

```
3 Lobel:
-> A Label is a Constant stoing that doesn't contains any
        of actions.
- for creating a lobel we can use the following three
 fooms:
   label(s);
  lobel (Stoing, Sto);
  lobel (stoing sto, int how);
-In the
          above those forms the first from coeste a
        without string and the second form (reater
          with a string value and the third form
 a label
 also coeate a label with stoing value and also well can adjust the label by using LABEL. LEFT, LABEL. PIGHT
 and LABEL-CENTER.
 Impost Jorg.qut.x;
   Impost Jorg. applet. *;
   Public class label demo extends applet
    label one= new label ("yes");
    label two = yew label ("No");
   label those = yew label ("may be");
   add(one);
   add (two);
   add (those);
  < apple code =" labelelemoccloss" width=200 height=300>
  े निया न्यामित
  < /html>
```

```
@ Buttons-
 -> The Button are useful to perform Some action
  the action for a button can be implemented using action listener interface.
 -> This interface defines action performed methodwhich
       be called, when an event (or) an action
  generated ofter clicking
                                  button.
                             the
- for creating a Button we can use the following
  two statements
   b= new Button();
           b = yew button ("lobel").
 the above forms the first statement is used to
  create a button without any name. The Second
 statement is used to execute a button with a
 name.
Fi Impost Jorgiautit;
  impost vova applet x;
  impost vova. qut. everf.x;
  Public class Buttondemo extends Applet
               Implements Actionlistenes
  Button yes, No, maybe;
 Public Void init()
  yes = new Button ("yes");
   No = yew Button ("No");
 may be = new Button ("may be");
             odd (yes );
            add (NO);
            add (may be);
             yes. addaction Listener (thes);
```

```
No add Action Listener (+ his);
   maybe add Action Listenes (this);
  Public void Action performed (Action event 90)
   string sto = a e-getaction command();
    msg="you pressed yes".
   else if (sto. equals ("No"));
   msq=" you poessed No");
3 14 e/se (10)
    msg="400 pressed may be";
   repoint ();
   Public void paint (Graphics 9)
   g. docws-tring (msg, 60,50);
  < h+m/>
  < applet code = "Button Demo. class" width= 300 height=200>
  </applet>
  c/h+m/>
                        you press yes
```

5 check box & -) A check box is a control that can be used to twon on option on (00) off it contoins a small check-box. and a label is associated with each check box. - for execting a checkbox() we can use the following three statementscheckbox(); check box (stoing sto); check box (string sto, Boolean on); - In the above 3-statements the first statements creates a checkbox without any label. - The Second statement create a checkbox with a label and the third statement we can say the check box option on too displaying the selected checkbox label. Fimport Jorg. awt. *; impost vova. qut. event.x; impost sova.aut.applet.x; Public class checkbox Demo extends Applet Implements ifemlistenes win= new check box ("window 98, tove); winds = new checkbox ("windowNT"); Solovies = new checkbox ("solovies"); mac = new checkbox ("mac"); add(win98); add (win NT); add (Solavies); add (mac);

Public void items statechinged (Item Every e)
and the transfer of the last o
repoint();
Especial with the wife of the tracker of pilot is a
Rublic Void point (Graphics 9)
The sound of the s
msg ="current state";
g. dogw stoing (msg, 6,10);
ms9 = " window98"+ wing8.getstate(),
q. doowstoing (msg. 6,10);
msg="winnt"+ winnt-get state();
9. dog w stoing (msg. 6,10);
msg-" solovis + solovis getstate();
9. dogw stoing (msg. 6, 10);
msg=umac" + mac.getstate();
g. dogwstring (msg, 6110);
ments
A Visit of the Control of the Contro
= height=300)
Chtml> Capplet code="checkbox Demo-class" width = 200 height=300)
cappled code const
1/2°-
[-\D/x]
□ windows98
- Windows NT . wo as a significant
[Soloris and part of the part
Comat Son Company
The mess object box male cog. Felse)

