**Experiment No: 8.1**

**Aim:**

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| Write a program to demonstrate the use of File class methods. |

**Code:**

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| import javax.swing.\*;  import java.awt.\*;  import java.awt.event.\*;  public class main81 extends Frame {  public static void main(String... ar) {  Frame frame;  Label label;  Button button;  frame = new Frame("Frame");  label = new Label("Enter values from 0-5");  button = new Button("Enter");  frame.setSize(600,800);  frame.setLayout(new FlowLayout());  TextField text1= new TextField();  frame.add(label);  frame.add(text1);  frame.add(button);  frame.setSize(210, 250);  frame.setVisible(true);  button.addActionListener(new ActionListener(){  public void actionPerformed(ActionEvent e){  int x= Integer.parseInt(text1.getText());  if (x==0){JOptionPane.showMessageDialog(frame,"ZERO");}  if (x==1){JOptionPane.showMessageDialog(frame,"ONE"); }  else if(x==2){ JOptionPane.showMessageDialog(frame,"TWO");}  else if(x==3){ JOptionPane.showMessageDialog(frame,"Three");}  else if(x==4){ JOptionPane.showMessageDialog(frame,"Four");}  else if(x==5){ JOptionPane.showMessageDialog(frame,"Five");}  else { JOptionPane.showMessageDialog(frame,"IT is something else");}  }  });  }  } |

**Output:**

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**Experiment No: 8.2**

**Aim:**

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| Develop a GUI application to create an array of double type named “ar” at runtime. The size of the array should be input from the user during runtime. The user should be asked to fill the array and then search any element from the array by taking search data from the user. Message should be displayed whether the search was successful or not. |

**Code:**

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| import javax.swing.\*;  import java.awt.\*;  import java.awt.event.ActionEvent;  import java.awt.event.ActionListener;  class A {  JTextField text1 = new JTextField("Enter text here");  Button b1,b2;  A(){  JFrame frame = new JFrame("ARRAY");  JLabel label = new JLabel("Enter Array's size");  TextField text1= new TextField();  b1=new Button("Ok");  label.setBounds(10,10,500,400);  text1.setBounds(50,80,20,50);  frame.setSize(1000,800);  frame.setLayout(new FlowLayout());  frame.setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);  frame.add(label);  frame.add(text1);  frame.setSize(210, 250);  frame.setVisible(true);  frame.add(b1);  b1.setBounds(100,100,200,300);  b1.addActionListener(new ActionListener() {  @Override  public void actionPerformed(ActionEvent e) {  JFrame f2=new JFrame("Enter Array Elements ");  f2.setSize(500,600);  f2.setVisible(true);  f2.setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);  int arsize= Integer.parseInt(text1.getText());  JLabel l[]=new JLabel[arsize];  JTextField t[]=new JTextField[arsize];  b2=new Button ("Enter");  for (int i = 0;i<arsize;i++){  l[i] = new JLabel("Array " + (i + 1));  t[i] = new JTextField(4);  f2.setLayout(new FlowLayout());  f2.add(l[i]);  f2.add(t[i]);  }  f2.add(b2);  b2.addActionListener(new ActionListener() {  @Override  public void actionPerformed(ActionEvent e) {  String as="";  float array[]=new float[arsize];  for(int i=0;i<arsize;i++){  array[i]= Integer.parseInt(t[i].getText());  as+=array[i]+",";  JFrame f3= new JFrame();  JLabel l2 = new JLabel("THE ARRAY IS :"+as);  f3.setLayout(new FlowLayout());  f3.add(l2);  f3.setVisible(true);  f3.setSize(500,600);  JLabel l3= new JLabel("Enter Array elemnt to be seacrhed:");  JTextField t3=new JTextField(6);  JButton b3=new JButton("Enter");  f3.setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);  f3.add(l3);f3.add(t3);f3.add(b3);  b3.addActionListener(new ActionListener() {  @Override  public void actionPerformed(ActionEvent e) {  int a=Integer.parseInt(t3.getText());  int i1;  boolean flag=false;  for( i1=0;i1<arsize;i1++){  if(array[i1]==a){  flag=true;  break;  }  }  if(flag==true){  JOptionPane.showMessageDialog(f3,"ELEMENT FOUND AT index"+i1);  }  else if(flag==false){  JOptionPane.showMessageDialog(f3,"ELEMENT Not found");  }  }  });  }  }  });  }  });  }  }  public class main82 {  public static void main(String[] args) {  new A();  }  } |

