# DHANRAJ BAID JAIN COLLEGE

## (AUTONOMOUS)

**Co-Educational Jain Minority Institution**

**Owned & Managed by Tamil Nadu Educational and Medical Foundation**

**Approved by Government of Tamil Nadu, Affiliated to University of Madras**

**Re-Accredited by NAAC with 'B+' Grade**

## BACHELOR OF COMPUTER APPLICATION
## II YEAR

## PROGRAMMING IN JAVA

## PRACTICAL RECORD

**NAME : …….**

**REGISTER NO. : …….**

**DEPARTMENT OF COMPUTER SCIENCE**

**2022-2023**

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### BONAFIDE CERTIFICATE

This is to certify that, the bonafide record of work done

in……..

by Mr/Ms …….. with Register no. ……of

IInd year BCA during the academic year 2022-2023.

…… ……..

Faculty In-charge Head of the Department

Submitted for the practical examination held on ……..
at **DHANRAJ BAID JAIN COLLEGE** Chennai -97

…….. ……..

Internal Examiner External Examiner

# *INDEX*

## *1. AREA AND PERIMETER OF A CIRCLE*

```
import java.io.*;
 class Area
 {
        public static void main(String s[])throws IOException
        {
                double a,p;
                int r;
                System.out.println("Enter the value of r:");
                BufferedReader br= new BufferedReader(new InputStreamReader(System.in));
                r=Integer.ParseInt(br.readLine());
                a=3.14*r*r;
                p=2*3.14*r;
                System.out.println(a);
                System.out.println(p);
        }
 }
```

***OUTPUT:***

Enter the value of r:

10

314.0

62.800000000000004

## *2. SUBSTRING REMOVAL FROM A STRING*

```
import java.io.*;
public class RemovalString
{
      public static void main(String s[ ])throws IOException
      {
           String str,substr;
           BufferedReader br=new BufferedReader (new InputStreamReader(System.in));
           System.out.println("Enter the String:");
           str=br.readLine();
           System.out.println("Enter the String to Remove:");
           substr=br.readLine();
           int j;
           j=str.indexOf(substr);
          StringBuffer sb=new StringBuffer(str);
          sb.delete(j,j+substr.length());
          System.out.println("Result of String:"+sb);
}
}
```

***OUTPUT:***

Enter the String: Hello World

Enter the String to Remove: World

Result of string: Hello

## *3. RANDOM NUMBER GENERATION*

```
import java.io.*;
import java.util.Random;
class Rand1
{
	public static void main(String s[])
	{
		Random r=new Random ();
		int k[ ]=new int[5];
		int i,j,t;
		for(i=0;i<5;i++)
		{
			k[i]=r.nextInt(10);
		}
		for(i=0;i<5;i++)
		for(j=0;j<5;j++)
		{
			if(k[i]>k[j])
			{
				t=k[i];
				k[i]=k[j];
				k[j]=t;
			}
		}
		System.out.println("Random  Numbers in Ascending Order");
		for(i=0;i<5;i++)
		{
			System.out.println(k[i]);
		}
}   }
```