Major Major

```
6 Radio Buttons-
 -> By using radio button we can select only one item
       y a group of items. A radio button can be created using a checkbox group class and checkbox class.
 -> for execting a sactio button first we should crafe.
   Checkbox goods object ofter that we should poss
  the checkbox gooup object to the checkbox closs.
 -> This can be represented as-
      checkbox good check box Group (3)
      checkbox cb= new checkbox ("lobels, cbg, stote);
-In the above two statement the state in the Second
  statement represents, if the state is tore then
  the radio button appears is already selected by
  default.
-) if the state is folse then the tackin button appeals
  as normal means the radiobutton can not be selected.
gimpoot Jova.out.x;
  impost Jorg. aut. event. x;
 class mysadio extends frame Implements Itemlistener
  String meg="";
  checkbox Good cbg;
  check box yin;
  myoadiocs
  Set layout (new Flow Layoutes);
  cbg = new checkbox group (so
  y= new checkbox ("yes", cbg .tave);
  n= new checkbox ("No", cbg, False);
 add(y);
 add(n);
  yoodd Item listener (this);
```

```
nodd Item Listener (this);
   Public roid item stateching ed (Item Event ie)
   repaint(s;
   Public void point (Gogphics 9)
    msg="current selection";
    msg= cbg.getselected checkbox ().get label ();
    9. doowstoing (msg, 10,100);
   Public static void main (string agests)
     my radio mo= new my radio ();
     mroset Tiple ("my rodioButton");
      mr.set size (100,400);
      mr. set visible (Toues;
   <htmf>
           code = " Radio Button Demo. class" width = 200 height = 300>
   Capplet
   c/htm/>
                   @yes ONO
1) List:
           contains multiple items for coenting a list
                    the following
```

list (int numdous);

```
-> The first form creates on empty list in
                  the number of sows specified
  second form
 the number of n-trees that a list may contain.
-) The get selected item and get selected index
  methods allow the user to select a single item
      a time.
I'm port dovo.out.x;
  impost Java. event. x;
  import varg. applet.x;
 Public class list Demo extends Applet
                 Implements Action Listened
    List Os, browser;
   string msg=" ";
   Public void init ()
    os= new list (4);
   browser = new list(3);
   OS-999 ("window xp");
   Os. add ("window vista");
    os. 9dd ("solovis");
   05.9dd ('m, 90 05");
   browser. add ("Internet explorer");
   boowsed. add ("fix efox");
   browsed. add ("operq").
   browser .select (1);
   add (os);
  add (boowsex);
  os-add action Listener (this);
  browser add Action Listener (this);
                        proparts);
```

```
Public void action performed (Action Event ae)
    Public Void paint (Goaphics 9)
     int idx [];
     ms9 = " cuosent os";
     idx = os.getselected Index ();
    for (int c=0; icidx; length; c++)
    msq+ = os-get Item (idx[i]+"
    g. doowstring (msg, 60,50);
    msg = "current browser".
    msq+ = "browser.get selected Item();
    9. dogw stoing (msg. 6,10);
   < hfml>
   < applet code =" Listoemo. class" width= 300 height
   </h/m/>
               current 08
                browsel
(8) choice:
                     used to coeste a pop-up list of
-) A choice
                is.
 items that forms a menu.
                     uses click on the menu a pop-up
                the
- when ever
                     will be displayed and
              select the sequiter prist
  used can
eg: impost vova autit;
    impost Jarg. event x, cotions top. 300011
```

```
import. Vara-applet .x;
  Public closs choice Demo extends Applet
                 Implements Itemlistenes
   choice os, browser;
   Public'
          void init()
   os = new choice (4);
   browser = new choice(3);
   os. add ("window xp");
   as add ("window vistor);
   05.0dd ("Solaris");
  os.odd("Macos");
  browser. add ("Internet explorer");
  browser add ("firefox");
  browser. odd ("operois).
  browser. select (1);
 add (browser);
 os. add I tem Listener (this);
 Browsex. add Item Listener (this);
 Public Void itemstatechonged (Item Event ie)
 repoint ();
Public void point (Graphic 9)
msg="Current os"
msgt = 0s.getselected Item ()
9. drowstring (msg, 6,120);
msg = "current browser";
msqt = browser getselect ed Item ();
```

