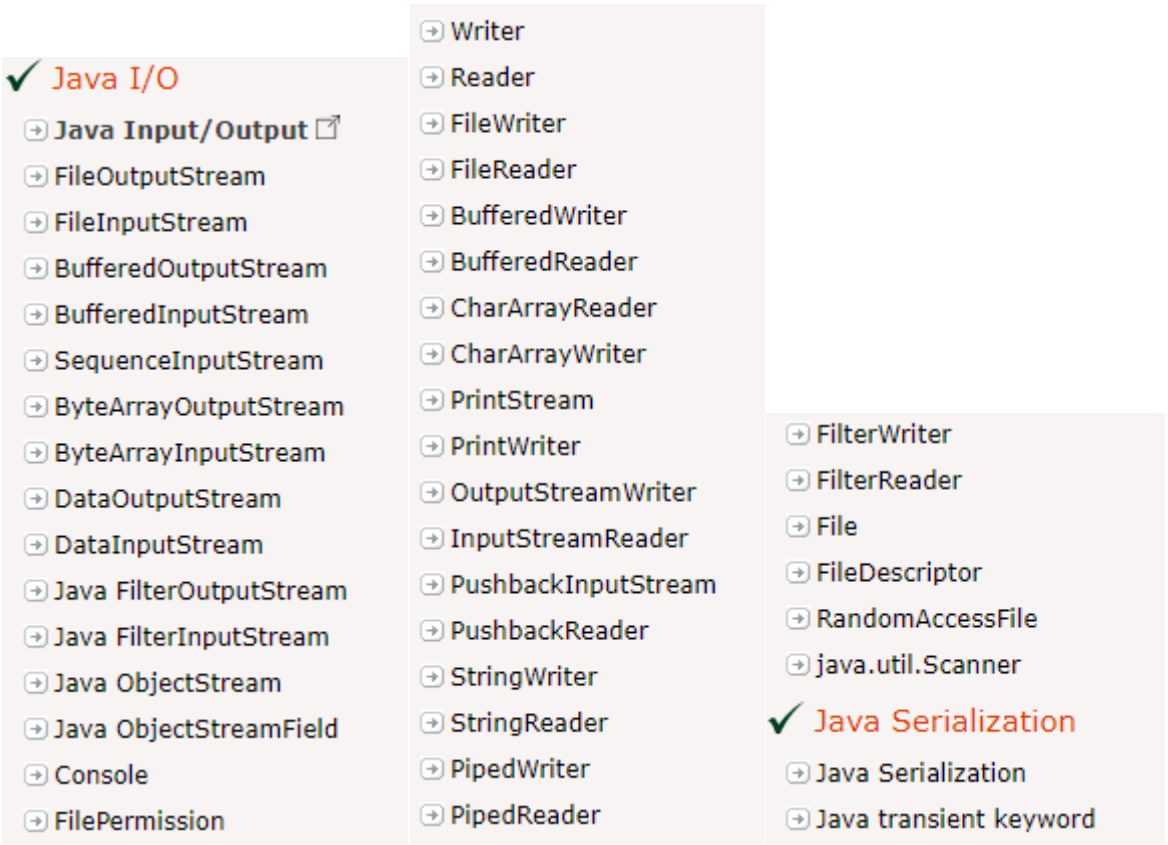
BÀI TẬP 2: I/O THEO LUỒNG VÀ THAO TÁC TỆP

Nội dung:

- **Nghiên cứu các lớp I/O và thao tác tệp**
- **Thực hiện các ví dụ tương ứng với lớp: Nhập chương trình ví dụ, chạy và phân tích chương trình, tự viết chương trình ví dụ thử nghiệm các thuộc tính và phương thức khác của mỗi lớp.**
- **Các lớp cơ bản trong danh sách sau.**



PHẦN I: LẬP TRÌNH I/O VÀ THAO TÁC TỆP CƠ BẢN

Các chương trình ví dụ(tham khảo link: https://www.javatpoint.com/java-io)

Yêu cầu:

- **Nhập chương trình, chạy và gỡ dối, giải thích từng lệnh sử dụng trong các chương trình.**
- **Nghiên cứu các thuộc tính và phương thức khác của lớp trong mỗi chương trình và sửa chạy chương trình để khảo sát kỹ các lớp.**

