full Name:

Gender:  Department:

Position:  Salary:

### III. Layout Manager

គីជាប្រភេទ Layout ដែលមានស្រាប់សំរាប់រូបថាម Toolbox របស់អ្នកទោតាម Layout មានស្រាប់របស់ Java។ Layout ដែលមានស្រាប់ដែងគ្នា BorderLayout, FlowLayout, GridLayout, CardLayout, GridBagLayout, BoxLayout, GroupLayout។

១) Border Layout: គីជាប្រភេទ Layout ដែលរួចរាល់គ្នា Control របស់អ្នកតាម ទីតាំងនៃ Layout ដែងគ្នា: NORTH, SOUTH, EAST, WEST និង CENTER។

## ឧទាហរណ៍ ១៖

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

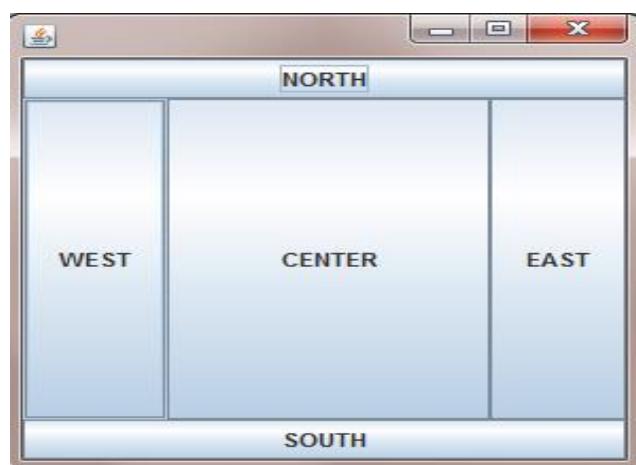
public class LayoutManager{
    JFrame f;
    public LayoutManager() {
        f=new JFrame();

        JButton b1=new JButton("NORTH");
        JButton b2=new JButton("SOUTH");
        JButton b3=new JButton("EAST");
        JButton b4=new JButton("WEST");
        JButton b5=new JButton("CENTER");

        f.add(b1,BorderLayout.NORTH);
        f.add(b2,BorderLayout.SOUTH);
        f.add(b3,BorderLayout.EAST);
        f.add(b4,BorderLayout.WEST);
        f.add(b5,BorderLayout.CENTER);

        f.setSize(300,300);
        f.setVisible(true);
    }
    public static void main(String[] args) {
        new LayoutManager();
    }
}
```

លទ្ធផលទីនេះ



២) Grid Layout: តើវាគាររួចរាល់នៅក្នុងបណ្តុះបណ្តុះដោយ និង  
ផ្ទៃទីតាំង

### ឧទានេរៈ ១៖

```

LayoutManager.java x
import java.awt.*;
import javax.swing.*;

public class LayoutManager{
    JFrame f;
    LayoutManager(){
        f=new JFrame();

        JButton b1=new JButton("1");
        JButton b2=new JButton("2");
        JButton b3=new JButton("3");
        JButton b4=new JButton("4");
        JButton b5=new JButton("5");
        JButton b6=new JButton("6");
        JButton b7=new JButton("7");
        JButton b8=new JButton("8");
        JButton b9=new JButton("9");

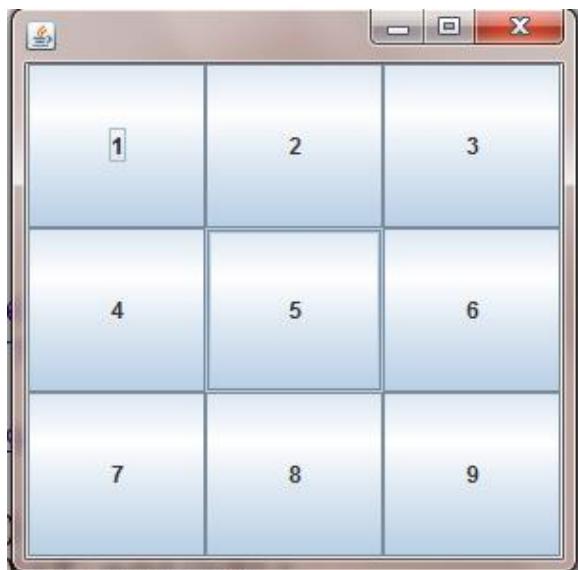
        f.add(b1);f.add(b2);f.add(b3);f.add(b4);f.add(b5);
        f.add(b6);f.add(b7);f.add(b8);f.add(b9);

        f.setLayout(new GridLayout(3,3));
        //setting grid layout of 3 rows and 3 columns

        f.setSize(300,300);
        f.setVisible(true);
    }
    public static void main(String[] args) {
        new LayoutManager();
    }
}

```

លទ្ធផលទឹកលប្តាន៖



### ៣) Flow Layout: តម្លៃការង្រៀបចំ និងជោរ ជូនជាបញ្ជាក់ RIGHT, LEFT, CENTER។

#### ឧទានានេះ ១៖

```
LayoutManager.java x
import java.awt.*;
import javax.swing.*;

