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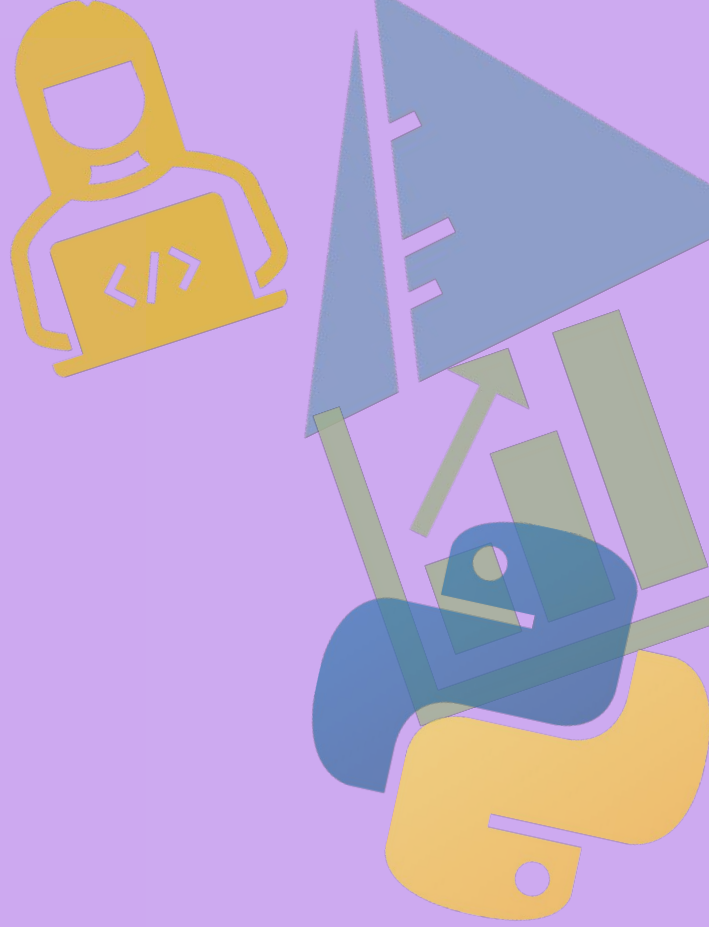
Greek Gods

Level 1- Humanities



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Introduction

The Ancient Roman and Greek empires were polytheistic societies (meaning that they worshipped many gods and goddesses). The worship of these multiple deities means that there are lots of Gods and Goddesses to remember, can you name them all?

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Meet the some of the Gods…

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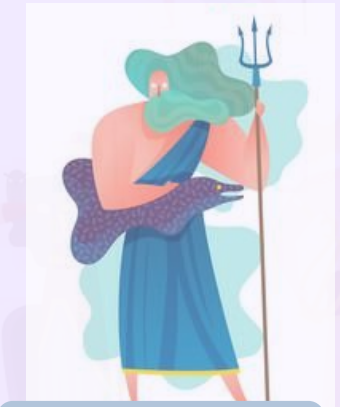
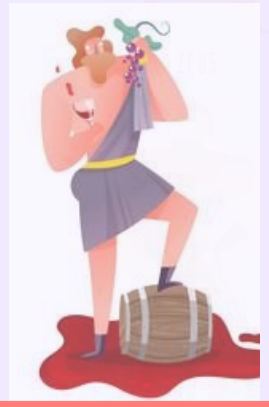
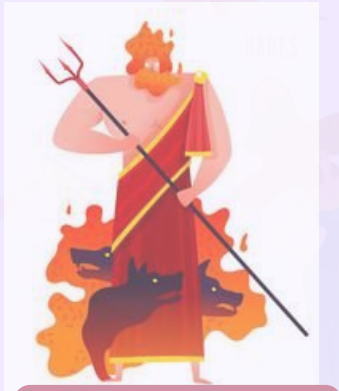


God of the sea



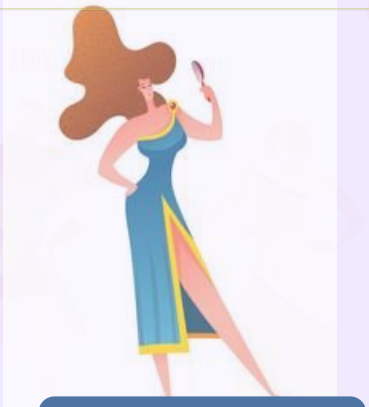
God of wine



God of the underworld

Goddess of marriage

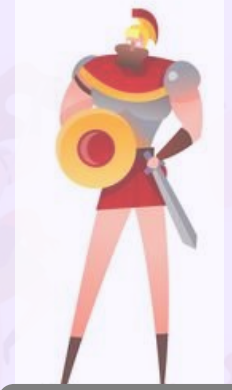
King of the gods



Goddess of love

Goddess of wisdom

God of music and medicine



God of war

Messenger of the gods

God of the forge

Goddess of the hunt

Task

- You should create a program that allows the user to interact with premade text files in order to find out information about various Roman gods, to find out: their Greek name, their duties as a god/territory as well as for some cases, a famous story about them

