

Assignment 3: files, strings and functions

Files to submit: *madlibs.py* and *tableprinter.py*

1. Madlibs

Specification: You are to put the code for the function below into the file *madlibs.py*

`mad_libs(inputname,outputname)` where the parameters are file paths. The function reads in the contents of the file named `inputname` and prompts the user for words to replace each occurrence of the words ADJECTIVE, NOUN, ADVERB, or VERB. The function then does the replacements, prints the modified string to the screen and to the file with name `outputname`.

For example, the contents of the input text file may look like this:

The ADJECTIVE panda walked to the NOUN and then VERB. A nearby NOUN was unaffected by these events.

If so, the output to the screen should look like this, with user input underlined

```
Enter an adjective: silly
Enter a noun: chandelier
Enter a verb: screamed
Enter a noun: pickup truck
```

The silly panda walked to the chandelier and then screamed. A nearby pickup truck was unaffected by these events.

This string would also be written to a file with name `outputname`

2. Table Printer

Specification: You are to put the code for the function `printTable()` into the file *tableprinter.py*

The function `printTable(L)` that takes a list `L` of lists of strings and displays it in a well-organized table with each column right-justified. Assume that all the inner lists will contain the same number of strings.

Given

```
tableData = [['apples', 'oranges', 'cherries', 'banana'],  
              ['Alice', 'Bob', 'Carol', 'David'],  
              ['dogs', 'cats', 'moose', 'goose']]
```

the function should print the following:

```
  apples Alice  dogs  
oranges   Bob  cats  
cherries Carol moose  
banana  David goose
```

Hint: Your code will first have to find the longest string in each of the inner lists so that the whole column can be wide enough to fit all the strings.

You can store the maximum width of each column as a list of integers. These widths will be used with the string method `rjust` to attain the desired alignment