

ICT167 ANS9

Importance of file I/O

- Output from one program can be input to another program (think world editor making a map and warcraft 3 reads the map. Allows game and map editor to talk. No need to keep recompiling program)

Stream (flow of input) is an object that delivers data to destination (screen, and file)

TextFiles Input stream:

- A stream that provides input to a program-
 - Java.util.Scanner class object is an input stream

TextFiles Output stream:

- A stream that accepts output from a program (into text file)-
 - PrintWriter class object is an outstream that outputs to a textfile
 - System.out

TextFiles I/O in Java consist of:

- OPENING
 - Creates a stream object for each input source (file) or output destination (file) and associating the object with the external entity
- LOOPING
 - Getting values in or sending values out by calling methods on the stream object and then
- CLOSING
 - The file or connection by invoking a *close method* on stream
 - Reason for closing file?
 - If a program crash then the file is corrupted/damaged
 - An opened file can't be read until it is closed

Exception handling important!!!! Always use Try and catch blocks to make sure file can be opened

Append text file

- Add program output to existing file rather than override everything when open text file.

FileOutputStream
is a CLASS

```
outputStream = new PrintWriter(new  
    FileOutputStream("out.txt", true));
```

StringTokenizer

- Used to parse (cut) a single line into words

Binary file I/O

- Not readable by humans includes- movie files (MP4), music files (MP3) different encoding to read binary files

BinaryFiles Input stream:

- A stream that provides input to a program (from the binary file)-
 - *ObjectInputStream* class object
- *FileInputStream* class object needed as well to open file

BinaryFiles Output stream:

- A stream that accepts output from a program (into binary file)-
 - *ObjectOutputStream* class object
- *FileOutputStream* class object needed as well to open file

Nested Try blocks: If no exception found in inner try block it goes to parent try block and finds exception there