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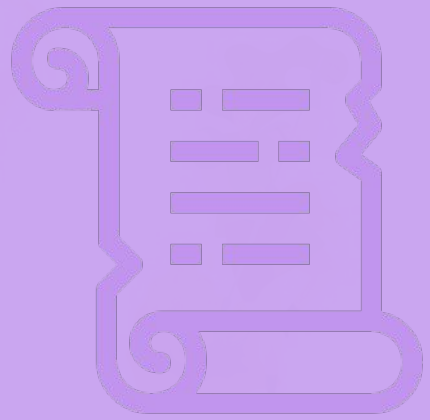

Greek and Roman Gods text files

Greek name

Roman name

Job

Link to story

```
ZEUS,JUPITER,King of the Gods,https://greekgodsandgoddesses.net/gods/zeus/
HERA,JUNO,Goddess of Marriage,https://greekgodsandgoddesses.net/goddesses/hera/
POSEIDON NEPTUNE,God of the Sea,https://greekgodsandgoddesses.net/gods/poseidon/
CRONUS,SATURN,Youngest son of Uranus, Father of Zeus,https://greekgodsandgoddesses.net/gods/cronus/
APHRODITE,VENUS,Goddess of Love,https://greekgodsandgoddesses.net/goddesses/aphrodite/
HADES,PLUTO,God of the Underworld,https://greekgodsandgoddesses.net/gods/hades/
HEPHAESTUS,VULCAN,God of the Forge,https://greekgodsandgoddesses.net/gods/hephaestus/
DEMETER,Ceres,Goddess of the Harvest,https://greekgodsandgoddesses.net/goddesses/demeter/
APOLLO,Apollo,God of Music and Medicine,https://greekgodsandgoddesses.net/gods/apollo/
ATHENA,MINERVA,Goddess of Wisdom,https://greekgodsandgoddesses.net/goddesses/athena/
ARTEMIS,DIANA,Goddess of the Hunt,https://greekgodsandgoddesses.net/goddesses/artemis/
ARES,MARS,God of War,https://greekgodsandgoddesses.net/gods/ares/
HERMES,Mercury,Messenger of the Gods,https://greekgodsandgoddesses.net/gods/hermes/
DIONYSUS,Bacchu,God of Wine,https://greekgodsandgoddesses.net/gods/dionysus/
PERSEPHONE,Proserpine,Goddess of the Underworld,https://greekgodsandgoddesses.net/goddesses/persephone/
EROS,CUPID,God of Love,https://greekgodsandgoddesses.net/gods/eros/
GAIA,Terra,Goddess of Earth
HYPNOS,Somnus,God of Sleep
RHEA,Ops,Mother of Zeus / Wife of Cronus
URANUS,Uranus,Father of the Titans
NIKE,Victoria,Goddess of Victory
EOS,Aurora,Goddess of the Dawn
PAN,Faunus,God of shepherds
SELENE,Luna,Goddess of the Moon
HELIOS,Sol,God of the Sun
HERACLES,Hercules,Son of Zeus
ODYSSEUS,Ulysses,Greek Hero
```

You will be given the links to two text files, the large one will look like this. It will tell you the name of each of the Roman gods, as well as its Greek equivalent, role and a link to a story

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Process

- Over some slides like Tash has done
- number of the step- built out with text about how to do- online research and links- whole of the coding solution links- how exercise can be used in reality

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Arrays

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An array is a container which can hold a fixed number of items of the same type.

Each item stored in an array is called an element, and its index is the position where it is within the array

If you have a list of items (for example car names) storing the values individually means that it can be had to find a specific value (especially if you want to store 300 cars not 3)

```
car1 = "Audi"
car2 = "BMW"
car3 = "Volvo"
```

```
cars = ["Audi", "BMW", "Volvo"]
print(cars)
```

Step 1

Creating the file arrays

These two arrays will be used to store the imported information from the two text files

```
1 fileArray=[]
2 file2Array=[]
```

To define an array, we must put the name of the array is equal to [] (is an empty list, as there is no information stored within these square brackets)

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Subroutines

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Subroutines are sequences of instructions that perform a specific task.