***OUTPUT:***

***Random  Numbers in Ascending Order***

0

2

5

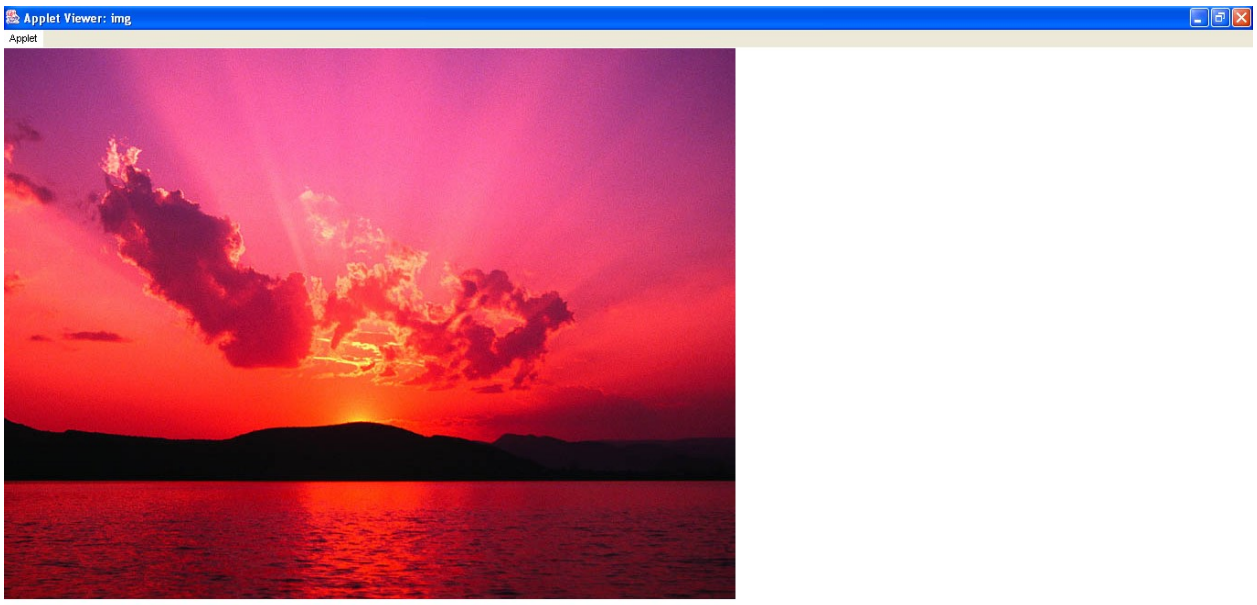
6

9

## *4. IMPLEMENTATION OF POINT CLASS FOR IMAGE MANIPULATION*

```
import java.applet.*;
import java.awt.*;
public class img extends Applet
{
	int x,y;
	Point p;
	Image i;
	public void init()
	{
		p=new Point();
		p.setLocation(100,100);
		i=getImage(getDocumentBase(),"Sunset.jpg");
		repaint();
	}
	public void paint(Graphics g)
	{
		x=(int)p.getX();
		y=(int)p.getY();
		g.drawImage(i,x,y, this);
	}
}
/*<applet code="img" width=200 height=300></applet>*/
```

# *OUTPUT:*



## *5. USAGE OF CALENDAR CLASS AND STRING MANIPULATION*

```
import java.io.*;
import java.util.Calendar;
class Cal1
{
        public static void main(String s[])
        {
                Calendar C=Calendar.getInstance();
String months[]={"January","February","March", "April","May","June","July","August",
"September","October","November","December"};
                System.out.println("CurrentDate :"+ C.get(Calendar.DATE));
                System.out.println("Day of week :"+ C.get(Calendar.DAY_OF_WEEK));
                System.out.println("Day of week in month :"+
                C.get(Calendar.DAY_OF_WEEK_IN_MONTH));
                System.out.println("Current Hour :"+ C.get(Calendar.HOUR));
                System.out.println("Current Minute :"+ C.get(Calendar.MINUTE));
                System.out.println("Current Second :"+ C.get(Calendar.SECOND));
                System.out.println("Current Millisecond :"+ C.get(Calendar.MILLISECOND));
                System.out.println("Current Month :"+ months[C.get(Calendar.MONTH)]);
                System.out.println("Current Year :"+ C.get(Calendar.YEAR));
                System.out.println("Current Hour :"+ C.get(Calendar.HOUR));
        }
}
```

***OUTPUT:***

Current Date: 3

Day of Week: 4

Day of Week in Month: 1

Current Hour: 2

Current Minute: 32

Current Second: 47

Current Millisecond: 390

Current Month: September

Current Year: 2014

Current Hour: 2

## *6. STRING MANIPULATION USING CHAR ARRAYS*

```
import java.io.*;
import java.lang.*;
import java.util.*;
class chararrays
{
        public static void main(String s[])throws IOException
        {
                char e[]={'j','a','v','a'};
                char f[]={'d','o','t','n','e','t'};
                String s1=new String(e);
                String s2=new String(f);
               System.out.println("Concatenation of String"+ s1+" "+s2);
               System.out.println("Length of characters"+ s1.length());
               System.out.println("Equals of 'f' and 'e' strings" +s1.equals(s2));
                System.out.println("charAt() of String"+ s1.charAt(1));
                System.out.println(s1.toUpperCase());
                System.out.println(s1.concat(s2));
        }
}
```

