<u>Directed Activities</u>: Demonstrate your work for the instructor after each activity.

<u>Learning Objectives</u>: Use Python text files. Writing functions that accept arguments and return values.

Question 01) Write two functions, **sphereArea(radius)** that returns the area of a sphere, and **sphereVolume(radius)** that returns the volume of a sphere

```
sphereArea = 4 * pi * radius<sup>2</sup>
sphereVolume = (4/3) * pi * radius<sup>3</sup>
```

Question 02) Write a function, **numberWords()**, that will first read the content of the file **rawWords.txt**, and then numbers and prints each word (on separate lines).

For example, if the file "rawWords.txt" contains:

to be or not to be

after executing your code, the output should be:

- 1. to
- 2. be
- 3. or
- 4. not
- 5. to
- 6. be

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Question 03) Build a file **hourlyWages.txt** so that each line of the file contains information about employees for some company in the form:

firstName lastName hourlyWage numberOfHoursWorked firstName lastName hourlyWage numberOfHoursWorked

. . .

(There's a space between values)

Write a function, hourlyWages(fileName), that accepts one string that represents the name of the input files.

The function should read in each line of the input file and calculate each employee's pay for the week. The program should then output/print each employee's first and last name, and pay for that week.

Output should like like this:

firstName lastName weekPay firstName lastName weekPay

Question 04) Create a function **nameValue(name)**. This function accepts a string representing a person's name and returns a number representing their numerological value. The "numerological" value of a name is determined by summing up the values of the letters of the name, where "a" is 1, "b" is 2, "c" is 3 etc., up to "z" being 26.

*Use the ASCII code function ord() to help you solve this problem

Upload the files to OAKS under the Assignments section.

Remove any files and folders you created on the desktop. Then empty your recycle bin. Log out of your Cougars account.

Log off of the computer you are using.