Bài 1:

```
import java.io.FileOutputStream;
public class FileOutputStreamExample {
   public static void main(String args[]){
        try{
          FileOutputStream fout=new FileOutputStream("D:\\testout.txt");
```

```
            String s="Welcome to javaTpoint.";
            byte b[]=s.getBytes();//converting string into byte array
            fout.write(b);
            fout.close();
            System.out.println("success...");
           }catch(Exception e){System.out.println(e);}
     }
}
```

Bài 2:

```
import java.io.FileInputStream;
public class DataStreamExample {
    public static void main(String args[]){
        try{
          FileInputStream fin=new FileInputStream("D:\\testout.txt");
          int i=fin.read();
          System.out.print((char)i);

          fin.close();
         }catch(Exception e){System.out.println(e);}
        }
       }


import java.io.FileInputStream;
public class DataStreamExample {
    public static void main(String args[]){
        try{
          FileInputStream fin=new FileInputStream("D:\\testout.txt");
          int i=0;
          while((i=fin.read())!=-1){
           System.out.print((char)i);
          }
          fin.close();
         }catch(Exception e){System.out.println(e);}
        }
       }
```

Bài 3:

```
import java.io.*;
public class BufferedOutputStreamExample{
public static void main(String args[])throws Exception{
    FileOutputStream fout=new FileOutputStream("D:\\testout.txt");
    BufferedOutputStream bout=new BufferedOutputStream(fout);
    String s="Welcome to javaTpoint.";
    byte b[]=s.getBytes();
```

```
    bout.write(b);
    bout.flush();
    bout.close();
    fout.close();
    System.out.println("success");
}
}
```

Bài 4:

```
import java.io.*;
public class BufferedInputStreamExample{
 public static void main(String args[]){
  try{
    FileInputStream fin=new FileInputStream("D:\\testout.txt");
    BufferedInputStream bin=new BufferedInputStream(fin);
    int i;
    while((i=bin.read())!=-1){
     System.out.print((char)i);
    }
    bin.close();
    fin.close();
  }catch(Exception e){System.out.println(e);}
 }
}
```

Bài 5:

```
import java.io.*;
class InputStreamExample {
  public static void main(String args[])throws Exception{
   FileInputStream input1=new FileInputStream("D:\\testin.txt");
   FileInputStream input2=new FileInputStream("D:\\testout.txt");
   SequenceInputStream inst=new SequenceInputStream(input1, input2);
   int j;
   while((j=inst.read())!=-1){
    System.out.print((char)j);
   }
   inst.close();
   input1.close();
   input2.close();
  }
}
```

Bài 6:

```
import java.io.*;
```

```
class Input1{
  public static void main(String args[])throws Exception{
   FileInputStream fin1=new FileInputStream("D:\\testin1.txt");
   FileInputStream fin2=new FileInputStream("D:\\testin2.txt");
   FileOutputStream fout=new FileOutputStream("D:\\testout.txt");
   SequenceInputStream sis=new SequenceInputStream(fin1,fin2);
   int i;
   while((i=sis.read())!=-1)
   {
     fout.write(i);
   }
   sis.close();
   fout.close();
   fin1.close();
   fin2.close();
   System.out.println("Success..");
  }
}
```

Bài 7:

```
import java.io.*;
import java.util.*;
class Input2{
public static void main(String args[])throws IOException{
//creating the FileInputStream objects for all the files
FileInputStream fin=new FileInputStream("D:\\a.txt");
FileInputStream fin2=new FileInputStream("D:\\b.txt");
FileInputStream fin3=new FileInputStream("D:\\c.txt");
FileInputStream fin4=new FileInputStream("D:\\d.txt");
//creating Vector object to all the stream
Vector v=new Vector();
v.add(fin);
v.add(fin2);
v.add(fin3);
v.add(fin4);
//creating enumeration object by calling the elements method
Enumeration e=v.elements();
//passing the enumeration object in the constructor
SequenceInputStream bin=new SequenceInputStream(e);
int i=0;
while((i=bin.read())!=-1){
System.out.print((char)i);
}
bin.close();
```

```
fin.close();
fin2.close();
}
}
```