***OUTPUT:***

Concatenation of String java dotnet

Length of characters 4

Equals of ‘f’ and ‘e’ string false

Char At() of String a

JAVA

Javadotnet

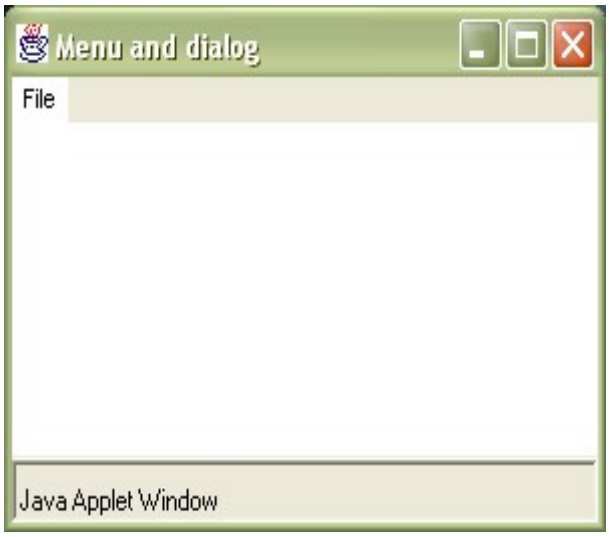
# *APPLETS*

## *7. WORKING WITH DIALOGS AND MENUS*

```
import java.awt.*;
import java.awt.event.*;
import java.applet.*;
/*<applet code="MenuF.java" width=300 height=300>
</applet>*/
class SampleDialog extends Dialog
{
        SampleDialog(Frame parent,String title)
        {
                super(parent,title,false);
        }
         public void paint(Graphics g)
        {
                g.drawString("in the dialog box",30,100);
        }
}
public class MenuF extends Applet
{
        Frame f;
        public MenuF()
        {
                MenuBar mbar=new MenuBar();
                f=new Frame("Menu and dialog");
                f.setMenuBar(mbar);
                Menu File=new Menu("File");
                MenuItem item1;
```

```
        File.add(item1=new MenuItem("New..."));
        mbar.add(File);
        f.setSize(300,200);
        f.setVisible(true);
        item1.addActionListener(new ActionListener(){
        public void actionPerformed(ActionEvent ae)
        {
            String arg=ae.getActionCommand();
            if(arg.equals("New..."))
            {
                SampleDialog d=new SampleDialog (f,"New Dialog Box");
                d.setSize(200,200);
                d.setVisible(true);
            }
        }
    }
}
```

