Input Output in java :

In order to perform input and output operation, Java software people has provided a predefined package called java.io.

By using this package we can read the data from keyword (DataInputStream, BufferedRedaer), can create a file, can perform read and write operation to the file.

What is the need of File Handling :

File handling is nothing but creating a file and performing read and write operation to the file.

As we know to store a value in the program we need to take the support of variable.

Once the execution of the program will be completed then we will not get variable value back so it will be deleted because variables values are available in RAM memory (Primary memory) and It is a volatile memory.

If we want to store the value of the variable permemnently so we can store these values in files (secondary memory) so in future we can retrieve the values from the files.

In order to perform read and write operation in the file we should use stream concept.
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* At basic level, java.io package has provided a predefined class called
  File available in java.io package.

  File file = new File("abc.txt");

* The above statement will NOT create any file, If the file is already available in the given path then It will provide the file reference to the reference variable called file.

File class has provided the following two methods :
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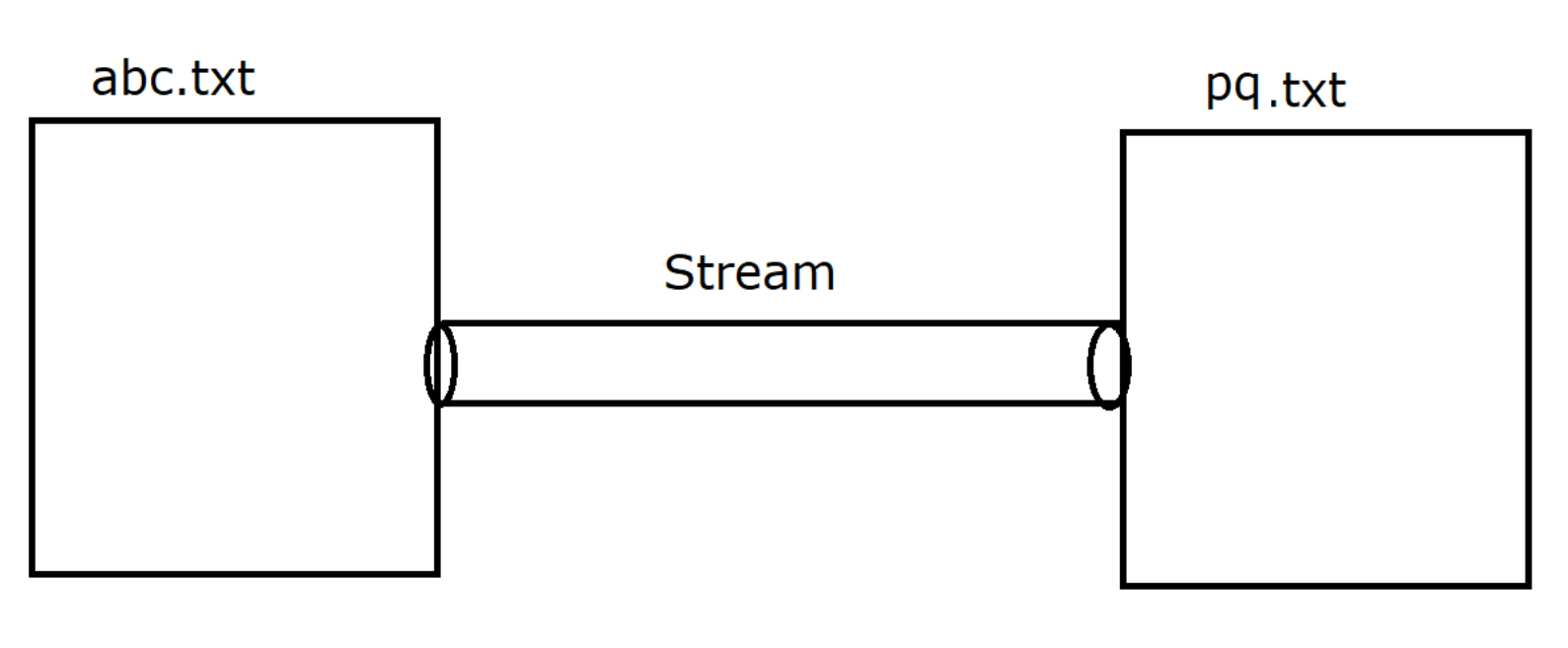
1) public boolen exists() : Will verify whether the file is available
   or not, If file is available, It will trur otherwise return false

2) public boolean createNewFile() throws IOException : Will create a
   new file, If and only if, file is not available.