Bài 8:

```
import java.io.*;
public class DataStreamExample {
public static void main(String args[])throws Exception{
      FileOutputStream fout1=new FileOutputStream("D:\\f1.txt");
      FileOutputStream fout2=new FileOutputStream("D:\\f2.txt");

      ByteArrayOutputStream bout=new ByteArrayOutputStream();
      bout.write(65);
      bout.writeTo(fout1);
      bout.writeTo(fout2);

      bout.flush();
      bout.close();//has no effect
      System.out.println("Success...");
     }
    }
```

Bài 9:

```
import java.io.*;
public class ReadExample {
  public static void main(String[] args) throws IOException {
    byte[] buf = { 35, 36, 37, 38 };
    // Create the new byte array input stream
    ByteArrayInputStream byt = new ByteArrayInputStream(buf);
    int k = 0;
    while ((k = byt.read()) != -1) {
      //Conversion of a byte into character
      char ch = (char) k;
      System.out.println("ASCII value of Character is:" + k + "; Special character is: " + c
h);
    }
  }
}
```

Bài 10:

```
import java.io.*;
public class OutputExample {
    public static void main(String[] args) throws IOException {
```

```
        FileOutputStream file = new FileOutputStream(D:\\testout.txt);
        DataOutputStream data = new DataOutputStream(file);
        data.writeInt(65);
        data.flush();
        data.close();
        System.out.println("Succcess...");
    }
}
```

Bài 11:

```
import java.io.*;
public class DataStreamExample {
  public static void main(String[] args) throws IOException {
    InputStream input = new FileInputStream("D:\\testout.txt");
    DataInputStream inst = new DataInputStream(input);
    int count = input.available();
    byte[] ary = new byte[count];
    inst.read(ary);
    for (byte bt : ary) {
      char k = (char) bt;
      System.out.print(k+"-");
    }
  }
}
```

Bài 12:

```
import java.io.*;
public class FilterExample {
    public static void main(String[] args) throws IOException {
        File data = new File("D:\\testout.txt");
        FileOutputStream file = new FileOutputStream(data);
        FilterOutputStream filter = new FilterOutputStream(file);
        String s="Welcome to javaTpoint.";
        byte b[]=s.getBytes();
        filter.write(b);
        filter.flush();
        filter.close();
        file.close();
        System.out.println("Success...");
    }
}
```

Bài 13:

```
import java.io.*;
public class FilterExample {
public static void main(String[] args) throws IOException {
```

```
File data = new File("D:\\testout.txt");
FileInputStream  file = new FileInputStream(data);
FilterInputStream filter = new BufferedInputStream(file);
int k =0;
while((k=filter.read())!=-1){
    System.out.print((char)k);
}
file.close();
filter.close();
}
}
```

Bài 14:

```
import java.io.ObjectStreamClass;
import java.util.Calendar;

public class ObjectStreamClassExample {
   public static void main(String[] args) {

      // create a new object stream class for Integers
      ObjectStreamClass osc = ObjectStreamClass.lookup(SmartPhone.class);

      // get the value field from ObjectStreamClass for integers
      System.out.println("" + osc.getField("price"));

      // create a new object stream class for Calendar
      ObjectStreamClass osc2 = ObjectStreamClass.lookup(String.class);

      // get the Class instance for osc2
      System.out.println("" + osc2.getField("hash"));

   }
}
```

Bài 15:

```
import java.io.ObjectStreamClass;
import java.util.Calendar;

public class ObjectStreamClassExample {
    public static void main(String[] args) {

        // create a new object stream class for Integers
        ObjectStreamClass osc = ObjectStreamClass.lookup(String.class);

        // get the value field from ObjectStreamClass for integers
        System.out.println("" + osc.getField("value"));
```

```
        // create a new object stream class for Calendar
        ObjectStreamClass osc2 = ObjectStreamClass.lookup(Calendar.class);

        // get the Class instance for osc2
        System.out.println("" + osc2.getField("isTimeSet"));

    }
}
```