***OUTPUT:***


Menu and dialog
File
Java Applet Window


New Dialog Box
in the dialog box
Java Applet Window

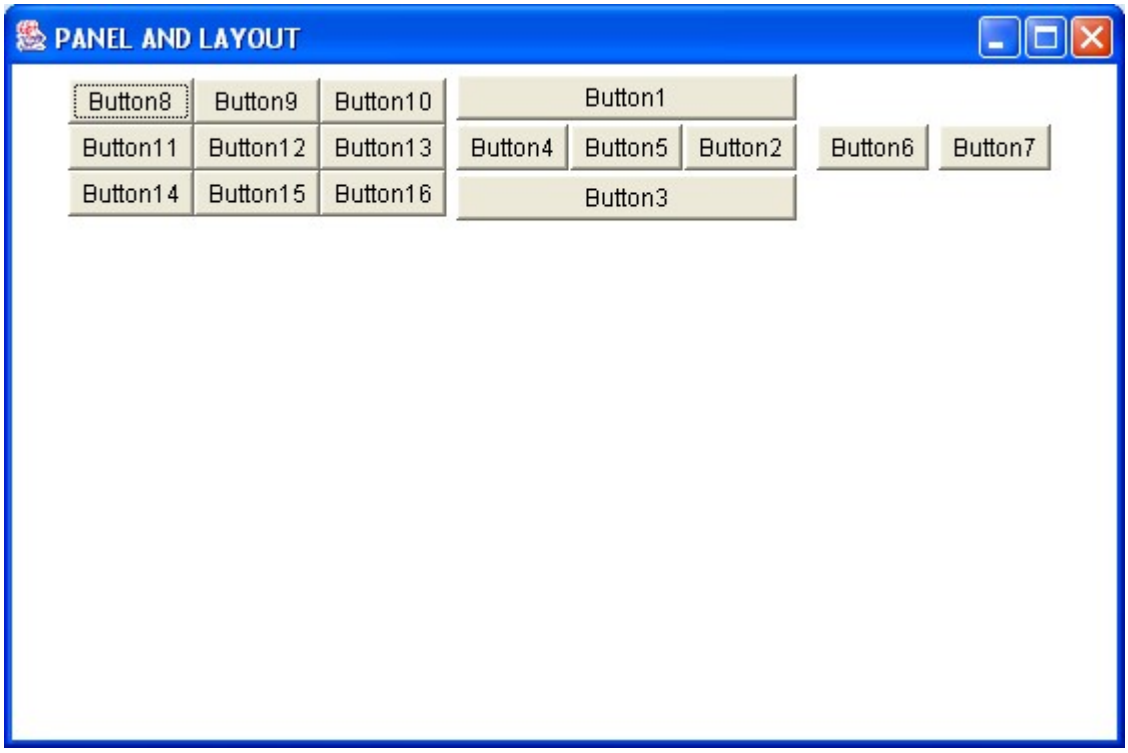
## *8.WORKING WITH PANELS AND LAYOUT*

```
import java.awt.*;
import java.awt.event.*;
public class pan extends Frame implements ActionListener
{
private Button bt1=new Button("Button1");
private Button bt2=new Button("Button2");
private Button bt3=new Button("Button3");
private Button bt4=new Button("Button4");
private Button bt5=new Button("Button5");
private Button bt6=new Button("Button6");
private Button bt7=new Button("Button7");
private Button bt8=new Button("Button8");
private Button bt9=new Button("Button9");
private Button bt10=new Button("Button10");
private Button bt11=new Button("Button11");
private Button bt12=new Button("Button12");
private Button bt13=new Button("Button13");
private Button bt14=new Button("Button14");
private Button bt15=new Button("Button15");
private Button bt16=new Button("Button16");
public static void main(String args[])
{
new pan();
}
public pan()
{
```

```
super("PANEL AND LAYOUT");
Panel p1=new Panel();
Panel p2=new Panel();
Panel p3=new Panel();
BorderLayout b1=new BorderLayout(1,2);
p1.setLayout(b1);
add(p3);
add(p1);
add(p2);
p3.setLayout(new FlowLayout(0));
p3.setLayout(new GridLayout(3,3));
p1.add(bt1,b1.NORTH);
p1.add(bt2,b1.EAST);
p1.add(bt3,b1.SOUTH);
p1.add(bt4,b1.WEST);
p1.add(bt5,b1.CENTER);
p2.add(bt6);
p2.add(bt7);
p3.add(bt8);
p3.add(bt9);
p3.add(bt10);
p3.add(bt11);
p3.add(bt12);
p3.add(bt13);
p3.add(bt14);
p3.add(bt13);
p3.add(bt14);
```

```
p3.add(bt15);
p3.add(bt16);
bt7.addActionListener(this);
setSize(640,480);
setLayout(new FlowLayout());
show();
}
public void actionPerformed(ActionEvent ae)
{
if(ae.getSource()==bt7)
{
System.exit(0);
}
}
}
```

