<param name value

Write a java program to demonstrate applet life cycle.

AWT Controls:

Abstract window toolkit: java developer provided AWT to develop GUI application . provided classes and interfaces.

In the awt package.

Class hierarchy of AWT:

Object

Component

Container--------

Panel Window

Applet Frame (menu,title bar)

Does not provide menu bar ,title bar

Component super class provided following subclasses: all sub classes called as components: awt controls

1.Lable class

2.Button

3.CheckBox

4.ChoiceList

5.List

6.TextArea

7.TextField

8.CheckBoxGroup

9.ScrollBar

Event handling:

When the user interact with the component, the action is performed is called as event

Ex: click the button

Select one item from list,choice list,check box

Type the data in the text box

Click the mouse

Entering data via keyboard

Event sources:

User interact with component,events are generated .such type of components are called as event sources.

1.Button: it generates action events when the user press the button.

2.check box: it generates item events ,when user select the checkbox item

3.choice list: it generates item events ,when user select the item from the choice list.

4.List:

It generates action event when the item is double clicked

It also generate item event when user select the item

5.scrollbar:

When user interact and scroll bar is maintained.adjustment event is occurred

6.text :

When the user enter a character ,text event is generated

7.window:

Window events are generated ,user close activated,deactivated

**Event Delegation model:**

Listener

component

Button b=new Button(“submit”);

Label l=new label();

Choice c= new choice();

add(b);

add(l);

import java.awt.\*;

import java.applet.\*

public class mycontainer extends Applet

{

Public void init()

{

}

}

public class mycontainer extends Frame

{

Psvm(String args[])

{

Each components-one interface-abstract methods

Each component- event classes-predefined methods

Event classes:

Java.lang.Object

Java.util.EventObject

Java.awt.AwtEvent

Java.awt.event :all the event classes was defined in this package

In this package all event classes were defined;

1.ActionEvent: when action is occurred on button,list ,choicelist

2.AdjustmentEvent: scrollbar

3.Container Event:

4.ComponentEvent:

5.FocusEvent:

6.InputEvent:

7.KeyEvent:

8.MouseEvent:

9.TExtEvent:

10.WindowEvent:

|  |  |  |
| --- | --- | --- |
| component | Listener | Listener methods |
| Button | ActionListener | Public void actionPerformed(ActioneEvent e) |
| CheckBox | ItemListener | public void itemStateChanged(ItemEvent) |
| CheckBoxGroup | ItemListener | public void itemStateChanged(ItemEvent) |
| TextField | ActionListener  FocusListener | Public void actionPerformed(ActioneEvent e)  Public void focusGained(FocusEvent e)  Public void focusLost(FocusEvent e) |
| TextArea | ActionListener  FocusListener | Public void actionPerformed(ActioneEvent e)  Public void focusGained(FocusEvent e)  Public void focusLost(FocusEvent e) |
| Choice | ActionListener  ItemListener | Public void actionPerformed(ActioneEvent e)  public void itemStateChanged(ItemEvent) |
| List | ActionListener  ItemListener | Public void actionPerformed(ActioneEvent e)  public void itemStateChanged(ItemEvent) |
| ScrollBar | AdjustmentListener  MouseMotionListener | Public void adjustmentVlaueChanged(AdujtmentEvent e)  Public void mouseDragged(MouseEvent e)  Public void mouseMoved(MouseEvent e) |
| Frame | WindowListener | Public void WindowActivated(WindowEvent e)  Public void WindowClosed(WindowEvent e)  Public void WindowDeactivated(WindowEvent e)  Public void WindowDeiconized(WindowEvent e) |
| KeyBoard | Keylistener | public void keyPressed(KeyEvent e)  public void keyReleased(KeyEvent e)  public void keyTyped(KeyEvent e) |

**Write a java program to display message when u click the button**

import java.awt.\*;

import java.applet.\*;

import java.awt.event.\*;

public class ex1 extends Applet implements ActionListener

{

TextField t=new TextField(20);

Button b=new Button("click");

public void init()

{

add(t);

add(b);

b.addActionListener(this);

}

public void actionPerformed(ActionEvent e)

{

if(e.getSource()==b)

{

t.setText("good morning");

}

}

}

/\*

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EX2:

import java.awt.\*;

import java.applet.\*;

import java.awt.event.\*;

public class ex1 extends Applet implements ItemListener

{

TextField t=new TextField(20);

Checkbox c=new Checkbox("java");

public void init()

{

add(t);

add(c);

c.addItemListener(this);

}

public void itemStateChanged(ItemEvent e)

{

if(c.getState()==true)

{

t.setText("welcome java");

}

else

{

t.setText("no need java");

}

}

}

/\*

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Ex3:

import java.awt.\*;

import java.applet.\*;

import java.awt.event.\*;

public class ex1 extends Applet implements ItemListener

{

TextField t=new TextField(20);

Choice c=new Choice();

public void init()

{

c.add("java");

c.add("dbms");

c.add("os");

add(t);

add(c);

c.addItemListener(this);

}

public void itemStateChanged(ItemEvent e)

{

if(c.getSelectedIndex()==0)

{

t.setText("welcome java");

}

else if(c.getSelectedIndex()==1)

{

t.setText("welcome dbms");

}

else

t.setText("welcome os");

}

}

/\*

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Ex4:

import java.awt.\*;

import java.applet.\*;

import java.awt.event.\*;

public class ex1 extends Applet implements ItemListener,ActionListener

{

TextField t=new TextField(20);

Choice c=new Choice();

Button b=new Button("click");

Label l=new Label();

public void init()

{

c.add("java");

c.add("dbms");

c.add("os");

add(t);

add(c);

add(b);

add(l);

c.addItemListener(this);

b.addActionListener(this);

}

public void itemStateChanged(ItemEvent e)

{

if(c.getSelectedIndex()==0)

{

t.setText("welcome java");

}

else if(c.getSelectedIndex()==1)

{

t.setText("welcome dbms");

}

else

t.setText("welcome os");

}

public void actionPerformed(ActionEvent e)

{

String s= " selected "+ c.getItem(c.getSelectedIndex());

l.setText(s);

}

}

/\*

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Ex5:

import java.awt.\*;

import java.applet.\*;

import java.awt.event.\*;

public class ex1 extends Applet implements ActionListener

{

TextField t1=new TextField(20);

TextField t2=new TextField(20);

TextField t3=new TextField(20);

Button b1=new Button("Add");

Button b2=new Button("clear");

public void init()

{

add(t1);

add(t2);

add(b1);

add(b2);

add(t3);

b1.addActionListener(this);

b2.addActionListener(this);

}

public void actionPerformed(ActionEvent e)

{

if(e.getSource()==b1)

{

int n1=Integer.parseInt(t1.getText());

int n2=Integer.parseInt(t2.getText());

t3.setText(" "+(n1+n2));

}

else if(e.getSource()==b2)

{

t1.setText(" ");

t2.setText(" ");

t3.setText(" ");

}

}

}

/\*

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