**Lists and functions**

The following functions both double all numbers in a list. One function returns a new list, but the other does not. For each case, write Python code that calls each function and prints the doubled list.

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| **Function** | **Function call and print** |
| **def** double(list\_of\_nums):  idx = 0  doubled\_list = []  while idx < len(list\_of\_nums):  doubled\_list.append(2\*list\_of\_nums[idx])  idx += 1  return doubled\_list | **list = [1,2,3,4,5]**  **doubled\_list = double[list]**  **print(doubled\_list)** |
| **def** double(list\_of\_nums):  idx = 0  while idx < len(list\_of\_nums):  list\_of\_nums[idx] \*= 2  idx += 1 | **list = [1,2,3,4,5]**  **double(list)**  **print(list)** |

**File input/output -**

1. What line of code do we write to open a file? What does the second parameter (the letter) signify?

open(“filepath”, mode): The second parameter indicates the mode you open the file in (read “r”, write “w”, append “a”).

1. How do we read a single line from a file?

Use readline() method. single\_line=file.readline()

1. How do we iterate through all lines in a file?

while(line):

line = file.readline()

1. What are the differences between opening a file in "write" mode vs. "append" mode?

Write mode will open a file in write-mode (will rewrite if data already exists), and will make a new file if it doesn’t already exisat. Opening a file in append mode writes to the end of a file.

1. When you use the file.write() function, where does this function include a new line in the file you give it?

It won’t unless you put in a “\n” in the write line

1. If your program is located in the directory lab9\_fileio, where must your text file, mytext.txt be located for the following line of code not to cause an error?

infile = open("mytext.txt", "r")

in the lab9\_fileio directory.

1. What must you do after you are done with a file?

Close the file