- It may be easier to think of them as mini-programs within a large program.
- Subroutines consist of modules of code that perform different tasks.
- If these tasks are repeated throughout the program, they can be written as subroutines.
- Each subroutine is given a unique name so that it can be called and executed quickly throughout the program, without having to write the code again.
- This reduces the size of the code, making the program more logical and easier to read and maintain.

```
#Defining a subroutine:
def nameOfSubroutine():
    code goes here
#Calling a subroutine:
nameOfSubroutine()
```

```
1 def nameOfSubroutine(): #declaring
2     print("hello")
3 nameOfSubroutine()      #calling
```

Step 2

Defining the subroutine

```
3 def romanToGreekName():
```

We will write the code in a subroutine called romanToGreekName

```
36 #main program
37 print("WELCOME TO THE ROMAN TO GREEK NAME TRANSLATOR!")
38 romanToGreekName()
```

The subroutine will later be called using this, so write this in now and it will be applicable later during testing of the subroutine's contents

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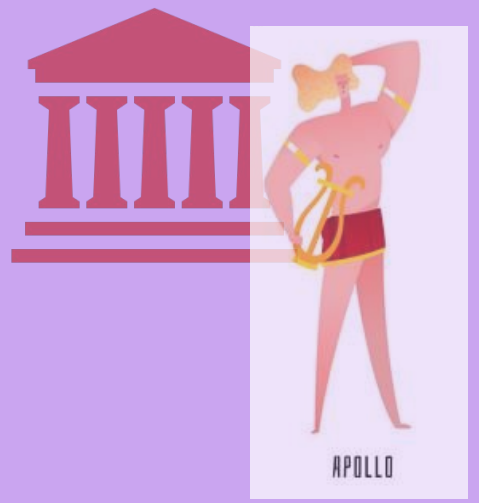

Step 3

Inside the subroutine

Noticing the indent, we can see that the first thing that will happen when the subroutine is called is that the user will be asked to input the ROMAN name of the god that they would like to find out information for

```
4       romanName=input("What is the name of the Roman God you would like to find?")
5       romanName=romanName.upper()
6       file = open("romanGods.txt","r")
```

We will then open the “romanGods.txt” text file, which holds the names of just the Roman gods available in this program

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Inside romanGods.txt file

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romanGods.txt

```
JUPITER
JUNO
NEPTUNE
SATURN
VENUS
PLUTO
VULCAN
CERES
APOLLO
MINERVA
DIANA
MARS
MERCURY
BACCHU
PROSERPINE
CUPID
TERRA
SOMNUS
OPS
URANUS
VICTORIA
AURORA
FAUNUS
LUNA
SOL
HERCULES
ULYSSES
```

We will use this text file to compare whether the user's input is actually the name of a Roman God

Input and Output

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```
print("Hello World!")
```

Output is the process of supplying information to the user.

In python, we use the print() statement.

Input is the process of receiving information from the user.

We do this using the input() statement.

We can store the user's data in variables!

```
print("What is your name?: ")
name = input()
```

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Reading from external files

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Python provides inbuilt functions for creating, writing and reading text files- here is all the syntax that you will need for reading from text files

Opening a text file code	f = open(”romanGods.txt","w+")	Open takes 2 arguments •The file that we want to open •A string that represents the access mode we want to do on the file
Read only	'r'	Open text file for reading- handle is positioned at the beginning of the file and raises an I/O error if the file doesn't exist (default mode when file is opened)
Read and write	'r+'	Opens file for reading and writing; handle at beginning; creates the file if the file does not exist

Reading a file	#example of reading a text file
	file3_read=open(book.txt","r")
	print("file3_read.read())
		Parameter to read a text file is "r", and to read files use the read() function. The read function returns the read bytes in the form of a string

splitLines()

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The splitlines() method splits a string into a list. The splitting will be done at line breaks (each line break will be a new element in the array)

```
fileArray=file.read().splitlines()
```

Step 4

Reading the text file

Here fileArray (created in line 1 of the code) is assigned the value of the contents of the romanGods.txt text file

```
4     romanName=input("What is the name of the Roman God you would like to find?")
5     romanName=romanName.upper()
6     file = open("romanGods.txt","r")
7
8     fileArray=file.read().splitlines()
9     file.close()
```

Each new element in the array will be one of the lines of the original text file

The text file is then closed as it will not be used again during the execution of this program

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If statements

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```
if character in alphabet:
    print ("the character is in the alphabet")
else:
    print ("the character is NOT in the alphabet")
```

The IF statement is a decision-making statement that guides a program to make decisions based on specified criteria.

The IF statement executes one set of code if a specified condition is met (TRUE) or another set of code evaluates to FALSE.

Step 5

Checking if the users input is valid

```
12      if romanName in fileArray:
13          indexOfRomanName=fileArray.index(romanName)
```

If the input is valid, whatever follows this if statement is carried out. It is considered valid if the name entered by the user is contained within the array that we have just filled with the contents of the romanNames.txt file.