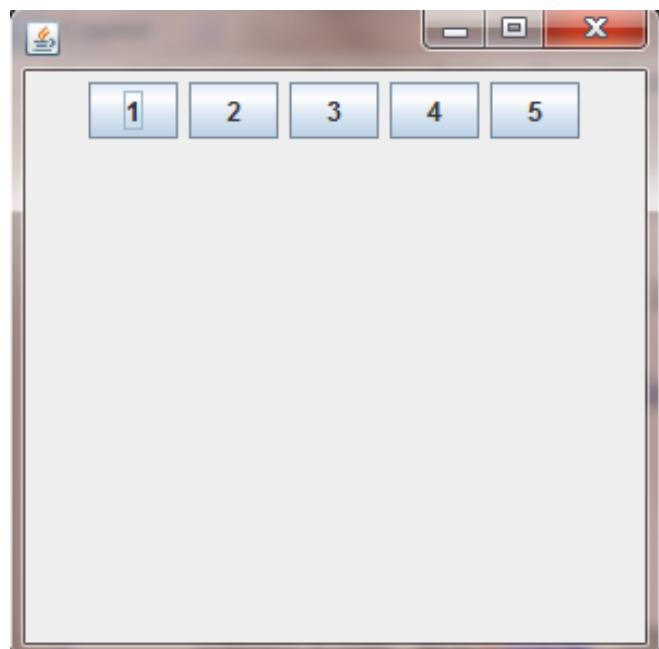
public class LayoutManager{
    JFrame f;
    LayoutManager() {
        f=new JFrame();

        JButton b1=new JButton("1");
        JButton b2=new JButton("2");
        JButton b3=new JButton("3");
        JButton b4=new JButton("4");
        JButton b5=new JButton("5");

        f.add(b1);f.add(b2);f.add(b3);f.add(b4);f.add(b5);

        f.setLayout(new FlowLayout(FlowLayout.CENTER));
        //setting flow layout of right alignment

        f.setSize(300,300);
        f.setVisible(true);
    }
    public static void main(String[] args) {
        new LayoutManager();
    }
}
```



#### សម្រាប់បង្កើតនៅក្នុងបញ្ហាស៊ា:

၆) Box Layout: គឺជាការរំបែក Components ទៅតាម Vertical ឬ Horizontal ផ្លូវ  
ជាគារ X\_AXIS, Y\_AXIS ។

### ឧទានន៍ ១៖

```
LayoutManager.java x
import java.awt.*;
import javax.swing.*;

public class LayoutManager extends Frame {
    Button buttons[];

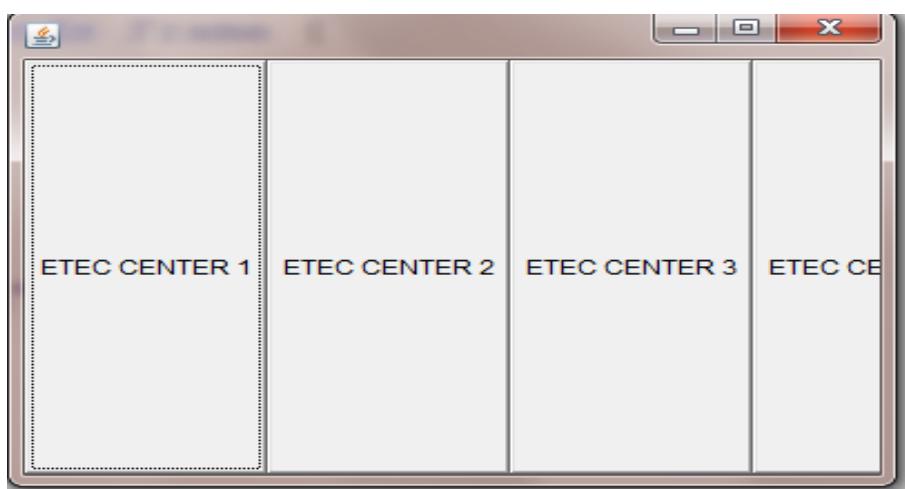
    public LayoutManager () {
        buttons = new Button [5];

        for (int i = 0;i<5;i++) {
            buttons[i] = new Button ("ETEC CENTER " + (i + 1));
            add (buttons[i]);
        }

        setLayout (new BoxLayout (this, BoxLayout.X_AXIS));
        setSize(400,400);
        setVisible(true);
    }

    public static void main(String args[]){
        new LayoutManager();
    }
}
```

លទ្ធផលទទួលបាន៖



ច) Card Layout: សំដែកលើការរៀបចំ Layout ទៅតាមស្តីកប្រា មួយច្បាស់  
ដែលអ្នកអាចបញ្ជាលើ Method មានស្រាប់របស់ Card Layout ដូចជា next, previous, first, last.

### ឧទាហរណ៍ ទេះ

```

LayoutManager.java * x
JButton b1,b2,b3,b4,b5;
Container c;
LayoutManager() {
    c=getContentPane();
    card=new CardLayout(40,30);
    //create CardLayout object with 40 hor space and 30 ver space
    c.setLayout(card);

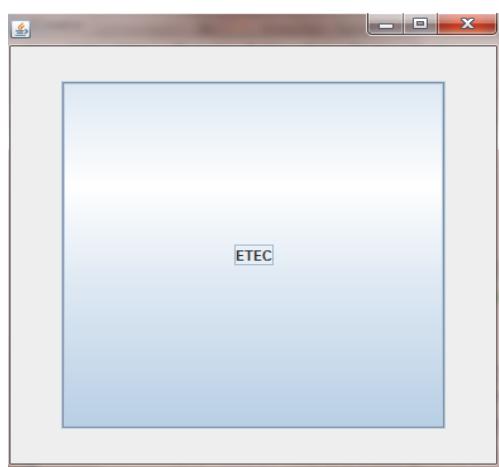
    b1=new JButton("ETEC");
    b2=new JButton("I.T");
    b3=new JButton("Professional");
    b4=new JButton("Training");
    b5=new JButton("CENTER");
    b1.addActionListener(this);
    b2.addActionListener(this);
    b3.addActionListener(this);
    b4.addActionListener(this);
    b5.addActionListener(this);
    c.add("a",b1);c.add("b",b2);c.add("c",b3);
    c.add("c",b4);c.add("c",b5);