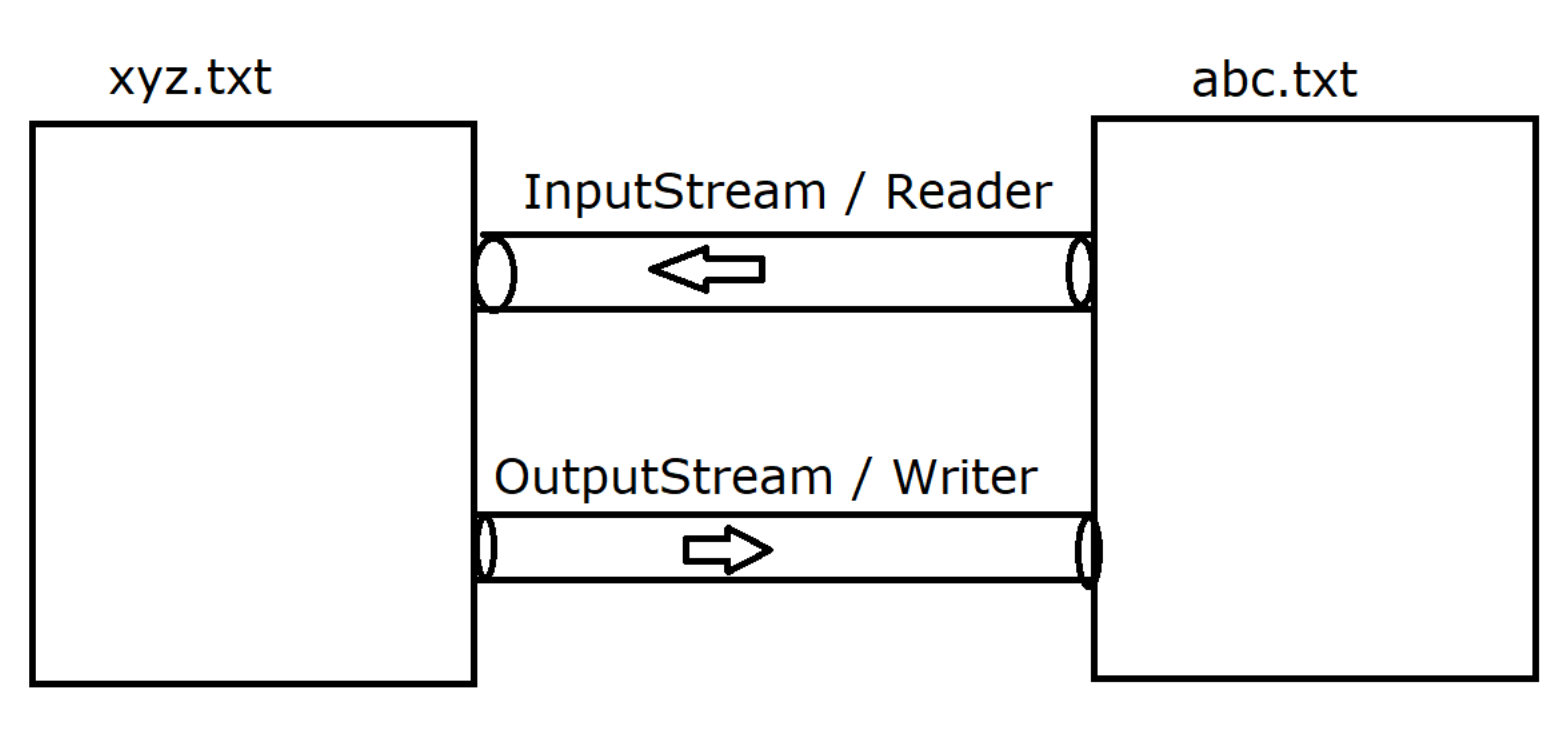
```java
package com.ravi.file_demo;

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

public class FileDemo1 {

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

        File file = new File("D:\\new\\Batch46.txt");

        if(file.exists())
        {
            System.out.println("File is available :"+file.getName());
        }
        else
        {
            System.err.println("File is  not available .....");
        }

        if(file.createNewFile())
        {
            System.out.println("File is created.."+file.getName());
        }
        else
        {
            System.err.println("File is already existing");
        }

      }
      catch(IOException e)
      {
          System.err.println("IOException encountered");
      }

    }

}
```
Note : File class has a method called getName() to get the name of the file

        public String getName()

What is Stream in Input and Output ?



* A Stream is nothing but flow of data or flow of characters to both the end.