Bài 16:

```
import java.io.Console;
class ReadStringTest{
public static void main(String args[]){
Console c=System.console();
System.out.println("Enter your name: ");
String n=c.readLine();
System.out.println("Welcome "+n);
}
}
```

```
        import java.io.Console;
        class ReadPasswordTest{
        public static void main(String args[]){
        Console c=System.console();
        System.out.println("Enter password: ");
        char[] ch=c.readPassword();
        String pass=String.valueOf(ch);//converting char array into string
        System.out.println("Password is: "+pass);
        }
        }
```

Bài 17:

```
import java.io.*;
import java.security.PermissionCollection;
public class FilePermissionExample{
      public static void main(String[] args) throws IOException {
       String srg = "D:\\IO Package\\java.txt";
       FilePermission file1 = new FilePermission("D:\\IO Package\\-", "read");
       PermissionCollection permission = file1.newPermissionCollection();
       permission.add(file1);
           FilePermission file2 = new FilePermission(srg, "write");
           permission.add(file2);
           if(permission.implies(new FilePermission(srg, "read,write"))) {
           System.out.println("Read, Write permission is granted for the path "+srg );
```

```
          }else {
            System.out.println("No Read, Write permission is granted for the path "+srg);
          }
        }
}
```

Bài 18:

```
import java.io.*;
public class WriterExample {
    public static void main(String[] args) {
        try {
            Writer w = new FileWriter("output.txt");
            String content = "I love my country";
            w.write(content);
            w.close();
            System.out.println("Done");
        } catch (IOException e) {
            e.printStackTrace();
        }
    }
}
```

Bài 19:

```
import java.io.*;
public class ReaderExample {
    public static void main(String[] args) {
        try {
            Reader reader = new FileReader("file.txt");
            int data = reader.read();
            while (data != -1) {
                System.out.print((char) data);
                data = reader.read();
            }
            reader.close();
        } catch (Exception ex) {
            System.out.println(ex.getMessage());
        }
    }
}
```

Bài 20:

```
package com.javatpoint;
import java.io.FileWriter;
public class FileWriterExample {
    public static void main(String args[]){
        try{
```

```
        FileWriter fw=new FileWriter("D:\\testout.txt");
        fw.write("Welcome to javaTpoint.");
        fw.close();
       }catch(Exception e){System.out.println(e);}
       System.out.println("Success...");
    }
}
```

Bài 21:

```
import java.io.FileReader;
public class FileReaderExample {
   public static void main(String args[])throws Exception{
       FileReader fr=new FileReader("D:\\testout.txt");
       int i;
       while((i=fr.read())!=-1)
       System.out.print((char)i);
       fr.close();
   }
}
```

Bài 22:

```
import java.io.*;
public class BufferedWriterExample {
public static void main(String[] args) throws Exception {
   FileWriter writer = new FileWriter("D:\\testout.txt");
   BufferedWriter buffer = new BufferedWriter(writer);
   buffer.write("Welcome to javaTpoint.");
   buffer.close();
   System.out.println("Success");
   }
}
```

Bài 24:

```
import java.io.*;
public class BufferedReaderExample {
   public static void main(String args[])throws Exception{
       FileReader fr=new FileReader("D:\\testout.txt");
       BufferedReader br=new BufferedReader(fr);

       int i;
       while((i=br.read())!=-1){
       System.out.print((char)i);
       }
       br.close();
       fr.close();
   }
```

```
}
```

Bài 25:

```
import java.io.*;
public class BufferedReaderExample{
public static void main(String args[])throws Exception{
    InputStreamReader r=new InputStreamReader(System.in);
    BufferedReader br=new BufferedReader(r);
    System.out.println("Enter your name");
    String name=br.readLine();
    System.out.println("Welcome "+name);
}
}
```

Bài 26:

```
import java.io.*;
public class BufferedReaderExample{
public static void main(String args[])throws Exception{
     InputStreamReader r=new InputStreamReader(System.in);
     BufferedReader br=new BufferedReader(r);
     String name="";
     while(!name.equals("stop")){
      System.out.println("Enter data: ");
      name=br.readLine();
      System.out.println("data is: "+name);
     }
    br.close();
    r.close();
    }
    }
```