**Output:**

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**Experiment No: 8.3**

**Aim:**

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| Develop a GUI application to create an array of objects of a user-defined class. Input the number of elements from the user. Call the member methods of each object in the array to fill and show the contents of each object. |

**Code:**

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| import javax.swing.\*;  import java.awt.\*;  import java.awt.event.ActionEvent;  import java.awt.event.ActionListener;  class A{  A(){  JFrame f1;  f1=new JFrame("STUDENT");  JLabel l1=new JLabel("How many STUDENTS?");  JTextField text1=new JTextField(5);  JButton b1 =new JButton("ENTER");  f1.add(l1);  f1.add(text1);  f1.add(b1);  setframe(f1);  b1.addActionListener(new ActionListener() {  @Override  public void actionPerformed(ActionEvent e) {  int no=Integer.parseInt(text1.getText());  JLabel l2=new JLabel("ENTER STUDENTS DETAILS");  JLabel j3,j4,j5,j6;  JLabel l[]=new JLabel[no];  JTextField t[][] = new JTextField[no][3];  JFrame f2=new JFrame("ADD STUDENTS");  JPanel p1[]=new JPanel[no];  int j=0;  for(int i=0;i<no;i++) {  j3 = new JLabel("NAME");  j4 = new JLabel("ROLL");  j5 = new JLabel("Branch");  p1[i] = new JPanel();  p1[i].add(j3);  p1[i].add(j4);  p1[i].add(j5);  for ( j = 0; j < 3; j++) {  t[i][j] = new JTextField(5);  p1[i].add(t[i][j]);  }  f2.add(p1[i]);  }  JButton b2=new JButton("ENTER");  f2.add(b2);  setframe(f2);  students s[]=new students[no];  b2.addActionListener(new ActionListener() {  @Override  public void actionPerformed(ActionEvent e) {  for(int i=0;i<no;i++){  for(int j=0;j<1;j++){  s[i]=new students();  s[i].setn(t[i][j].getText());  }  }  for(int i=0;i<no;i++){  for(int j=1;j<2;j++){  s[i].setr(Integer.parseInt(t[i][j].getText()));  }  }  for(int i=0;i<no;i++){  for(int j=2;j<3;j++) {  s[i].setb(t[i][j].getText());  }  }  }  });  JButton b4=new JButton("CHECK ENTERED DETAILS");  JPanel p2=new JPanel();  p2.setBackground(Color.blue);  p2.setVisible(true);  p2.add(b4);  f2.add(p2);  b4.addActionListener(new ActionListener() {  @Override  public void actionPerformed(ActionEvent e) {  JLabel l5,l6,l7;  JPanel p2[]=new JPanel[no];  JFrame f3=new JFrame("ENTERED DETAILS ARE");  for (int i=0;i<no;i++){  l5=new JLabel(s[i].getn()+" ");  l6=new JLabel(String.valueOf(s[i].getr()));  l7=new JLabel(s[i].getb()+" ");  p2[i]=new JPanel();  p2[i].setLayout(new GridLayout(3,20));  p2[i].setVisible(true);  p2[i].setBackground(Color.green);  p2[i].add(l5);  p2[i].add(l6);  p2[i].add(l7);  f3.add(p2[i]);  }  setframe(f3);  }  });  }  });  }  void setframe(JFrame ob){  ob.setSize(900,800);  ob.setLayout(new FlowLayout());  ob.setVisible(true);  ob.setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);  }  }  class students{  String name;  int roll;  String branch;  void setn(String n){  name=n;  }  void setr(int r){  roll=r;  }  void setb(String b){  branch=b;  }  String getn(){  return name;  }  int getr(){  return roll;  }  String getb(){  return branch;  }  }  public class main83 {  public static void main(String as[]){  A ob=new A();  }  } |

**Output:**

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**Experiment No: 8.4**

**Aim:**

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| Develop a GUI application to implement Date of Birth validator. The DOB should only be in the form "dd/mm/yyyy". Use customized exception handling method as the validator. |