Stream is further divided into two categories :
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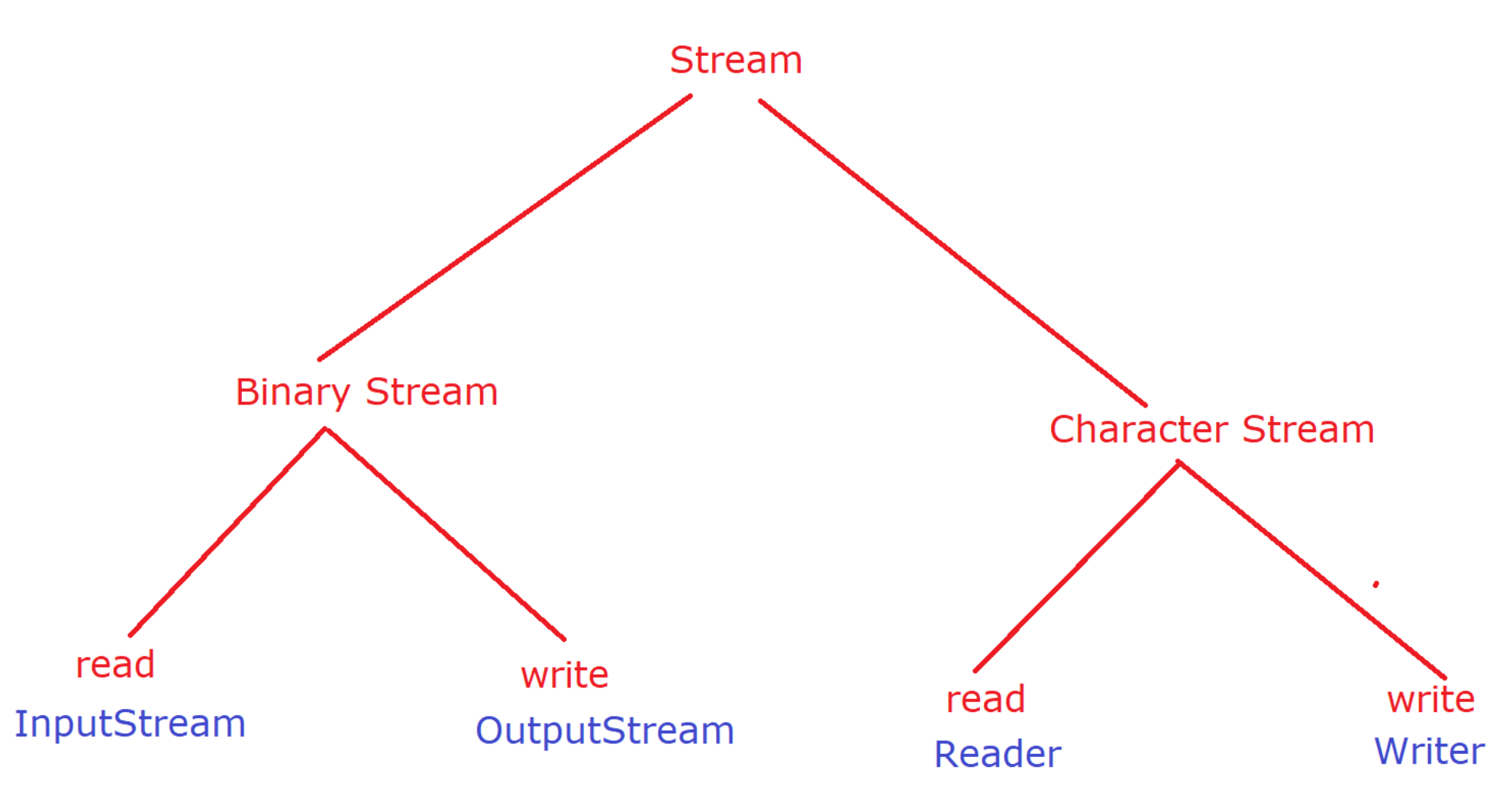
1) Binary OR Byte Oriented Stream
2) Character OR Text Stream



Streams in java :

A Stream is nothing but flow of data or flow of characters to both the end.

Stream is divided into two categories [Diagram 16-FEB]

1) byte oriented Stream :-

It used to handle characters, images, audio and video file in binary format.

2) character oriented Stream :-

It is used to handle the data in the form of characters or text.

Now byte oriented or binary Stream can be categorized as "InputStream" and "OutputStream". input streams are used to read or receive the data where as output streams are used to write or send the data.

Again Character oriented Stream is divided into Reader and Writer. Reader is used to read() the data from the file where as Writer is used to write the data to the file.

All Streams are represented by classes in java.io package.

InputStream is the super class for all types of input operation where as OutputStream is the super class for all type of Output operation.