g. drawstring (msg, 6,100); chtm/> <applet code = "choice Demo.class" width= 300 height=200> c/h/m/> ofp; id til window XP/0 opeda. current window KP cussent br. fixefox 9 contained class: A Contained class is a Superclass for all the classes. in a gwt. This class has the following methods-1 Contained: This is used to coeste a new containes for adding the component. @ component odd (en) component compo- This is used to add the specified component at the end of the Containes. 3 void add Container listener (): - It adds specified container Listener interface to a component. (void paint (Graphics 9): It is used to paint the contained. 5 void add cos This is used to add the specified containes. (void remove (intindex) it is used to remove the specified component from at containet F void remove all 1 Remove all the components from a Container

9

void selford (fort f)

-> 9t is used to set the fort for a confainer.

vold sellayout (Layout -manager mgs)

It is used to set the Layout manager

-> PICHI and for confer. with

void update () changes of is used to update the containers. out at a

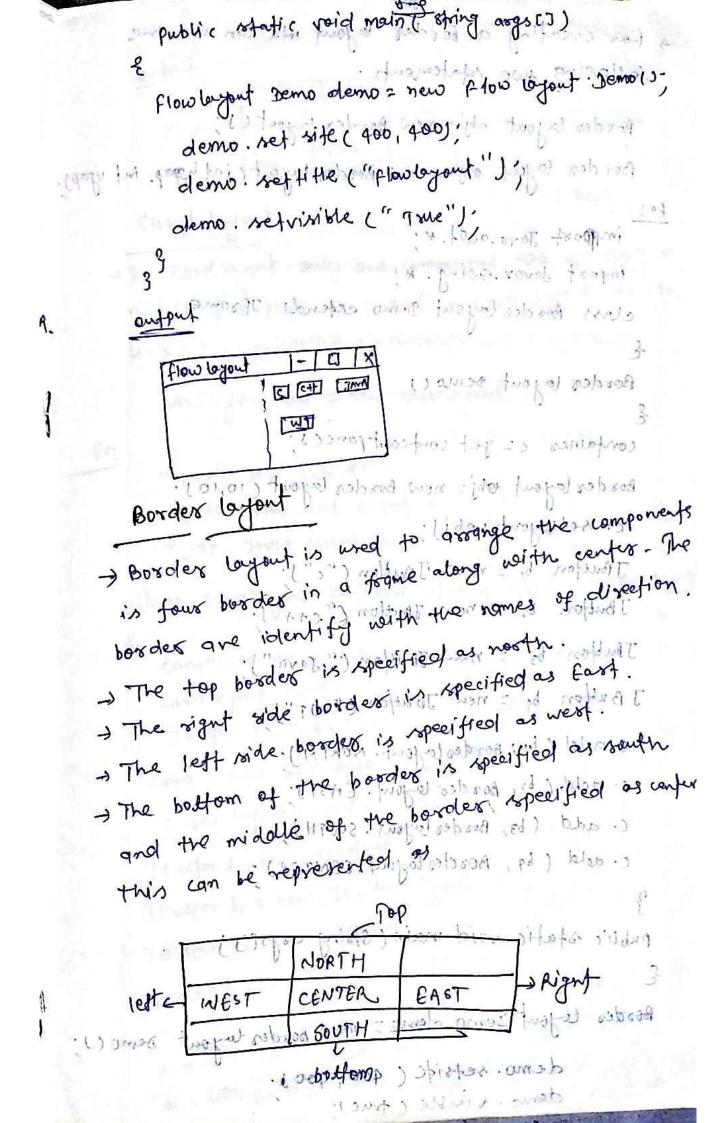
Layout managers:

+ . Pur. ovab tropni -> A layout manager is a class that can be used to arrange the component in a particular nanner. In the frame, the logout managers that can be available in a java que () amos judgoj suo!]

of flow layout is useful to grange the component in a line one after another when a line is filled with the component the remaining components is automatically placed in the meat line. To create a from again we can me the following statements. (" FWI") MOTTURE OUR

flow byout obj = new flowbyout(); from byout obj: new flow byout (interdigenment); flow layout obj = new flowlayout (int h gap . int vgap).