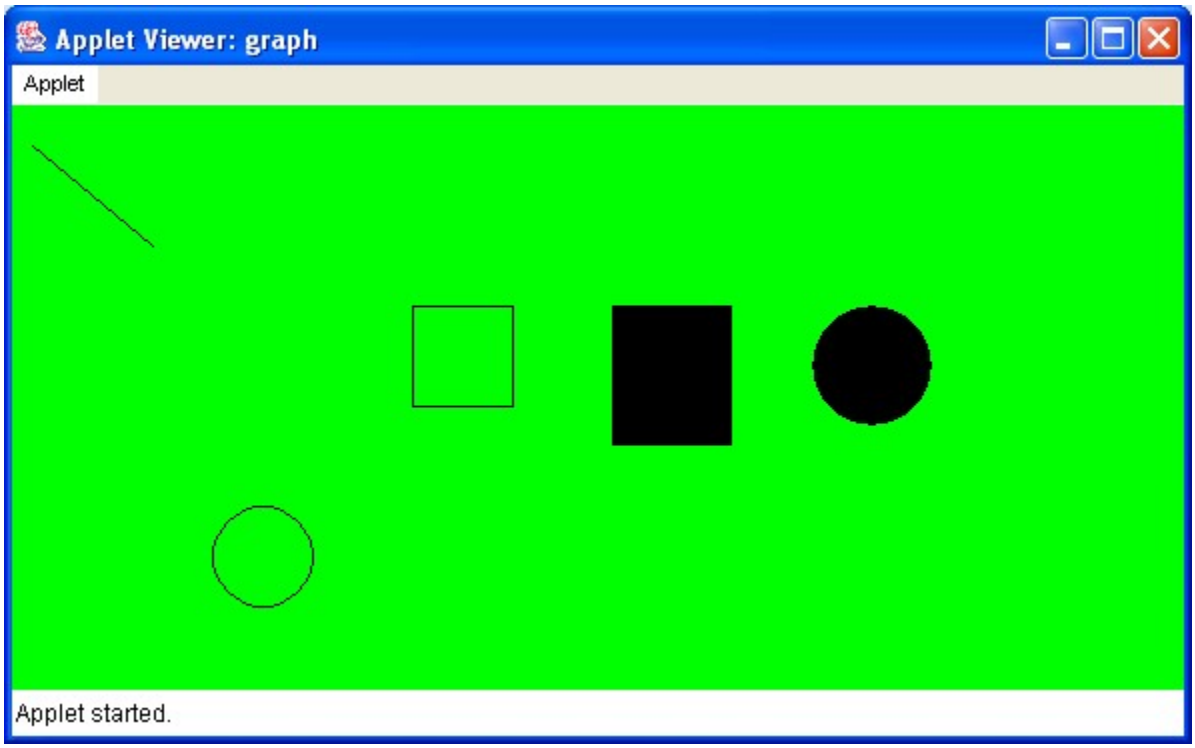
## *OUTPUT:*


PANEL AND LAYOUT
Button8
Button9
Button10
Button1
Button11
Button12
Button13
Button4
Button5
Button2
Button6
Button7
Button14
Button15
Button16
Button3

## *9.WORKING WITH GRAPHICS*

```
import java.awt.*;
import java.applet.*;
public class graph extends Applet
{
	public void init()
	{
		setBackground(Color.green);
	}
	public void paint(Graphics  g)
	{
		g.drawLine(10,20,70,70);
		g.drawOval(100,200,50,50);
		g.drawRect(200,100,50,50);
		g.fillRect(300,100,60,70);
		g.fillOval(400,100,60,60);
	}
}
/*
<applet code ="graph" width=300 height=200>
</applet>*/
```

