Files

See Chapter 7 of the Notes.

We open files with

F = open(<filename>, <mode>)

where both of the arguments are strings.   The filename can either be a simple string, like "foobar.txt", in which case the file needs to be in the same folder as the program, or a path, such as "C:\Users\bob\Documents\Classes\cs150-spring16\foobar.txt"

The mode can be any of the following strings:
"r", which means the file is to be opened for reading
"w", which means the file is to be created for writing
"a", which means the file already exists and is to
       be appended onto.

In "r" or "a" mode your program will crash if the file is not found.

In "w" mode a new file is created. If there happens to be an existing file with the filename you give, that file will be destroyed and its contents lost. So be careful with this mode.

If file F is open for writing,

   F.write(<string>)

will write <string> at the end of it.

If you want to divide the file into lines, use the "\n" character as a line break:

   F.write("%s\n" % <string>)

writes the string to file F and terminates the line.

   F.write(<string>+"\n")

does the same thing.

So suppose we have an integer value like 23 stored in variable x. How can we write the value of x to file F?

A. F.write(23)

B. F.write(x)

C. F.write("x")

D. F.write(str(x))

E. F.write("%d" % x)

We can use formatted strings to write numeric data into files. For example, if x is an integer variable,

F.write("%d" %x)

will write x into file F.

If F is a file that is open for either reading or writing,

        F.close()

closes it; this breaks the connection between your program and the file. The file is automatically closed when your program halts, so we don't usually need to use this to close files.

If you have a file F open in read-mode and you want to go back to the start so you can re-read it, use
F.seek(0)