

FileHandlerExample.java

```
import java.io.*;
import java.util.Scanner;

public class FileHandlerExample
{
    /**
     * Binary files
     */

    public void writeInBinaryFile1(String fname, byte[] b)
    {
        try
        {
            File f = new File(fname);
            FileOutputStream fo = new FileOutputStream(f);
            fo.write(b);
            fo.close();
        }
        catch(IOException e)
        {
            System.out.println("ERROR IN writeInBinaryFile1");
        }
    }

    public byte[] readBinaryFile1(String fname)
    {
        try
        {
            File f = new File(fname);
            FileInputStream fi = new FileInputStream(f);
            byte[] b = new byte[(int)f.length()];
            fi.read(b);
            fi.close();
            return b;
        }
        catch(IOException e)
        {
            System.out.println("ERROR IN readBinaryFile1");
        }
        return null;
    }

    public void writeInBinaryFile2(String fname, int d1, double d2, char d3, boolean d4)
    {
        try
        {
            File f = new File(fname);
            FileOutputStream fo = new FileOutputStream(f);
            DataOutputStream dto = new DataOutputStream(fo);

            dto.writeInt(d1);
            dto.writeDouble(d2);
            dto.writeChar(d3);
            dto.writeBoolean(d4);
        }
    }
}
```

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```
        dto.close();
    }
    catch(IOException e)
    {
        System.out.println("ERROR IN writeInBinaryFile2");
    }
}

public void readBinaryFile2(String fname)
{
    try
    {
        File f = new File(fname);
        FileInputStream fi = new FileInputStream(f);
        DataInputStream dti = new DataInputStream(fi);
        int d1      = dti.readInt();
        double d2   = dti.readDouble();
        char d3     = dti.readChar();
        boolean d4  = dti.readBoolean();

        System.out.println();
        System.out.print(fname + " content:  " + d1 + "  " + d2 + "  " + d3 + "  " +
d4);

        dti.close();
    }
    catch(IOException e)
    {
        System.out.println("ERROR IN readBinaryFile2");
    }
}

/*****
 *
 * Text files
 */

public void writeInTextFile1(String fname)
{
    Scanner sc = new Scanner(System.in);
    String line = "";
    String text="";
    System.out.println("\nTEXT FILE 1");
    do
    {
        line = sc.next();
        if(!line.equals("###"))
        {
            text += line + "\r\n";
        }
    }
    while(!line.equals("###"));

    try
    {
        File f = new File(fname);
        FileOutputStream fo = new FileOutputStream(f);
```

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```
        PrintWriter pw = new PrintWriter(fo);

        pw.write(text);
        pw.close();
    }
    catch(IOException e)
    {
        System.out.println("ERROR IN writeInTextFile1");
    }
}

public void writeInTextFile2(String fname)
{
    Scanner sc = new Scanner(System.in);
    String line = "";
    String text="";

    System.out.println("\nTEXT FILE 2");
    do
    {
        line = sc.next();
        if(!line.equals("###"))
        {
            text += line + "\r\n";
        }
    }
    while(!line.equals("###"));

    try
    {
        File f = new File(fname);
        FileWriter fw = new FileWriter(f);

        fw.write(text);
        fw.close();
    }
    catch(IOException e)
    {
        System.out.println("ERROR IN writeInTextFile2");
    }
}

public void readTextFile(String fname)
{
    String line = "";
    String text = "";

    try
    {
        File f = new File(fname);
        FileReader fr = new FileReader(f);
        BufferedReader br = new BufferedReader(fr);

        while(line != null)
        {
            line = br.readLine();
            if(line != null)
            {
                text += line+"\r\n";
            }
        }
    }
}
```

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```
    }
    }
    br.close();
    System.out.println();
    System.out.print(fname + " content: \n" + text);
}
catch(IOException e)
{
    System.out.println("ERROR IN readTextFile");
}
}

public void writeInObjectFile(String fname, Person[] parray)
{
    try
    {
        File f = new File(fname);
        FileOutputStream fo = new FileOutputStream(f);
        ObjectOutputStream os = new ObjectOutputStream(fo);
        if(parray != null)
        {
            os.writeObject(parray);
        }
        os.close();
    }
    catch(IOException e)
    {
        System.out.println("ERROR IN writeInObjectFile " + e.getMessage());
    }
}

public Person[] readObjectFile(String fname)
{
    try
    {
        File f = new File(fname);
        FileInputStream fi = new FileInputStream(f);
        ObjectInputStream is = new ObjectInputStream(fi);

        Person parray[] = (Person[])is.readObject();

        is.close();
        return parray;
    }
    catch(IOException e)
    {
        System.out.println("ERROR IN readObjectFile");
    }
    catch(Exception e)
    {
        System.out.println("ERROR IN readObjectFile");
    }
    return null;
}

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

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```
FileHandlerExample m = new FileHandlerExample();

// ***** test binary files 1
byte[] bt = {10, 15, 100, -9, 89};
m.writeInBinaryFile1("myfile1.dat", bt);
byte b[] = m.readBinaryFile1("myfile1.dat");
System.out.print("myfile1.dat contains: ");
for(int i=0; i<b.length; i++)
{
    System.out.print(b[i] + " ");
}

// ***** test binary files 2
m.writeInBinaryFile2("myfile2.dat", 120, 120000000, 'Z', true);
m.readBinaryFile2("myfile2.dat");

// ***** test text files 1
m.writeInTextFile1("myfile3.txt");
m.readTextFile("myfile3.txt");

// ***** test text files 2
m.writeInTextFile2("myfile4.txt");
m.readTextFile("myfile4.dat");

// ***** Object files test
Person[] par = new Person[3];
par[0] = new Person("Ali", 11);
par[1] = new Person("Ahmed", 15);
par[2] = new Person("Taher", 12);
m.writeInObjectFile("myfile5.dat", par);
par = m.readObjectFile("myfile5.dat");
for(int i=0; i<par.length; i++)
{
    par[i].display();
}
}

}

/*****
import java.io.*;

public class Person implements Serializable
{
    private String name;
    private int age;

    public Person(String n, int a)
    {
        setName(n);
        setAge(a);
    }
}
*****/
```

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```
    }

    public String getName() {
        return name;
    }
    public void setName(String name) {
        this.name = name;
    }
    public int getAge() {
        return age;
    }
    public void setAge(int age) {
        this.age = age;
    }

    public void display()
    {
        System.out.println("\nName: "+getName()+" Age: "+getAge());
    }
}
*/
```