}
public void actionPerformed(ActionEvent e) {
    card.next(c);
}

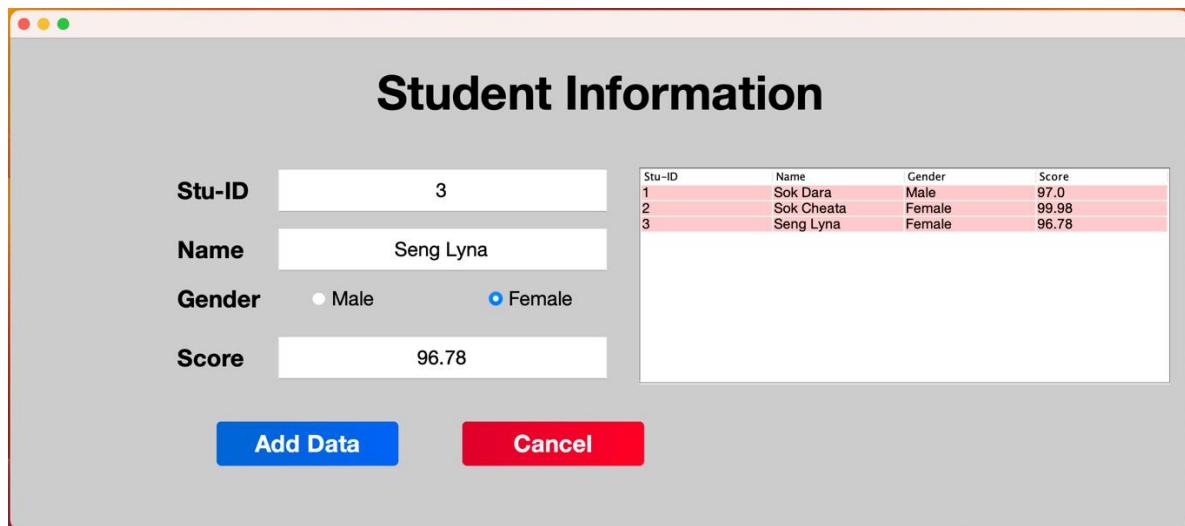
public static void main(String[] args) {
    LayoutManager cl=new LayoutManager();
    cl.setSize(400,400);
    cl.setVisible(true);
    cl.setDefaultCloseOperation(EXIT_ON_CLOSE);
}
}

```

លទ្ធផលនេះ



- ការ Design និង Insert ទិន្ន័យចូល Table in Java Swing (



- ដោលក្នុងទិន្ន័យចូលទៅកាន់ Table បានត្រួតពីជំនួយ ArrayList

```
1 package GUI;
2 import java.util.ArrayList;
3 public class List_Stu {
4     private int id;
5     private String name,gender;
6     private float score;
7     public List_Stu(int id, String name, String gender, float score) {
8         this.id = id;
9         this.name = name;
10        this.gender = gender;
11        this.score = score;
12    }
13    public int getId() {
14        return id;
15    }
16    public String getName() {
17        return name;
18    }
19    public String getGender() {
20        return gender;
21    }
22    public float getScore() {
23        return score;
24    }
25    static ArrayList<List_Stu> list=new ArrayList<>();
26}
27}
```

- ឧប្បុរាណ Insert Data into Table

```
135     private void btnAddActionPerformed(java.awt.event.ActionEvent evt) {  
136         DefaultTableModel model=(DefaultTableModel) table.getModel();  
137         model.setRowCount(0);  
138         int id = Integer.parseInt(txtID.getText());  
139         String name = txtName.getText();  
140         String gender;  
141         if(rbmale.isSelected()==true){  
142             gender="Male";  
143         }else{  
144             gender="Female";  
145         }  
146         float score =Float.parseFloat(txtScore.getText());  
147         List_Stu row=new List_Stu(id, name, gender, score);  
148         List_Stu.list.add(row);  
149         for(int i=0;i<List_Stu.list.size();i++){  
150             Object obj[]={  
151                 List_Stu.list.get(i).getId(),  
152                 List_Stu.list.get(i).getName(),  
153                 List_Stu.list.get(i).getGender(),  
154                 List_Stu.list.get(i).getScore()  
155             };  
156             model.addRow(obj);  
157         }  
158     }  
159  
160     private void btnCancelActionPerformed(java.awt.event.ActionEvent evt) {  
161         txtID.setText("");  
162         txtName.setText("");  
163         txtScore.setText("");  
164     }  
165 }
```



“၍ပြီသအေးဖော်ပဲ့ဖြာနှုန်းလိုပြီ၊  
သာမီဆဲမဲမဲတော်များမျှတော်များဖော်ပဲ့ကာ  
မောယူနှုန်းလိုပြီများလော်မော်များလော်များ...!”

## — ປຸດທະນາຍົດືອີເສັ້ນຫຼຸດ —

- ការ Design និង Insert ទិន្ន័យចូល Table in Java Swing (Label,TextField,Button,Table, Radio Button,Check Box)



- ដើម្បីបង្កើតទិន្ន័យចូលទៅកាន់ Table បានត្រួតពិនិត្យដោយប្រើ ArrayList