**Code:**

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| import javax.swing.\*;  import java.awt.\*;  import java.awt.event.ActionEvent;  import java.awt.event.ActionListener;  class datenotvalid extends Exception {  datenotvalid(String message) {  super(message);  }  }  class yearnotvalid extends Exception {  yearnotvalid(String message) {  super(message);  }  }  class monthnotvalid extends Exception {  monthnotvalid(String message) {  super(message);  }  }  class A{  int date;  int month;  int year;  JFrame f1 = new JFrame("D.O.B");  void getdata() throws datenotvalid,monthnotvalid,yearnotvalid{  try{  if(date>31 || date<=1){  throw new datenotvalid("Entered date is not valid");  }  if(year<=1960){  throw new yearnotvalid("Entered year is not valid");  }  if(month>=12 || month<=1){  throw new monthnotvalid("ENTERED MONTH IS NOT VALID");  }  }  catch (datenotvalid e){  JOptionPane.showMessageDialog(f1,"ENTERED DATE IS not VALID ");  }  catch (monthnotvalid m) {  JOptionPane.showMessageDialog(f1, "ENTERED MONTH IS not VALID ");  }  catch (yearnotvalid y) {  JOptionPane.showMessageDialog(f1, "ENTERED YEAR IS not VALID ");  }  JPanel p1=new JPanel();  JLabel l4=new JLabel(String.valueOf(date)+String.valueOf(month)+String.valueOf(year));  l4.setSize(200,100);  JFrame f2=new JFrame("ENTERED DOB IS:");  f2.setVisible(true);  p1.setBackground(Color.magenta);  p1.setVisible(true);  p1.setSize(500,400);  p1.add(l4);  System.out.println("asdasd");  f2.add(p1);  f2.pack();  }  A() {  f1.setLayout(null);  f1.setVisible(true);  f1.setSize(800, 700);  f1.setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);  JTextField text1 = new JTextField(5);  JTextField text2 = new JTextField(5);  JTextField text3 = new JTextField(5);  JButton jb = new JButton("ENTER");  text1.setBounds(400, 250, 100, 100);  text2.setBounds(500, 250, 100, 100);  text3.setBounds(600, 250, 100, 100);  text3.setBackground(Color.green);  text1.setBackground(Color.green);  text2.setBackground(Color.green);  jb.setBounds(700, 250, 100, 100);  JLabel l1 = new JLabel("DATE");  JLabel l2 = new JLabel("MONTH");  JLabel l3 = new JLabel("YEAR");  l1.setBounds(450, 150, 50, 100);  l2.setBounds(550, 150, 50, 100);  l3.setBounds(650, 150, 50, 100);  f1.add(l2);  f1.add(l1);  f1.add(l3);  f1.add(text1);  f1.add(text2);  f1.add(text3);  f1.add(jb);  f1.add(l1);  jb.addActionListener(new ActionListener() {  @Override  public void actionPerformed(ActionEvent e) {  date = Integer.parseInt(text1.getText());  month = Integer.parseInt(text2.getText());  year = Integer.parseInt(text3.getText());  try {  getdata();  } catch (datenotvalid d) {  } catch (monthnotvalid m) {  } catch (yearnotvalid y) {  }  }  });  }  }  public class main84 {  public static void main(String as[]) {  A ob = new A();  }  } |

**Output:**

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**Experiment No: 8.5**

**Aim:**

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| Develop a GUI application to show marquee effect of two labels one from right to left on the screen and other from left to right on the screen. Use Multi-threading. |

**Code:**

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| import javax.swing.\*;  import java.awt.\*;  class A extends Thread {  JFrame f1 = new JFrame("MARQUEE");  JLabel l2 = new JLabel("Right Marquee");  JLabel l1 = new JLabel("Left Marquee");  JPanel p1;  JPanel p2;  A(){  f1.setVisible(true);  f1.setSize(1366,768);  f1.setLayout(null);  }  void rm() {  JPanel p1=new JPanel();  p1.setVisible(true);  p1.add(l1);  p1.setBounds(0,0,1366,384);  p1.setBackground(Color.green);  f1.add(p1);  int x=200;  while(true){  l1.setBounds(x,0,200,200);  x=x+1;  if(x==1366){  x=0;  }  try {  sleep(10);  }  catch (Exception e){}  }  }  void lm() {  JPanel p2=new JPanel();  p2.setVisible(true);  p2.setBounds(0,350,1366,384);  p2.setBackground(Color.magenta);  p2.add(l2);  f1.add(p2);  int x=200;  while(true){  l2.setBounds(x,100,200,200);  x=x-1;  if(x==0){  x=1366;  }  try {  sleep(10);  }  catch (Exception e){}  }  }  }  class rm extends Thread{  A ob;  rm(A s){  ob =s;  }  public void run(){  ob.rm();  }  }  class lm extends Thread{  A ob;  lm(A s){  ob =s;  }  public void run(){  ob.lm();  }  }  public class main85 {  public static void main(String as[]) {  A ob=new A();  rm ob1=new rm(ob);  lm ob2=new lm(ob);  ob1.start();  ob2.start();  }  } |

