

## Object-Oriented Programming (CS F213)

**Labsheet-11**

Prof.R Gururaj

**java.io package** Supports Java's basic Input and Output System, including File IO.

So far we have seen only *System.out.print()* and *println()*

Text based console I/O is not so important in Java.

All fundamental I/O in Java is based on *streams*.

A streams is an abstraction that either produces or consumes information.

A stream represents a flow of data , or a channel of communication ( with at least conceptually) a writer at the one end and the reader at the other end.

A stream is linked to a physical device by the Java IO system.

All streams behave in the same way independent of the device it is associated with.

Thus the same IO classes and methods can be applied to any device.

An input stream can abstract many different devices like- keyboard, file, network socket etc.

Similarly an Output stream can abstract many different devices like- monitor, file, network connection etc.

Streams are clean way to deal with I/O without having every part of your code understand the difference between the devices.

Java implements streams within class hierarchies defined in *java.io* package.

**Java defines two types of streams:**

Byte oriented Streams

Character oriented Streams (Java 1.1)

At the lowest level all I/O is byte-oriented.

**Practice Problem-1**

**// Reading console (keyboard) input**

**Practice problem-2**

**// Reading from keyboard**

**Practice Problem-3**

**// reading from file using file input stream**

**Practice Problem-4**

**// copying the content from one file to another**

**Practice Problem-5**

**// File object Demo**

**Practice Problem-6**

**// Using File object methods to get details of a file**

**Practice Problem-7**

**// listing the Directory with File object**

**Practice Problem-8**

**// Data input/output streams to handle java primitive data**

\*\*\*\*\*