```

1 package GUI;
2 import java.util.ArrayList;
3 public class List_students {
4     private int id;
5     private String name,gender,cousr;
6     private float price;
7     private String plac,time,day;
8     public List_students(int id, String name, String gender, String cousr, float price, String plac, String time, String day) {
9         this.id = id;
10        this.name = name;
11        this.gender = gender;
12        this.cousr = cousr;
13        this.price = price;
14        this.plac = plac;
15        this.time = time;
16        this.day = day;
17    }
18    public int getId() {
19        return id;
20    }
21    public String getName() {
22        return name;
23    }
24    public String getGender() {
25        return gender;
26    }
27    public String getCousr() {
28        return cousr;
29    }
30    public float getPrice() {
31        return price;
32    }
33    public String getPlac() {
34        return plac;
35    }
36    public String getTime() {
37        return time;
38    }
39    public String getDay() {
40        return day;
41    }
42    static ArrayList<List_students> list=new ArrayList<>();
43 }
```

- ធនធាន Insert Data into Table ( Button Add )

```
283     private void btnAddActionPerformed(java.awt.event.ActionEvent evt) {  
284         DefaultTableModel model=(DefaultTableModel) table.getModel();  
285         model.setRowCount(0);  
286         int id=Integer.parseInt(txtID.getText());  
287         String name=txtName.getText();  
288         String gender;  
289         if(rbMale.isSelected()==true){  
290             gender="Male";  
291         }else{  
292             gender="Female";  
293         }  
294         String course=cbCourse.getSelectedItem().toString();  
295         float price=Float.parseFloat(txtPrice.getText());  
296         String Place=cbPlace.getSelectedItem().toString();  
297         String Time=cbTime.getSelectedItem().toString();  
298         String day;  
299         if(b1.isSelected()==true){  
300             day="Mon-Thu";  
301         }else{  
302             day="Sat-Sun";  
303         }  
304         List_students row=new List_students(id, name, gender, course, price, Place, Time, day);  
305         List_students.list.add(row);  
306         GetData();  
307     }  
308 }
```

- Function GetData from ArrayList

```
7     void GetData()  
8     {  
9         DefaultTableModel model=(DefaultTableModel) table.getModel();  
10        for(int i=0;i<List_students.list.size();i++)  
11        {  
12            Object obj[]={  
13                List_students.list.get(i).getId(),  
14                List_students.list.get(i).getName(),  
15                List_students.list.get(i).getGender(),  
16                List_students.list.get(i).getCourse(),  
17                List_students.list.get(i).getPrice(),  
18                List_students.list.get(i).getPlace(),  
19                List_students.list.get(i).getTime(),  
20                List_students.list.get(i).getDay()  
21            };  
22            model.addRow(obj);  
23        }  
24    }
```

- ແກ້ວມະນຸງ Update Data into Table ( Button Update )

```
339     private void kButton3ActionPerformed(java.awt.event.ActionEvent evt) {  
340         DefaultTableModel model=(DefaultTableModel) table.getModel();  
341  
342             int id=Integer.parseInt(txtID.getText());  
343             String name=txtName.getText();  
344             String gender;  
345             if(rbMale.isSelected()==true){  
346                 gender="Male";  
347             }else{  
348                 gender="Female";  
349             }  
350             String course=cbCourse.getSelectedItem().toString();  
351             float price=Float.parseFloat(txtPrice.getText());  
352             String Place=cbPlace.getSelectedItem().toString();  
353             String Time=cbTime.getSelectedItem().toString();  
354             String day;  
355             if(b1.isSelected()==true){  
356                 day="Mon-Thu";  
357             }else{  
358                 day="Sat-Sun";  
359             }  
360             List_students row=new List_students(id, name, gender, course, price, Place, Time, day);  
361             int st=table.getSelectedRow();  
362             List_students.list.set(st, row);  
363             model.setRowCount(0);  
364             GetData();  
365     }  
366 }
```

- ແກ້ວມະນຸງ Mouse Click on Table ( ເພີ່ມຂໍ້ຕົກລົງທຶນເບີ້ນຕົກລົງ )

```
313     private void tableMouseClicked(java.awt.event.MouseEvent evt) {  
314         DefaultTableModel model=(DefaultTableModel) table.getModel();  
315         int row=table.getSelectedRow();  
316         txtID.setText(model.getValueAt(row, 0).toString());  
317         txtName.setText((String) model.getValueAt(row, 1));  
318         String gender=model.getValueAt(row, 2).toString();  
319         if(gender.equals("Male"))  
320         {  
321             rbMale.setSelected(true);  
322         }  
323         else{  
324             rbFemale.setSelected(true);  
325         }  
326         cbCourse.setSelectedItem(model.getValueAt(row, 3));  
327         txtPrice.setText(model.getValueAt(row, 4).toString());  
328         cbPlace.setSelectedItem(model.getValueAt(row, 5));  
329         cbTime.setSelectedItem(model.getValueAt(row, 6));  
330         String day=model.getValueAt(row, 7).toString();  
331         if(day.equals("Mon-Thu"))  
332         {  
333             b1.setSelected(true);  
334         }else{  
335             b2.setSelected(true);  
336         }  
337     }
```

- របៀប Delete Data on Table ( Button Delete )

