

## I/O Stream

### Program1: File Operation

```
package com.gsv;

import java.io.File;
import java.io.IOException;

public class FileMethod
{
    public static void main(String[] args)
    {
        try
        {
            File f1= new File("D:\\sample.txt");
            // exists() : public boolean exists()

            boolean status =f1.exists();
            System.out.println("Befor status "+status);
            //createNewFile : public boolean createNewFile()
            f1.createNewFile();
            boolean status1 =f1.exists();
            System.out.println("After status "+status1);
            //getName () : public String getName()

            String name = f1.getName();
            System.out.println(name);

            System.out.println("File Delete Status :"+f1.delete());
            System.out.println(f1.exists());

            File f2= f1.getAbsoluteFile();
            System.out.println(f2); //f2.toString()

            System.out.println("Absolute Path"+f1.getAbsolutePath());

            System.out.println("Read only"+f1.canRead());
            System.out.println("Write only"+f1.canWrite());

            File f3 = new File("D:\\A\\B");
                //System.out.println(f3.mkdir());
                System.out.println(f3.mkdirs());
            File f4 = new File(f3,"sample.png");
            f4.createNewFile();
            System.out.println(f4.isFile());
            System.out.println(f4.isDirectory());
            System.out.println(f4.isHidden());
            System.out.println("Length :"+f4.length());
            File f5 = new File("D:\\");
            String all[]= f5.list();
            for(String file1 : all )
            {
                System.out.println(file1);
            }
        }
        catch(IOException ex)
```

```

        {
            ex.printStackTrace();
        }
    }
}

```

**Program2: Write data inside the file using FileWriter.**

```

package com.sdj;

import java.io.File;
import java.io.FileWriter;
import java.io.IOException;

public class FileWriterDemo
{
    public static void main(String[] args)
    {
        File f1 =null;
        FileWriter fw =null;
        try
        {
            f1 = new File("D:\\demo.txt");
            fw = new FileWriter(f1);
            fw.write("SDJ INFOSOFT");
            System.out.println("Length of File "+f1.length());
        }
        catch(IOException ex)
        {
            ex.printStackTrace();
        }
        finally
        {
            try
            {
                {
                    if(fw!=null)
                    {
                        fw.flush();
                        fw.close();
                        fw =null;
                        System.out.println("Length of File "+f1.length());
                    }
                }
            }
            catch(IOException ex)
            {
                ex.printStackTrace();
            }
        }

    }

}

```

**Program3: Write data inside the file using File Reader.**

```

package com.gsv;

```

```

import java.io.File;
import java.io.FileReader;
import java.io.IOException;

public class FileReaderDemo
{
    public static void main(String[] args)
    {
        File f1 = null;
        FileReader fr =null;
        try
        {
            System.out.println("start");
            f1 = new File("D:\\demo.txt");
            fr = new FileReader(f1);
            //read() : public int read();

            int ch = fr.read();
            System.out.println(ch);
        }
        catch(IOException ex)
        {
            ex.printStackTrace();
        }
    }
}

```

#### **Program 4: Image Read and Write using FileInputStream and OutputStream Class**

```

package com.gsv;

import java.io.File;
import java.io.FileInputStream;
import java.io.FileOutputStream;
import java.io.IOException;

public class FileInputStreamDemo
{
    public static void main(String[] args)
    {
        FileInputStream fis =null;
        FileOutputStream fos =null;
        File f1 =null;
        try
        {
            f1 = new File("D:\\gsv.jpg");

            fis = new FileInputStream(f1);
            long len = f1.length();
            byte all[] =new byte[(int)len];
            fis.read(all);
            fos =new FileOutputStream("D:\\gsv1.jpg");
            fos.write(all);
            for(int i=0;i<all.length;i++)
            {
                System.out.print(" "+all[i]);
            }
        }
    }
}

```

```

    }
    catch(IOException ex)
    {
        ex.printStackTrace();
    }
    finally
    {
        try
        {
            if(fis!=null)
            {
                fis.close();
            }
        }
        catch(IOException ex)
        {
            ex.printStackTrace();
        }
        try
        {
            if(fos!=null)
            {
                fos.close();
                fos =null;
            }
        }
        catch(IOException ex)
        {
            ex.printStackTrace();
        }
    }
}
}
}

