

AP COMPUTER SCIENCE A – FILE IO CONVENIENCE CLASSES

Dr. Harren wrote the three classes `ConsoleInput`, `FileInput` and `FileOutput` in package `IO` to streamline IO in java. To access the classes you must

```
import IO.ConsoleInput;
import IO.FileInput;
import IO.FileOutput;
```

with the `IO` folder being on your Desktop. These classes throw no exceptions which the user must catch, making them convenient to use.

1) Modify program `MinSort` to make a program `MinSort2`, by:

- a) Removing the static methods `openBR`, `readLine`, `close` and `openPW`.
- b) Modifying method `loadFileAsIntArray` to use a `FileInput` object.
- c) Modifying method `printSort` to use a `FileInput` object. Use `println("%2d", intA[i])`.
- d) Using a `ConsoleInput` object in main to read in the input and output file names.

2) Modify program `MatrixMultiply3` to make a program `MatrixMultiply4` by:

- a) Removing the static method `open`.
- b) Using a `ConsoleInput` object in main to read in the input file name.
- c) Modifying method `readMatrix` to use a `FileInput` object. Use `readLineInts()` to read in the dimensions of the matrix, *e.g.*,

```
int [] ia=fi.readLineInts();
int rows=ia[0];
```

An entire row of the matrix can be read in with one read statement, *e.g.*,

```
double [][] rv=new double [rows][];
for ( int i=0; i<rows; ++i ) rv[i]=fi.readLineDoubles();
```

- d) Modifying method `printMatrix` to use a `FileOutput` object connected to the console. Each row of the matrix `m` can be printed with one print statement, *e.g.*,

```
for ( int i=0; i<m.length; ++i ) fo.println("%6.1f",m[i]);
```