```

367     private void kButton4ActionPerformed(java.awt.event.ActionEvent evt) {
368         DefaultTableModel model=(DefaultTableModel)table.getModel();
369         int index=table.getSelectedRow();
370         List_students.list.remove(index);
371         model.removeRow(index);
372     }

```

- របៀប Refresh Data on Field ( Button Refresh )

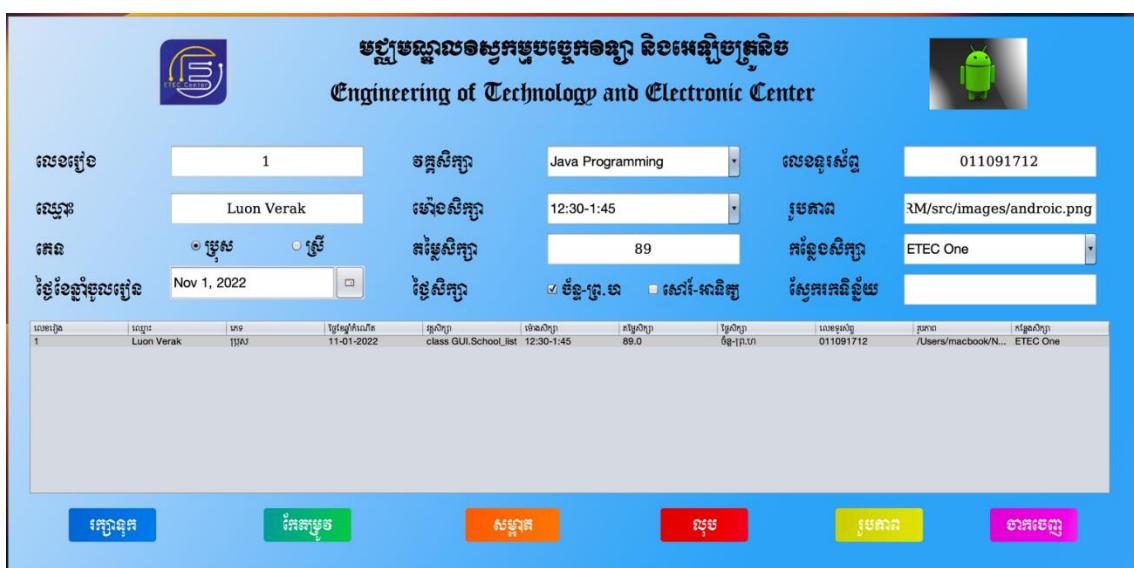
```

74     private void kButton5ActionPerformed(java.awt.event.ActionEvent evt) {
75         txtID.setText("");
76         txtName.setText("");
77         txtPrice.setText("");
78         cbCourse.setSelectedIndex(0);
79         cbPlace.setSelectedIndex(0);
80         cbTime.setSelectedIndex(0);
81         bggender.clearSelection();
82         bgdate.clearSelection();
83     }

```

## ការ Design និង Insert ទិន្នន័យថ្លាង Table in Java Swing

(Label,TextField,Button,Table,Radio Button,Check Box, Date Time,Images)



- ធនធាន Insert Data into Table ( Button តម្លៃទិន្នន័យ )

```
1 package GUI;
2 import java.awt.Image;
3 import java.io.File;
4 import java.text.SimpleDateFormat;
5 import java.util.Date;
6 import javax.swing.ImageIcon;
7 import javax.swing.JFileChooser;
8 import javax.swing.JOptionPane;
9 import javax.swing.RowFilter;
10 import javax.swing.table.DefaultTableModel;
11 import javax.swing.table.TableRowSorter;
12
13 public class School extends javax.swing.JFrame {
14     SimpleDateFormat sdf=new SimpleDateFormat("MM-dd-yyyy");
15
16     public School() {
17         initComponents();
18     }
19     void GetData()
20     {
21         DefaultTableModel model=(DefaultTableModel) table.getModel();
22         for(int i=0;i<School_list.list.size();i++)
23         {
24             Object obj[]={ 
25                 School_list.list.get(i).getId(),
26                 School_list.list.get(i).getName(),
27                 School_list.list.get(i).getGender(),
28                 School_list.list.get(i).getDate(),
29                 School_list.list.get(i).getClass(),
30                 School_list.list.get(i).getTime(),
31                 School_list.list.get(i).getPrice(),
32                 School_list.list.get(i).getDay(),
33                 School_list.list.get(i).getPhone(),
34                 School_list.list.get(i).getImage(),
35                 School_list.list.get(i).getPlace()
36             };
37             model.addRow(obj);
38         }
39     }
40 }
```



“ខ្សែវាមិនបោះពេកជីថាក្រោមបំផុតទេ,  
បំផុតទេ:ក៏ជីថាក្រោមទេ, បំផុតទេ:ក៏វាយឆ្លើយទេ  
នៅយោប់ជាក៏បិត្តបានបោះទា កូលតរួចឱ្យនៅក...!”

—ក្រុមរាយជីបិត្តបាន

```
420     private void btnSaveActionPerformed(java.awt.event.ActionEvent evt) {
421         DefaultTableModel model=(DefaultTableModel) table.getModel();
422
423         int id=Integer.parseInt(txtID.getText());
424         String name=txtName.getText();
425         String gender;
426         if(rbMale.isSelected()==true){
427             gender="ប្រុស";
428         }
429         else{
430             gender="រៀន";
431         }
432         String date=sdf.format(txtDate.getDate());
433         String cours=(String) cbCours.getSelectedItem();
434         String time=(String) cbTime.getSelectedItem();
435         float price=Float.parseFloat(txtPrice.getText());
436         String day;
437         if(cbMon.isSelected()==true)
438         {
439             day="ចិន-ក្រុម";
440         }
441         else{
442             day="សោរ-ភាពិកា";
443         }
444         String phone =txtPhone.getText();
445         String pleace=(String) cbPlace.getSelectedItem();
446         String imag=txtImag.getText();
447         School_list row=new School_list(id, name, gender, date, cours, time, price, day, phone, imag, pleace);
448         School_list.list.add(row);
449         model.setRowCount(0);
450         GetData();
451     }
```

- ផ្លូវយោង Update Data into Table ( Button ត្រួតពិនិត្យ)

