PÉCSI TUDOMÁNYEGYETEM
TERMÉSZETTUDOMÁNYI KAR

“Methodology of Programming I”

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PTE

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Basic I/O

Your programs can read and write data by using classes from the java.io package.

An I/O Stream represents an input source or an output destination.

- input stream: read data from a source, one item at a time
- output stream: write data to a destination, one item at time

A stream can represent many different kinds of sources and destinations, including disk files, devices, other programs, and memory arrays.

Most of the classes from java.io package, implement sequential access streams.

The sequential access streams can be divided into two groups:

- those that read and write bytes
- those that read and write Unicode characters

Byte streams:

Byte Streams handle I/O of raw binary data.

Programs use byte streams to perform input and output of 8-bit bytes.

All byte stream classes are descended from InputStream and OutputStream.

Byte streams should only be used for the most primitive I/O.

Character streams:

Handle I/O of character data, automatically handling translation to and from the local character set.

All character stream classes are descended from Reader and Writer.

File I/O:

The java.nio.file package provides extensive support for file and file system I/O.

This is a very comprehensive API, but the key entry points are as follows:

- The Path class has methods for manipulating a path.
- The Files class has methods for file operations, such as moving, copy, deleting, and also methods for retrieving and setting file attributes.
- The FileSystem class has a variety of methods for obtaining information about the file system.

References:

https://docs.oracle.com/javase/tutorial/tutorialLearningPaths.html