-> In the above statements the first statement ereafes a flow layout and the default gap between the component is 5-pixely -) In the second externent we specified abjument to arrange the components from the lest whe can use flow logart. LEFT to adjust the component from right side. We can use frow layout. -> RIGHT and for contex. whe can use flow byout CENTE -> In the third statement the hgap and sgap specificy the horizontal and verstical gap between the components. Takent woulders: impost dava. and . +; importations of the series that the month of the Class flowboyout semo extends I frame more of Flow tayout Demo() 200 0000 0 00 21 diayo Lavoques sit spreng of Internation and so Flowlayout obj = new flow layout (flow layout, RIGHT, 10,10) b, = new JBUTTON (46') D2 = new JBUTTON ("C++")) by = new JOUFTON ("Java"); b4 = new JBUTTON ("WT"). Atmosphere c. add copy was wor = ide tragel was (theorem apply men flowledges the larger court c. add (ba); was in the hope water



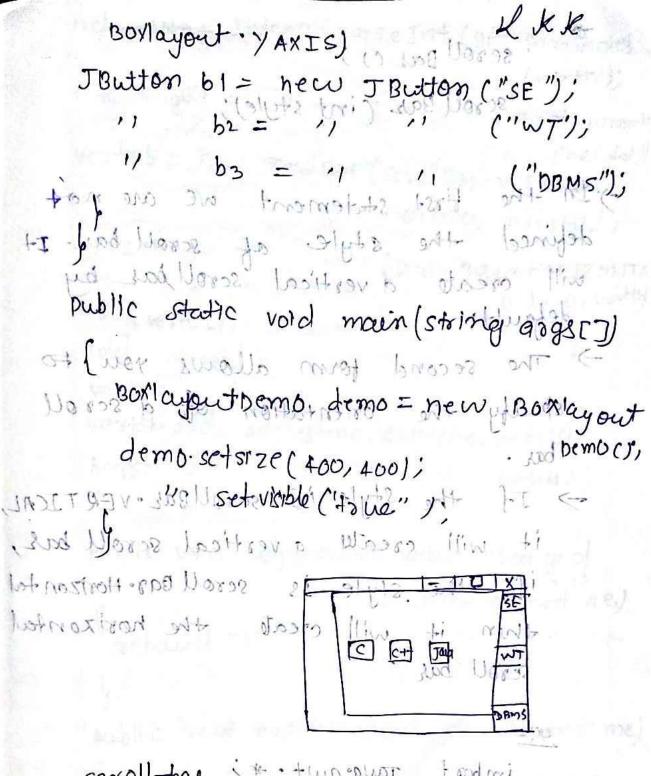
-> for creating a border layout the can we the following two refatements. Border layout obj = new Border layout () Border layout obj = new Border layout (ind hypap, int ypaps aldiniofox arrable impost Java. aut. *; impost davax. swing . +; class Boodes layout Demo extends Iframe Border loyout Demo () confainer c= get conferent pane (3; Border layout abj = new Border layout (10,101. or of 2.0 set layout (obil: Jourson b, = news Janton ("c" J. 1000 (Joutson by = new Joutson ("C++"). JButton by man JButton ("Java") J Buton by = new Jouton CTINT by type 311 6 or add (by, porderlagout. NORTH). c. add (b) porder layout. EASTI, to mothed with c. add (bg, Border byjout: SOUTH Jijobin of c. add (bg, Border layout CENTER): public static void main (String aggs[]) iest of intest courses that toping Border Ceyout Demo demo = new Border Luyout demo. setsite (400, 900). demo . visible (true);