```
471     private void btnUpdateActionPerformed(java.awt.event.ActionEvent evt) {
472         DefaultTableModel model=(DefaultTableModel) table.getModel();
473
474         int id=Integer.parseInt(txtID.getText());
475         String name=txtName.getText();
476         String gender;
477         if(rbMale.isSelected()==true){
478             gender="ប្រុស";
479         }
480         else{
481             gender="រៀន";
482         }
483         String date=sdf.format(txtDate.getDate());
484         String cours=(String) cbCours.getSelectedItem();
485         String time=(String) cbTime.getSelectedItem();
486         float price=Float.parseFloat(txtPrice.getText());
487         String day;
488         if(cbMon.isSelected()==true)
489         {
490             day="ចិន-ក្រុម";
491         }
492         else{
493             day="សោរ-ភាពិកា";
494         }
495         String phone =txtPhone.getText();
496         String pleace=(String) cbPlace.getSelectedItem();
497         String imag=txtImag.getText();
498         School_list row=new School_list(id, name, gender, date, cours, time, price, day, phone, imag, pleace);
499         int st=table.getSelectedRow();
500         School_list.list.set(st, row);
501         model.setRowCount(0);
502         GetData();
503     }
```

- នគរបាយ Mouse Click and Delete on Table ( ដើម្បីកែងកម្មជិត្តយោនេយ៉ឺឡក្នុងផ្លូវ  
MouseClickលាងសង្កិត )

```
504     private void tableMouseClicked(java.awt.event.MouseEvent evt) {  
505         DefaultTableModel model=(DefaultTableModel) table.getModel();  
506         int row=table.getSelectedRow();  
507         txtID.setText(model.getValueAt(row, 0).toString());  
508         txtName.setText(model.getValueAt(row, 1).toString());  
509         String gender=model.getValueAt(row, 2).toString();  
510         if(gender.equals("ប្រុស"))  
511         {  
512             rbMale.setSelected(true);  
513         }  
514         else{  
515             rbFemale.setSelected(true);  
516         }  
517         try {  
518             java.util.Date obj = sdf.parse(model.getValueAt(row, 3).toString());  
519             txtDate.setDate(obj);  
520         } catch (Exception e) {  
521             JOptionPane.showMessageDialog(this, e);  
522         }  
523         cbCours.setSelectedItem(model.getValueAt(row, 4));  
524         cbTime.setSelectedItem(model.getValueAt(row, 5));  
525         txtPrice.setText(model.getValueAt(row, 6).toString());  
526         String day=model.getValueAt(row, 7).toString();  
527         if(day.equals("ចន្ទ-ព្រ.ច")){  
528             cbMon.setSelected(true);  
529         }  
530         else{  
531             cbSat.setSelected(true);  
532         }  
533         txtPhone.setText(model.getValueAt(row, 8).toString());  
534         txtImag.setText(model.getValueAt(row, 9).toString());  
535         lbImage.setIcon(new javax.swing.ImageIcon(model.getValueAt(row, 9).toString()));  
536         cbPlace.setSelectedItem(model.getValueAt(row, 10));  
537     }  
538  
539     }  
540  
541     private void btnDeleteActionPerformed(java.awt.event.ActionEvent evt) {  
542         DefaultTableModel model=(DefaultTableModel)table.getModel();  
543         int index=table.getSelectedRow();  
544         School_list.list.remove(index);  
545         model.removeRow(index);  
546     }  
547 }
```

- ផ្លាស់ប្តូរ Upload Images

```

private void btnImageActionPerformed(java.awt.event.ActionEvent evt) {
    JFileChooser chooser = new JFileChooser();
    chooser.showOpenDialog(null);
    File f = chooser.getSelectedFile();
    String filename = f.getAbsolutePath();
    txtImg.setText(filename);
    Image getAbsolutePath=null;
    ImageIcon icon = new ImageIcon(filename);
    Image image = icon.getImage().getScaledInstance(lbImage.getWidth(), lbImage.getHeight(), Image.SCALE_SMOOTH);
    lbImage.setIcon(icon);
}

