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September 18, 2012

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AGENDA

Understanding Streams

Streams

Files

File class methods

File class methods -Cont

Programs using File class

Program to rename a file.

Program to delete a file.

Types of Streams

Stream Base IO

Overview of IO Classes

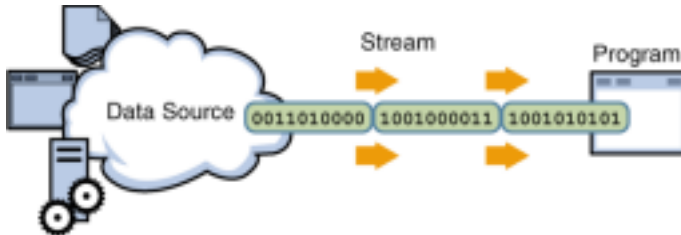
OutputStream of IO

InputStream of IO

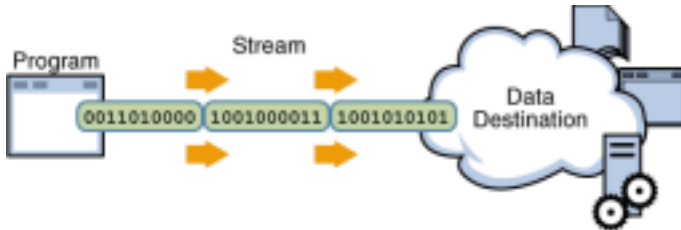
Writer of IO

Reader of IO

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Input Stream



Output Stream

[|] Sequence of bytes.

[|] Input Stream : Data is received by some device to program. [|] Output Stream : Data is sent by the program to device. [|] Stream provides a sort of abstraction.

[|] Recall System.out and System.in

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| File class is provided by java.io package.

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- | Directory too is treated as file and have additional method `list()` to list the filename in directory.

- |

```
public File(String pathname)
public File(String parent, String child)
public File(File parent, String child)
public File(URI uri
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```
| boolean canRead()  
| boolean canWrite()  
| boolean cancreateNewFile()  
| boolean delete()  
| boolean exists()  
| String getAbsolutePath()
```

- | String getName()
- | String getParent()
- | String getPath()
- | boolean isAbsolute()
- | boolean isDirectory()
- | boolean isFile()
- | boolean isHidden()
- | long lastModified()
- | long length()

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- | String[] list()

- | File[] listFiles()
- | boolean mkdir()
- | boolean renameTo(File d)
- | boolean setLastModifiedDate()
- | boolean setReadOnly()
- | String toString()
- | String getFreeSpace()
- | String getTotalSpace()
- | String getUsableSpace()

| Program to rename a file.

- | Program to rename a file.

- | Program to delete a file.

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| Program to rename a file.

- | Program to delete a file.
- | Creating a directory.

- | Program to rename a file.
- | Program to delete a file.
- | Creating a directory.
- | Traversing a Directory.

- | Program to rename a file.
- | Program to delete a file.
- | Creating a directory.
- | Traversing a Directory.
- | Using FilenameFilter Interface.

```
import java.io.*;
import java.util.Scanner;
public class Rename
{
public static void main(String args[]) {
    File f1, f2;
    Scanner s = new Scanner(System.in);
    System.out.println("Enter the file name : "); String
    name old = s.nextLine();
    System.out.println("Enter the new name : "); String
```

```
name new = s.nextLine();  
f1 = new File(name old);  
f2 = new File(name new);  
if(f1.renameTo(f2))  
    System.out.println("File renamed");  
else  
    System.out.println("Error Occured");
```

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        File f1;  
        Scanner s = new Scanner(System.in);  
        System.out.println("Enter the file name : "); String  
        name = s.nextLine();
```

```
f1 = new File(name);  
if(f1.exists())  
{  
    if(f1.delete())  
        System.out.println("File deleted");  
    else  
        System.out.println("Error Occured");  
}
```

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¹ Byte Stream / Binary Stream

¹ Only Binary data / bytes.

¹ Read and Write [8 bytes].

- | Character Stream
 - | Character Data.
 - | Unicode Character.

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- | Four Abstract Classes.

- | Byte Stream / Binary Stream

- | InputStream.

- | OutputStream.

- | Character Stream

- | Reader.

- | Writer.

- | Four Abstract Classes.
- | Byte Stream / Binary Stream
 - | InputStream.
 - | OutputStream.
- | Character Stream
 - | Reader.
 - | Writer.

	Byte Based		Character Based	
	Input	Output	Input	Output
Basic	InputStream	OutputStream	Reader InputStreamReader	Writer OutputStreamWriter
Arrays	ByteArrayInputStream	ByteArrayOutputStream	CharArrayReader	CharArrayWriter
Files	FileInputStream RandomAccessFile	FileOutputStream RandomAccessFile	FileReader	FileWriter
Pipes	PipedInputStream	PipedOutputStream	PipedReader	PipedWriter
Buffering	BufferedInputStream	BufferedOutputStream	BufferedReader	BufferedWriter
Filtering	FilterInputStream	FilterOutputStream	FilterReader	FilterWriter
Parsing	PushbackInputStream StreamTokenizer		PushbackReader LineNumberReader	
Strings			StringReader	StringWriter
Data	DataInputStream	DataOutputStream		
Data - Formatted		PrintStream		PrintWriter
Objects	ObjectInputStream	ObjectOutputStream		
Utilities	SequenceInputStream			