output Public soid action perfer card layout; - In card layout only one component one card is visible at a time to create a casel loyout whe can lives the following statements card about oh, a new card pahont () impost Java. awt. *; impost Java and event . * [] -Lyho import Javar sueling . *; class cardleyout extends Itsome implements actioning a two dimensional gold from "surfacionation out o cardleyout cord; yours and columns. The contained is divided into, edipedand amopula titaigle and Items carely in carely out Using is transport and c. set layout (cased); a gaid bagut. Joutson bis new Joutson (sich) ping porton of 6 JButton by = new JButton ("C+1); [Lumple of Button bar zinew Joutton ("Java."); c. add ("second card", b.); c. add ("Third card" bs J. Priess. norof toograin be addagtion listener (this); Traged bires (this);

b. add Action Lintener (this); 1.71 3 by add Action Listener (this) Public void action performed (Action Event qe) card neat (); case loyent; public afactic raid main (string args []) itable of a time to execute a cood legant whe Card leyout Demo denso = new land layout Demo(). demio. netside (400, 400), (1) demo. refrisible (true); Y. Bullie. 1 0408 twin + Grid layout -) A Gold logout is useful to divide the confairer into a two dimensional grid form that confeins several rows and columns. . puro protections The confainer is divided into a equal side rectargle and one component is placed in each reefargle to create a grid loyout. coact legent (card), To create a good layout whe can use the following style asid toyout obj = new Grid layout (); = id noting [Grid layout obj = new Grid layout (introines, int columns) import Jarg. and :x; d, pros tory) blooms impost Javar. Swing . K; heres brouge ! Don . class grid tayout Demo ex , adda etten fin lenes

```
Grid layout Dergo ()
                              H. + Wo. DUST
        Gridlayout good = new grid layout (2, 3, 50,50),
         c. set tayout ( Brid ) = met vagual x08 82010
         Jouton bi = new Jouton ("c");
         I Button br = new I Button ("C++,").
         I Button by = new Joutton ("Java");
        J' Bulton By = How JBulton ("INT")
      ( T) Button by of new Jourfor ( "Olc");
      Mypomel mp1 = new (da) poper ()
         c. add (bs); codd (bs);
      My panel ms = neiledylpamelos
          c. adol ( 64).
                            c. add (mg);
         c. add (ba);
      public refatic void main (string angs [])
        Gridleyout Denso. demo: new Gridleyout Demo ();
 with treplemon supplife ( 500, 500 died rod
 EIXA X. Elemon Net visible ( true).
                     school mohors
                      TButton b1 = no
Donat Box Layout : - Ed
    -> A bealayout allows multiple components to be adoled
      either vertically or horizontally to create
      box beyout we can use the following statement
        Box layout box = new Box layout (Ipanel: object, axis,
 Berbyout horz = new gexlaum + / this
```

```
1m port
           Java · awt · *;
    import fewarswing to be two the
    class Box Layout mextends JFrames
                    Jourson pr - were Janfour Co.
                 I Button by = new I Button 1 "C++
        Buxlayout Democ
                       J Button by a new Jourton
          contained c = getcontent panel);
            c. set Loujout (new Flowlay out (0);
            Mypanel mp1 = new mypanel ()
            coadd (mp1);
            My panel mp2 = new mypaneles;
             c.add (mp);
                                 c. add (by).
           class impranely extends stranely
  doighout Demo genes aver Chalologh some (i).
               Box layout box1 = new Boxlayout (this,
                        Cand ) = Haringoxlayord . X -AXIJ
               setlayout (bon 1);
                TButton b1 = new JButton ("");
                           by = 11 11 ("(-PA))
                                = 11: July 10) x (1) Jana)
box to yout allows multiple components to be easterd
   class mypanel 2 extends Tpanel and
sex legent box = new Box (s) responder of the sold ward x so
  " ( mortafien ):
              Boxbyout 60x2 = new Boxlayout (this
```



restically of therizontally.