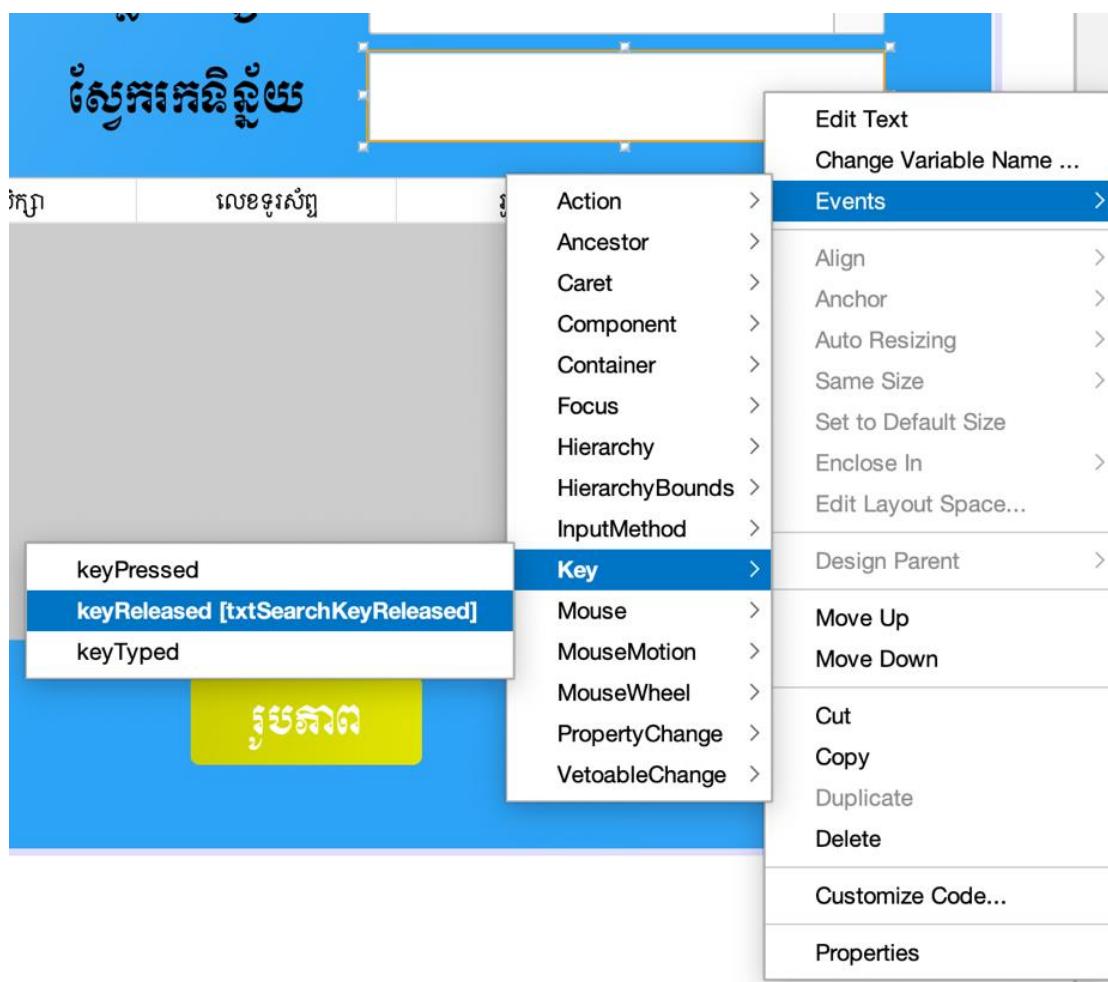
```

- Function Search Data

```

451     void search(String str){
452         DefaultTableModel model=(DefaultTableModel) table.getModel();
453         TableRowSorter<DefaultTableModel> trs=new TableRowSorter<>(model);
454         table.setRowSorter(trs);
455         trs.setRowFilter(RowFilter.regexFilter(str));
456     }

```



```

466     private void txtSearchKeyReleased(java.awt.event.KeyEvent evt) {
467         String item=txtSearch.getText();
468         search(item);
    }

```

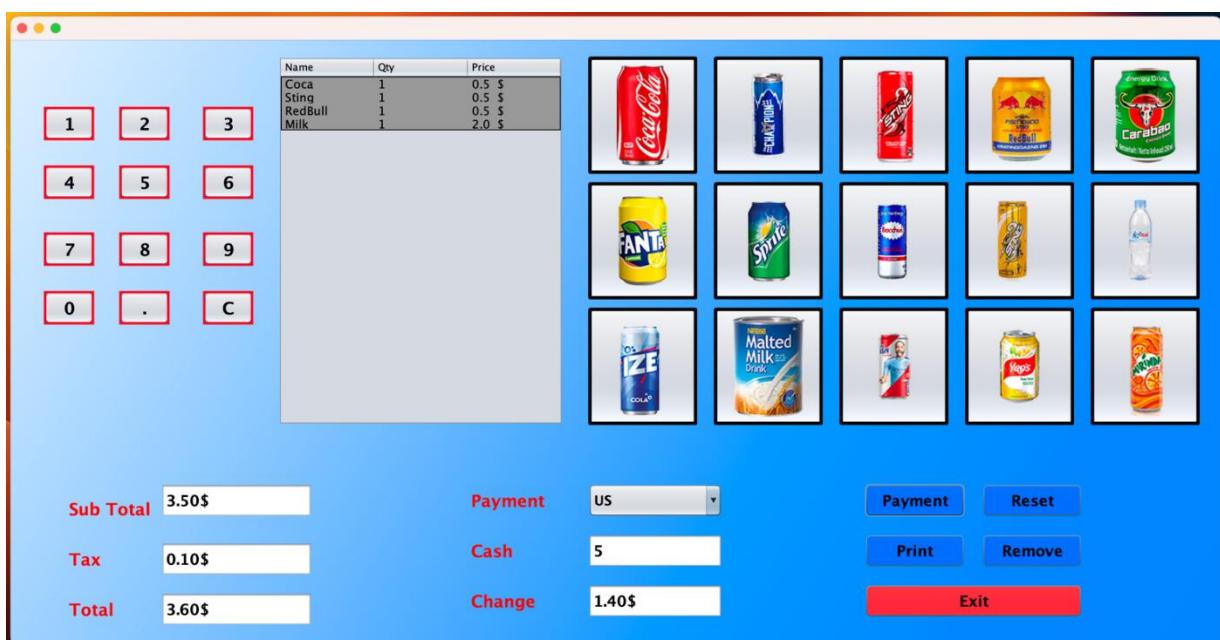
- Button Refresh ( សម្រាប់ )