Bài 27:

```
import java.io.CharArrayReader;
public class CharArrayExample{
  public static void main(String[] ag) throws Exception {
    char[] ary = { 'j', 'a', 'v', 'a', 't', 'p', 'o', 'i', 'n', 't' };
    CharArrayReader reader = new CharArrayReader(ary);
    int k = 0;
    // Read until the end of a file
    while ((k = reader.read()) != -1) {
      char ch = (char) k;
      System.out.print(ch + " : ");
      System.out.println(k);
    }
  }
```

```
}
```

Bài 28:

```
import java.io.CharArrayWriter;
import java.io.FileWriter;
public class CharArrayWriterExample {
public static void main(String args[])throws Exception{
        CharArrayWriter out=new CharArrayWriter();
        out.write("Welcome to javaTpoint");
        FileWriter f1=new FileWriter("D:\\a.txt");
        FileWriter f2=new FileWriter("D:\\b.txt");
        FileWriter f3=new FileWriter("D:\\c.txt");
        FileWriter f4=new FileWriter("D:\\d.txt");
        out.writeTo(f1);
        out.writeTo(f2);
        out.writeTo(f3);
        out.writeTo(f4);
        f1.close();
        f2.close();
        f3.close();
        f4.close();
        System.out.println("Success...");
       }
      }
```

Bài 29:

```
import java.io.FileOutputStream;
import java.io.PrintStream;
public class PrintStreamTest{
 public static void main(String args[])throws Exception{
   FileOutputStream fout=new FileOutputStream("D:\\testout.txt ");
   PrintStream pout=new PrintStream(fout);
   pout.println(2016);
   pout.println("Hello Java");
   pout.println("Welcome to Java");
   pout.close();
   fout.close();
  System.out.println("Success?");
 }
}
```

Bài 30:

```
import java.io.File;
import java.io.PrintWriter;
public class PrintWriterExample {
```

```
    public static void main(String[] args) throws Exception {
            //Data to write on Console using PrintWriter
      PrintWriter writer = new PrintWriter(System.out);
      writer.write("Javatpoint provides tutorials of all technology.");
 writer.flush();
      writer.close();
//Data to write in File using PrintWriter
      PrintWriter writer1 =null;
        writer1 = new PrintWriter(new File("D:\\testout.txt"));
        writer1.write("Like Java, Spring, Hibernate, Android, PHP etc.");

                    writer1.flush();
        writer1.close();
    }
}
```

Bài 31:

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

        try {
            OutputStream outputStream = new FileOutputStream("output.txt");
            Writer outputStreamWriter = new OutputStreamWriter(outputStream);

            outputStreamWriter.write("Hello World");

            outputStreamWriter.close();
        } catch (Exception e) {
            e.getMessage();
        }
    }
}
```

Bài 32:

```
public class InputStreamReaderExample {
    public static void main(String[] args) {
        try  {
            InputStream stream = new FileInputStream("file.txt");
            Reader reader = new InputStreamReader(stream);
            int data = reader.read();
            while (data != -1) {
                System.out.print((char) data);
                data = reader.read();
            }
        } catch (Exception e) {
```

```
            e.printStackTrace();
        }
    }
}
```

Bài 33:

```
import java.io.*;
public class InputStreamExample {
public static void main(String[] args)throws Exception{
        String srg = "1##2#34###12";
        byte ary[] = srg.getBytes();
        ByteArrayInputStream array = new ByteArrayInputStream(ary);
        PushbackInputStream push = new PushbackInputStream(array);
        int i;
           while( (i = push.read())!= -1) {
              if(i == '#') {
                 int j;
                 if( (j = push.read()) == '#'){
                     System.out.print("**");
                 }else {
                    push.unread(j);
                    System.out.print((char)i);
                 }
              }else {
                        System.out.print((char)i);
              }
           }
          }
    }
```

Bài 34:

```
        import java.io.*;
        public class ReaderExample{
           public static void main(String[] args) throws Exception {
              char ary[] = {'1','-','-','2','-','3','4','-','-','-','5','6'};
              CharArrayReader reader = new CharArrayReader(ary);
              PushbackReader push = new PushbackReader(reader);
              int i;
                 while( (i = push.read())!= -1) {
                    if(i == '-') {
                       int j;
                       if( (j = push.read()) == '-'){
                           System.out.print("#*");
                       }else {
                          push.unread(j); // push back single character
```