- To execute adjiniscrollobas showaran we the following statements:

scroll Bers (); Tray Tropo (0) scroll Bar (int style);

the first statement we are not defined the style of scroll bar. It will create a vertical scroll bar by [[] default of \$2) rison book situates situation

-> The second form allows you to topispecify the orientation of a scroll · rad bernio (), demo-scherze(100, 100);

-> If the style is scrollBar. VERTICAL, it will create a vertical scroll bar, if the style is scroll Bar. Horizontal sexull bar will create the horizontal

import Java aut + *; import java aut event * >

bro class spremo extends. Applet Implements Adjust mentistenes, mous

motionListenes

can be esecuted eithery string ms = " seroll Bas vertsb, horzsb; It su mapublic evolidorsinitac suce the following statements

```
ind width = Integer parse Int (get parameter
                                   (width));
   int height = " (offet parameter
    verts b = new scroll bar (scroll bar - VERTICAL,
detrov Outover dezmi" 4" jort, to, sheight;
   horzsb
                     " (ScrollBaz. HORIZONITAL
  got value 0;
                                  0,1,10, width);
    add (vertsb);
    add (horzsb);
     Ve a last
     vertsboadd adjustmentListener (+h1s);
     horsh-add
                                (this);
     لم
     public void adjustment value changed
                       ( Adjustment Event ae)
 sof there are an arrange of this set items for
arranging a wint of items in a menu afirst space have
 public void mouse oragged (Mouse Event me)
bur, wie have to create the main menu forgreating
       int x= me.get(x);
       int y= me. get (4), or brown p
      vertsb - setvalue (y);
        horasbito meni lask (X); sod meni
        repaint ();
     public void mouse moved (nowegvent me)
```

supplie troid paint (arabhid 9) ((Wholm) strong mg = "veo Heal:" +veotsto getvaluecy; illespion may = "horizantal ! + norze 6 1, de Es; g: drawstr mg("4", norzsb. getvalue(), vertsb. 11 (१८३०।। एकः भवह १७०१ १८१ get value o; 0,1,10, WISHH: odd (vertsb); i (452LOU) plob realished adjustmenthistenes (HIVIS); horsb- add (+hil); public void adjustment value changed C Adjustment Event 2Me.) -) In a menu me can arrange a list of items! for arranging a vist of items in a menu afirst wall have (smito creaters or imena pass astes creating the menu bar, we have to weate the main menu for creating a menu and a menu being. -) rale have to we the following statements Menu for mi = new menu of cond Menu. Me: men menu () traisfor public void mouse moved (NOWEEVEN

```
simport i Java aut : *; tur vinore troduis
import Java autevent : * 19 19 19 1
 public class Simple Meny extends Iforame implement
                            ActionListenes
   Menue states, cities;
      public simple Menu ()
       MenuBas mb= new menuBas ();
       Set Menu Base (mb);
          States = new Menu ("Indian states");
          cities =
                         " (" Indian cities");
          mb add (states);
           mb. add (cittes);
           State add ActionListener (this);
          state cities add Action Listener (this);
          state add (new menuItem ("Himachal prodeship
          State add (new MenuItern ("Rajasthan"));
          State add (new MenuItem ("west Bengal"));
          cities. add (new menuItem ("belli));
          " ("jaipus"));
              " " (" ("kolkata")),
          public void action performed (Action Event
                                             de)
             string str = de.getAction command c);
             system · out · println ("you selected"+sta);
```

1 1 story but story through plan storys Dugan

Public state void main (string args []) 2 simplemenu m1 = new simple Menuic); m1. @ set size (300,300) bereidrai (See m.1.) set visible (Arue); en sidua 3 motelling Hoa Menue states, cities; 0/p:-Omple Starple Menn C) menubas (); Indian state Indian of States = new vertel "andlan states"); mb add (states); "Indian cities"); : (2014:0) bbb don State ash Alientistand (+Mis); Mask (1814+) somotes (crazy notes untuk); ("Rojas+han")); otate ("Rojas+han")); state cielel inch State acld (new menustern ("west sengal")) cities add (new monution ("belli)); " ("Jadhus"); == " " (" wo kate")), " " public void action performed (Action Front (9b

ctains ctr = dealtactantament