```

540     private void btnExitActionPerformed(java.awt.event.ActionEvent evt) {
541         System.exit(0);
542     }
543
544     private void btnUpdate1ActionPerformed(java.awt.event.ActionEvent evt) {
545         // TODO add your handling code here:
546     }
547
548     private void kButton1ActionPerformed(java.awt.event.ActionEvent evt) {
549         txtID.setText("");
550         txtName.setText("");
551         txtPhone.setText("");
552         txtPrice.setText("");
553         txtDate.setDate(new Date());
554         cbCours.setSelectedIndex(0);
555         cbPlace.setSelectedIndex(0);
556         cbTime.setSelectedIndex(0);
557         txtImag.setText("");
558         buttonGroup1.clearSelection();
559         buttonGroup2.clearSelection();
560     }
561
562 }
563
564
565
566
567
568
569
    }

```

### ផលិតផល Product



```
1 package SWING_FORM;
2 import java.text.DecimalFormat;
3 import java.text.MessageFormat;
4 import javax.swing.JTable;
5 import javax.swing.table.DefaultTableModel;
6 public class Product extends javax.swing.JFrame {
7     DecimalFormat df=new DecimalFormat("####0.00");
8     DefaultTableModel model;
9     public Product() {
10         initComponents();
11     }
12     void ITEMProduct()
13     {
14         double tax=3;
15         double subtotal=0;
16         for(int i=0;i<tbTable.getRowCount();i++)
17         {
18             String sprice=tbTable.getValueAt(i, 2).toString();
19             sprice=sprice.substring(0,sprice.length()-3);
20             double price=Double.parseDouble(sprice);
21             subtotal=subtotal+price;
22         }
23         txtsub_total.setText(String.valueOf(df.format(subtotal))+"$");
24         double ctax=subtotal*tax/100;
25         txttax.setText(String.valueOf(df.format(ctax))+"$");
26         double total=subtotal+ctax;
27         txtTotal.setText(String.valueOf(df.format(total))+"$");
28     }
29     void ChangDollar()
30     {
31         double cash=Double.parseDouble(txtCash.getText());
32         String t= txtTotal.getText();
33         t=t.substring(0,t.length()-1);
34         double total=Double.parseDouble(t);
35         double change = cash-total;
36         txtChange.setText(df.format(change)+"$");
37     }
38     void changKHR()
39     {
40         double cash = Double.parseDouble(txtCash.getText());
41         String t=txtTotal.getText();
42         t=t.substring(0,t.length()-1);
43         double total=Double.parseDouble(t);
44         total=total*4000;
45         double change = cash-total;
```

```
private void btnClearActionPerformed(java.awt.event.ActionEvent evt) {
    txtCash.setText("");
}

private void btn7ActionPerformed(java.awt.event.ActionEvent evt) {
    String number = txtCash.getText();
    if(number=="")
    {
        txtCash.setText("7");
    }
    else
    {
        number=txtCash.getText()+"7";
        txtCash.setText(number);
    }
}

private void btnCocaActionPerformed(java.awt.event.ActionEvent evt) {
    double price=0.5;
    DefaultTableModel model=(DefaultTableModel)tbTable.getModel();
    Object row[]={ "Coca", "1", price+" $"};
    model.addRow(row);
    ITEMProduct();
}

private void brnPrintActionPerformed(java.awt.event.ActionEvent evt) {
    MessageFormat header = new MessageFormat("Printing in progress");
    MessageFormat footer = new MessageFormat("Page {0, number, integer}");
    try {
        tbTable.print(JTable.PrintMode.NORMAL,header,footer);
    } catch (java.awt.print.PrinterException ex) {
        System.err.format("No Printer Found...!", ex.getMessage());
    }
}

private void btnPayActionPerformed(java.awt.event.ActionEvent evt) {
    if(cbPay.getSelectedIndex()==0)
    {
        ChangDoollar();
    }
    else{
        changKHR();
    }
}

private void btnResetActionPerformed(java.awt.event.ActionEvent evt) {
    txtCash.setText("");
    txtsub_total.setText("");
    txttax.setText("");
    txtTotal.setText("");
    txtChange.setText("");
    DefaultTableModel model=(DefaultTableModel) tbTable.getModel();
    model.setRowCount(0);
}
```

```
043
044
045 private void btnRemoveActionPerformed(java.awt.event.ActionEvent evt) {
846     DefaultTableModel model=(DefaultTableModel)tbTable.getModel();
847     int row=tbTable.getSelectedRow();
848     model.removeRow(row);
849     ITEMProduct();
850     if(cbPay.getSelectedIndex()==0){
851         ChangDollar();
852     }
853     else{
854         changKHR();
855     }
}
```

## ଶ୍ରୀହାତ୍ମମନ୍ଦିତକୁଣ୍ଡ



## STAFF MANAGEMENT SYSTEM

ID	Name	Gender	Phone	Position	Salary	Address	Date	Image

**ID:**

**Name:**

**Gender:**  Male  Female

**Position:**

**Address:**

**Phone:**

**Salary:**

**Job Start Date:**

**Search:**  **Browse:**



“ତପ୍ତିକାରୀଙ୍କୁ ଲୋଭ୍ୟ ହେଲା, ନୃତ୍ୟରେ ପାଇଲେ  
ତାହେଲାହେଲାମିମଳୀଙ୍କୁ ଲୋଭ୍ୟ ହେଲାପିଲ ...!”

## ក្រុងអាយុធិនិត្យរដ្ឋ