```
                    System.out.print((char)i);
                }
            }else {
                    System.out.print((char)i);
            }
        }
    }
}
```

Bài 35:

```
import java.io.*;
public class StringWriterExample {
    public static void main(String[] args) throws IOException {
        char[] ary = new char[512];
        StringWriter writer = new StringWriter();
        FileInputStream input = null;
        BufferedReader buffer = null;
        input = new FileInputStream("D://testout.txt");
        buffer = new BufferedReader(new InputStreamReader(input, "UTF-8"));
        int x;
        while ((x = buffer.read(ary)) != -1) {
                writer.write(ary, 0, x);
        }
        System.out.println(writer.toString());
        writer.close();
        buffer.close();
    }
}
```

Bài 36:

```
import java.io.StringReader;
public class StringReaderExample {
    public static void main(String[] args) throws Exception {
        String srg = "Hello Java!! \nWelcome to Javatpoint.";
        StringReader reader = new StringReader(srg);
        int k=0;
            while((k=reader.read())!=-1){
                System.out.print((char)k);
            }
        }
}

import java.io.PipedReader;
import java.io.PipedWriter;
```

```
public class PipeReaderExample2 {
   public static void main(String[] args) {
      try {

         final PipedReader read = new PipedReader();
         final PipedWriter write = new PipedWriter(read);

         Thread readerThread = new Thread(new Runnable() {
            public void run() {
               try {
                  int data = read.read();
                  while (data != -1) {
                     System.out.print((char) data);
                     data = read.read();
                  }
               } catch (Exception ex) {
               }
            }
         });

      Thread writerThread = new Thread(new Runnable() {
         public void run() {
            try {
               write.write("I love my country\n".toCharArray());
            } catch (Exception ex) {
            }
         }
      });

      readerThread.start();
      writerThread.start();

   } catch (Exception ex) {
      System.out.println(ex.getMessage());
   }
}
```

```
      }
      Bài 37:
      import java.io.PipedReader;
      import java.io.PipedWriter;

      public class PipeReaderExample2 {
         public static void main(String[] args) {
            try {
```

```
            final PipedReader read = new PipedReader();
            final PipedWriter write = new PipedWriter(read);

            Thread readerThread = new Thread(new Runnable() {
                public void run() {
                    try {
                        int data = read.read();
                        while (data != -1) {
                            System.out.print((char) data);
                            data = read.read();
                        }
                    } catch (Exception ex) {
                    }
                }
            });

            Thread writerThread = new Thread(new Runnable() {
                public void run() {
                    try {
                        write.write("I love my country\n".toCharArray());
                    } catch (Exception ex) {
                    }
                }
            });

            readerThread.start();
            writerThread.start();

        } catch (Exception ex) {
            System.out.println(ex.getMessage());
        }

    }
}
```

Bài 38:

```
import java.io.*;
class CustomFilterWriter extends FilterWriter {
    CustomFilterWriter(Writer out) {
        super(out);
    }
    public void write(String str) throws IOException {
        super.write(str.toLowerCase());
    }
```

```
}
public class FilterWriterExample {
    public static void main(String[] args) {
        try {
            FileWriter fw = new FileWriter("Record.txt");
            CustomFilterWriter filterWriter = new CustomFilterWriter(fw);
            filterWriter.write("I LOVE MY COUNTRY");
            filterWriter.close();
            FileReader fr = new FileReader("record.txt");
            BufferedReader bufferedReader = new BufferedReader(fr);
            int k;
            while ((k = bufferedReader.read()) != -1) {
                System.out.print((char) k);
            }
            bufferedReader.close();
        } catch (IOException e) {
            e.printStackTrace();
        }
    }
}
```

Bài 39:

```
import java.io.*;
class CustomFilterReader extends FilterReader {
    CustomFilterReader(Reader in) {
        super(in);
    }
    public int read() throws IOException {
        int x = super.read();
        if ((char) x == ' ')
            return ((int) '?');
        else
            return x;
    }
}
public class FilterReaderExample {
    public static void main(String[] args) {
        try  {
            Reader reader = new FileReader("javaFile123.txt");
            CustomFilterReader fr = new CustomFilterReader(reader);
            int i;
            while ((i = fr.read()) != -1) {
                System.out.print((char) i);
            }
```

```
            fr.close();
            reader.close();
         } catch (Exception e) {
            e.getMessage();
         }
      }
   }
```

Bài 40:

```
import java.io.*;
public class FileDemo {
   public static void main(String[] args) {

      try {
         File file = new File("javaFile123.txt");
         if (file.createNewFile()) {
            System.out.println("New File is created!");
         } else {
            System.out.println("File already exists.");
         }
      } catch (IOException e) {
         e.printStackTrace();
      }

   }
}
```

Bài 41:

```
import java.io.*;
public class FileDemo2 {
   public static void main(String[] args) {

      String path = "";
      boolean bool = false;
      try {
         // createing  new files
         File file  = new File("testFile1.txt");
         file.createNewFile();
         System.out.println(file);
         // createing new canonical from file object
         File file2 = file.getCanonicalFile();
         // returns true if the file exists
         System.out.println(file2);
         bool = file2.exists();
         // returns absolute pathname
```

```
            path = file2.getAbsolutePath();
            System.out.println(bool);
            // if file exists
            if (bool) {
               // prints
               System.out.print(path + " Exists? " + bool);
            }
         } catch (Exception e) {
            // if any error occurs
            e.printStackTrace();
         }
      }
   }
```

Bài 42:

```
import java.io.*;
public class FileExample {
public static void main(String[] args) {
    File f=new File("/Users/sonoojaiswal/Documents");
    String filenames[]=f.list();
    for(String filename:filenames){
        System.out.println(filename);
    }
}
}
```

Bài 43:

```
import java.io.*;
public class FileExample {
public static void main(String[] args) {
    File dir=new File("/Users/sonoojaiswal/Documents");
    File files[]=dir.listFiles();
    for(File file:files){
        System.out.println(file.getName()+" Can Write: "+file.canWrite()+"
        Is Hidden: "+file.isHidden()+" Length: "+file.length()+" bytes");
    }
}
}
```

Bài 44:

```
import java.io.*;
public class FileDescriptorExample {
   public static void main(String[] args) {
      FileDescriptor fd = null;
      byte[] b = { 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58 };
```

```
        try  {
            FileOutputStream fos = new FileOutputStream("Record.txt");
            FileInputStream fis = new FileInputStream("Record.txt");
            fd = fos.getFD();
            fos.write(b);
            fos.flush();
            fd.sync();// confirms data to be written to the disk
            int value = 0;
            // for every available bytes
            while ((value = fis.read()) != -1) {
               char c = (char) value;// converts bytes to char
               System.out.print(c);
            }
            System.out.println("\nSync() successfully executed!!");
        } catch (Exception e) {
            e.printStackTrace();
        }
    }
}
```

Bài 45:

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

public class RandomAccessFileExample {
    static final String FILEPATH ="myFile.TXT";
    public static void main(String[] args) {
        try {
            System.out.println(new String(readFromFile(FILEPATH, 0, 18)));
            writeToFile(FILEPATH, "I love my country and my people", 31);
        } catch (IOException e) {
            e.printStackTrace();
        }
    }
    private static byte[] readFromFile(String filePath, int position, int size)
            throws IOException {
        RandomAccessFile file = new RandomAccessFile(filePath, "r");
        file.seek(position);
        byte[] bytes = new byte[size];
        file.read(bytes);
        file.close();
        return bytes;
    }
    private static void writeToFile(String filePath, String data, int position)
```

```
            throws IOException {
        RandomAccessFile file = new RandomAccessFile(filePath, "rw");
        file.seek(position);
        file.write(data.getBytes());
        file.close();
    }
}
```