**Output:**

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**Experiment No: 8.6**

**Aim:**

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| Develop a GUI application to display all the contents of a text file. The user should enter the path and name of the file whose contents would be shown. |

### Code:

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| import javax.swing.\*;  import java.awt.\*;  import java.io.\*;  import java.awt.event.ActionEvent;  import java.awt.event.ActionListener;  class A{  JLabel l1=new JLabel("ENTER SOURCE LOCATION");  JLabel l2=new JLabel("TEXT IS:-");  JTextField text1=new JTextField();  JTextArea text2=new JTextArea();  JButton b1=new JButton("ENTER");  JScrollPane scroll=new JScrollPane(text2);  String dest;  String s="";  A(){  JFrame f1=new JFrame("sda");  f1.setSize(800,900);  f1.setVisible(true);  f1.setLayout(null);  f1.setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);  JPanel p1=new JPanel();  p1.setLayout(null);  p1.setBounds(0,0,1000,400);  p1.setBackground(Color.orange);  text1.setBounds(400,80,200,60);  l1.setBounds(100,60,200,100);  b1.setBounds(200,250,200,60);  JPanel p2=new JPanel();  p2.setLayout(null);  p2.setBackground(Color.green);  p2.setBounds(0,400,1000,400);  l2.setBounds(100,40,200,300);  scroll.setBounds(200,10,400,300);  p1.add(b1);  p1.add(text1);  p2.add(l2);  p2.add(scroll);  p1.add(l1);  f1.add(p1);  f1.add(p2);  b1.addActionListener(new ActionListener() {  @Override  public void actionPerformed(ActionEvent e) {  dest = new String(text1.getText());  System.out.println(dest);  getd();  text2.setText(s);  }  });  }  void getd(){  File file=new File("C:\\Users\\HIMANSHU\\Desktop\\CLIPBoad.txt");  int a;  try {  FileInputStream fis = new FileInputStream(file);  while( (a=fis.read())!=-1 ) {  s=s+(char)a;  }  }catch (FileNotFoundException e){}  catch (IOException e) {  e.printStackTrace();  }  System.out.println(s);  }  }  public class main86{  public static void main(String as[]){  A o =new A();  }  } |

**Output:**

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**Experiment No: 8.7**

**Aim:**

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| Develop a GUI application to search a name present in a text file named "Names.txt" in "D:\Names\" folder. Also print if name not found. Input the name to search from user. |

**Code:**

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| import javax.swing.\*;  import java.awt.\*;  import java.awt.event.ActionEvent;  import java.awt.event.ActionListener;  import java.io.\*;  public class main87 extends JFrame {  JLabel l1 = new JLabel("ENTER THE NAME TO BE SEARCHED");  JButton b1 = new JButton("ENTER");  JTextField text1 = new JTextField("");  String s;  main87() {  setLayout(null);  l1.setBounds(100, 60, 400, 60);  b1.setBounds(100, 200, 200, 60);  text1.setBounds(500, 60, 200, 40);  add(text1);  add(l1);  add(b1);  b1.addActionListener(new ActionListener() {  @Override  public void actionPerformed(ActionEvent e) {  s=new String(text1.getText());  getd();  }  });  }  void getd () {  boolean flag = false;  int line = 1;  String as = new String();  File f = new File("G:\\New folder\\names.txt");  try {  FileReader fr = new FileReader(f);  BufferedReader br = new BufferedReader(fr);  while ((as = br.readLine()) != null) {  if (as.equalsIgnoreCase(s)) {  flag = true;  break;  }  System.out.println(as);  System.out.println();  line++;  }  }  catch (FileNotFoundException e) {  }catch(IOException e1){}  if(flag==true){  JOptionPane.showMessageDialog(null,"NAME Exists");  }  else  JOptionPane.showMessageDialog(null,"NAME doesn't exist");  }  public static void main(String AS[]){  main87 o=new main87();  o.setSize(1366,768);  o.setVisible(true);  o.setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);  }  } |

**Output:**

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