***OUTPUT:***

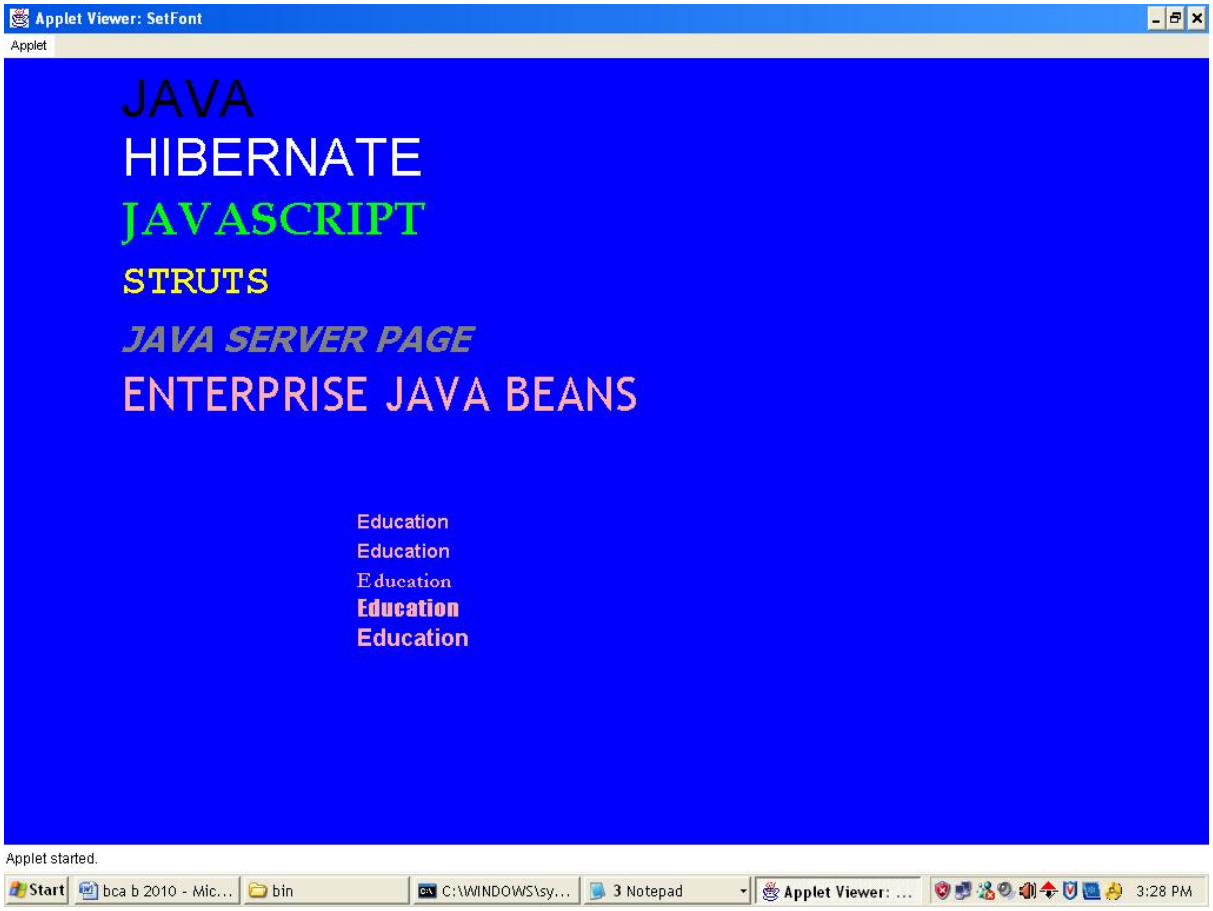


## *10. WORKING WITH COLORS AND FONTS*

```
import java.applet.*;
import java.awt.*;
/*<applet code="SetFont.class" width=200 height=200></applet>*/
public class SetFont extends Applet
{
        Font arial,arialBlack,bAntiqua,courierNew,
         tahoma,trebuChet;
         public void int()
         {
                setBackground(Color.blue);
               arial=new Font("Arial",Font.PLAIN,45);
               arialBlack=new Font("ArialBlack",
               Font.BOLD+Font.ITALIC,45);
               bAntiqua=newFont("BookAntiqua",
               courierNew=new Font("Courier New",
                Font.BOLD,35);
                tahoma=new Font("Tahoma",
                Font.BOLD+Font.ITALIC,30);
                trebuChet=new Font("TrebuChet MS",
                Font.PLAIN,40);
       }
       public void paint(Graphics g)
       {
               g.setFont(arial);
               g.setColor(Color.black);
               g.drawString("JAVA",100,50);
```

```
 g.setFont(arialBlack);
 g.setColor(Color.white);
 g.drawString("HIBERNATE",100,100);
 g.setFont(bAntiqua);
 g.setColor(Color.green);
 g.drawString("JAVASCRIPT",100,150);
 g.setFont(courierNew);
 g.setColor(Color.yellow);
 g.drawString("STRUTS",100,200);
 g.setFont(tahoma);
 g.setColor(Color.gray);
 g.drawString("JAVA SERVER PAGE",100,250);
 g.setFont(trebuChet);
 g.setColor(Color.pink);
 g.drawString("ENTERPRISEJAVABEANS",
 100,300);
 String fName[]={"Bookman oldstyle",
"Gothic Bold","Garamond","Impact",
"MS sans Serif"};
int blue=20,row=400,green=20,red=20;
int i;
for(i=0;i<10;i++,red+=20,
     green+=20,blue+=20,row+=25)
{
   g.setFont(new Font(fName[i],Font.BOLD,i+16));
   g.drawString("Education",300,row);
}        }
```

***OUTPUT:***


Applet Viewer: SetFont
Applet
JAVA
HIBERNATE
JAVASCRIPT
STRUTS
JAVA SERVER PAGE
ENTERPRISE JAVA BEANS
Education
Education
Education
Education
Education
Applet started.
Start
bca b 2010 - Mic...
bin
C:\WINDOWS\sy...
3 Notepad
Applet Viewer: ...
3:28 PM