```

**Program 5: Write content from one file to other .txt file.**

```
package com.gsv;
```

```
import java.io.File;
```

```
import java.io.FileReader;
```

```
import java.io.FileWriter;
```

```
import java.io.IOException;
```

```
public class DemoCopy
```

```
{
```

```
    public static void main(String[] args)
```

```
    {
```

```
        File f1 =null;
```

```
        File f2 =null;
```

```
        FileWriter fw = null;
```

```
        FileReader fr =null;
```

```
        FileWriter fw1 = null;
```

```
        try
```

```
        {
```

```
            f1 = new File("sdj1.txt");
```

```
            fw = new FileWriter(f1);
```

```
            fw.write("SDJ INFOSOFT");
```

```

    }
    catch(IOException ex)
    {
        ex.printStackTrace();
    }
    finally
    {
        try
        {
            if(fw!=null)
            {
                fw.flush();
                fw.close();
            }
        }
        catch(IOException ex)
        {
            ex.printStackTrace();
        }
    }
}
try
{
    f2 = new File("sdj2.txt");
    fw1 = new FileWriter(f2);
    fr = new FileReader(f1);
    int ch;
    while((ch=fr.read())!=-1)
    {
        fw1.write((char)ch);
    }
}
catch(IOException ex)
{
    ex.printStackTrace();
}
finally
{
    try
    {
        if(fr!=null)
        {
            fr.close();
        }
        if(fw1!=null)
        {
            fw1.flush();
            fw1.close();
        }
    }
    catch(IOException ex)
    {
        ex.printStackTrace();
    }
}
}
}

```

## Program 6: Serilizable and Deserializabe

```
package com.sdj;
import java.io.Serializable;

public class Person implements Serializable //marker interface
{
    int age;
    float weight;
    double height;
    String name;
    static int sid;
    transient int sno;
}
```

### //Serializable Program

```
package com.gsv;

import java.io.FileOutputStream;
import java.io.IOException;
import java.io.ObjectOutputStream;

public class PersonSerial
{
    public static void main(String[] args)
    {
        Person p1 = new Person();
        p1.age=24;
        p1.weight=56.7f;
        p1.height=5.11;
        p1.name="demo";
        p1.sid=45555;
        p1.sno=411;
        FileOutputStream fos =null;
        ObjectOutputStream oos =null;

        try
        {
            fos = new FileOutputStream("D:\\sdj.txt");
            oos = new ObjectOutputStream(fos);
            oos.writeObject(p1);
        }
        catch(IOException ex)
        {
            ex.printStackTrace();
        }
        finally
        {
            try
            {
                if(oos!=null)
                {
                    oos.flush();
                    oos.close();
                    oos =null;
                }
            }
        }
    }
}
```

```

        catch(IOException ex)
        {
            ex.printStackTrace();
        }
    try
    {
        if(fos!=null)
        {
            fos.flush();
            fos.close();
            fos =null;
        }
    }
    catch(IOException ex)
    {
        ex.printStackTrace();
    }
}

}
}

```

### **//Deserializable Program**

```

package com.gsv;

import java.io.FileInputStream;
import java.io.IOException;
import java.io.ObjectInputStream;

public class PersonDesrial
{
    public static void main(String[] args)
    {
        FileInputStream fis =null;
        ObjectInputStream ois =null;
        try
        {
            fis = new FileInputStream("d:\\sdj.txt");
            ois = new ObjectInputStream(fis);
            Person p1 = (Person)ois.readObject();
            System.out.println("Age :"+p1.age);
            System.out.println("weight :"+p1.weight);
            System.out.println("Height :"+p1.height);
            System.out.println("Name :"+p1.name);
            System.out.println("sid :"+p1.sid);
            System.out.println("sno :"+p1.sno);

        }
        catch(IOException ex)
        {
            ex.printStackTrace();
        }
        catch(ClassNotFoundException ex)
        {
            ex.printStackTrace();
        }
        finally
        {

```

```

        try
        {
            if(ois!=null)
            {
                ois.close();
                ois =null;
            }
        }
        catch(IOException ex)
        {
            ex.printStackTrace();
        }

        try
        {
            if(fis!=null)
            {
                fis.close();
                fis =null;
            }
        }
        catch(IOException ex)
        {
            ex.printStackTrace();
        }
    }
}

```