Bài 46:

```
import java.util.*;
public class ScannerExample {
public static void main(String args[]){
        Scanner in = new Scanner(System.in);
        System.out.print("Enter your name: ");
        String name = in.nextLine();
        System.out.println("Name is: " + name);
        in.close();
        }
}
import java.util.*;
public class ScannerClassExample1 {
    public static void main(String args[]){
        String s = "Hello, This is JavaTpoint.";
        //Create scanner Object and pass string in it
        Scanner scan = new Scanner(s);
        //Check if the scanner has a token
        System.out.println("Boolean Result: " + scan.hasNext());
        //Print the string
        System.out.println("String: " +scan.nextLine());
        scan.close();
        System.out.println("--------Enter Your Details-------- ");
        Scanner in = new Scanner(System.in);
        System.out.print("Enter your name: ");
        String name = in.next();
        System.out.println("Name: " + name);
        System.out.print("Enter your age: ");
        int i = in.nextInt();
        System.out.println("Age: " + i);
        System.out.print("Enter your salary: ");
        double d = in.nextDouble();
        System.out.println("Salary: " + d);
        in.close();
        }
}
```

Bài 47:

```
import java.util.*;
public class ScannerClassExample2 {
     public static void main(String args[]){
        String str = "Hello/This is JavaTpoint/My name is Abhishek.";
        //Create scanner with the specified String Object
        Scanner scanner = new Scanner(str);
        System.out.println("Boolean Result: "+scanner.hasNextBoolean());
        //Change the delimiter of this scanner
        scanner.useDelimiter("/");
        //Printing the tokenized Strings
        System.out.println("---Tokenizes String---");
       while(scanner.hasNext()){
          System.out.println(scanner.next());
       }
        //Display the new delimiter
        System.out.println("Delimiter used: " +scanner.delimiter());
        scanner.close();
        }
}
```

Bài 48:

```
import java.io.*;
class PrintStreamTest{
 public static void main(String args[])throws Exception{
   FileOutputStream fout=new FileOutputStream("mfile.txt");
   PrintStream pout=new PrintStream(fout);
   pout.println(1900);
   pout.println("Hello Java");
   pout.println("Welcome to Java");
   pout.close();
   fout.close();
 }
}
import java.io.*;
import java.util.zip.*;
class Compress{
public static void main(String args[]){
try{
FileInputStream fin=new FileInputStream("Deflater.java");
FileOutputStream fout=new FileOutputStream("def.txt");
DeflaterOutputStream out=new DeflaterOutputStream(fout);

int i;
```

```
while((i=fin.read())!=-1){
out.write((byte)i);
out.flush();
}
fin.close();
out.close();
}catch(Exception e){System.out.println(e);}
System.out.println("rest of the code");
}
}
```

Bài 49:

```
import java.io.*;
import java.util.zip.*;
class DeCompress{
public static void main(String args[]){
try{
FileInputStream fin=new FileInputStream("def.txt");
InflaterInputStream in=new InflaterInputStream(fin);
FileOutputStream fout=new FileOutputStream("D.java");

int i;
while((i=in.read())!=-1){
fout.write((byte)i);
fout.flush();
}
fin.close();
fout.close();
in.close();
}catch(Exception e){System.out.println(e);}
System.out.println("rest of the code");
}
}
```

Bài 50:

```
//file 1
import java.io.Serializable;
public class Student implements Serializable{
 int id;
 String name;
 public Student(int id, String name) {
  this.id = id;
  this.name = name;
 }
}
```

```
//File 2
import java.io.*;
class Persist{
 public static void main(String args[]){
  try{
  //Creating the object
  Student s1 =new Student(211,"ravi");
  //Creating stream and writing the object
  FileOutputStream fout=new FileOutputStream("f.txt");
  ObjectOutputStream out=new ObjectOutputStream(fout);
  out.writeObject(s1);
  out.flush();
  //closing the stream
  out.close();
  System.out.println("success");
  }catch(Exception e){System.out.println(e);}
 }
}
//File 3
import java.io.*;
class Depersist{
 public static void main(String args[]){
  try{
  //Creating stream to read the object
  ObjectInputStream in=new ObjectInputStream(new FileInputStream("f.txt"));
  Student s=(Student)in.readObject();
  //printing the data of the serialized object
  System.out.println(s.id+" "+s.name);
  //closing the stream
  in.close();
  }catch(Exception e){System.out.println(e);}
 }
}
```

----------**Hết**----------