The index of the name is then stored in a variable

```
32      else:
33          print("ERROR: that is not the name of a Roman god\n")
```

If the name is not contained within the array, then the user will be told that there is an error

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Inside greekGods.txt file

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greekGods.txt — Edited

```
ZEUS,JUPITER,King of the Gods,https://greekgodsandgoddesses.net/gods/zeus/
HERA,JUNO,Goddess of Marriage,https://greekgodsandgoddesses.net/goddesses/hera/
POSEIDON NEPTUNE,God of the Sea,https://greekgodsandgoddesses.net/gods/poseidon/
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APHRODITE,VENUS,Goddess of Love,https://greekgodsandgoddesses.net/goddesses/aphrodite/
HADES,PLUTO,God of the Underworld,https://greekgodsandgoddesses.net/gods/hades/
HEPHAESTUS,VULCAN,God of the Forge,https://greekgodsandgoddesses.net/gods/hephaestus/
DEMETER,Ceres,Goddess of the Harvest,https://greekgodsandgoddesses.net/goddesses/demeter/
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ARES,MARS,God of War,https://greekgodsandgoddesses.net/gods/ares/
HERMES,Mercury,Messenger of the Gods,https://greekgodsandgoddesses.net/gods/hermes/
DIONYSUS,Bacchu,God of Wine,https://greekgodsandgoddesses.net/gods/dionysus/
PERSEPHONE,Proserpine,Goddess of the Underworld,https://greekgodsandgoddesses.net/goddesses/
persephone/
EROS,CUPID,God of Love,https://greekgodsandgoddesses.net/gods/eros/
GAIA,Terra,Goddess of Earth
HYPNOS,Somnus,God of Sleep
RHEA,Ops,Mother of Zeus / Wife of Cronus
URANUS,Uranus,Father of the Titans
NIKE,Victoria,Goddess of Victory
EOS,Aurora,Goddess of the Dawn
PAN,Faunus,God of shepherds
SELENE,Luna,Goddess of the Moon
HELIOS,Sol,God of the Sun
HERACLES,Hercules,Son of Zeus
ODYSSEUS,Ulysses,Greek Hero
```

This text file is essentially a more complicated version of the last (same index as the last file but with added categories)

This will be imported into the code the same as the romanGods.txt file , however this time it will look like a 2D array in the sense that each element is split into 4 categories by a comma

The 4 categories (reminder)

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Greek name [0]

Roman name [1]

Job [2]

Link to story [3]

```
ZEUS,JUPITER,King of the Gods,https://greekgodsandgoddesses.net/gods/zeus/
HERA,JUNO,Goddess of Marriage,https://greekgodsandgoddesses.net/goddesses/hera/
POSEIDON NEPTUNE,God of the Sea,https://greekgodsandgoddesses.net/gods/poseidon/
CRONUS,SATURN,Youngest son of Uranus, Father of Zeus,https://greekgodsandgoddesses.net/gods/cronus/
APHRODITE,VENUS,Goddess of Love,https://greekgodsandgoddesses.net/goddesses/aphrodite/
HADES,PLUTO,God of the Underworld,https://greekgodsandgoddesses.net/gods/hades/
HEPHAESTUS,VULCAN,God of the Forge,https://greekgodsandgoddesses.net/gods/hephaestus/
DEMETER,Ceres,Goddess of the Harvest,https://greekgodsandgoddesses.net/goddesses/demeter/
APOLLO,Apollo,God of Music and Medicine,https://greekgodsandgoddesses.net/gods/apollo/
ATHENA,MINERVA,Goddess of Wisdom,https://greekgodsandgoddesses.net/goddesses/athena/
ARTEMIS,DIANA,Goddess of the Hunt,https://greekgodsandgoddesses.net/goddesses/artemis/
ARES,MARS,God of War,https://greekgodsandgoddesses.net/gods/ares/
HERMES,Mercury,Messenger of the Gods,https://greekgodsandgoddesses.net/gods/hermes/
DIONYSUS,Bacchu,God of Wine,https://greekgodsandgoddesses.net/gods/dionysus/
PERSEPHONE,Proserpine,Goddess of the Underworld,https://greekgodsandgoddesses.net/goddesses/persephone/
EROS,CUPID,God of Love,https://greekgodsandgoddesses.net/gods/eros/
GAIA,Terra,Goddess of Earth
HYPNOS,Somnus,God of Sleep
RHEA,Ops,Mother of Zeus / Wife of Cronus
URANUS,Uranus,Father of the Titans
NIKE,Victoria,Goddess of Victory
EOS,Aurora,Goddess of the Dawn
PAN,Faunus,God of shepherds
SELENE,Luna,Goddess of the Moon
HELIOS,Sol,God of the Sun
HERACLES,Hercules,Son of Zeus
ODYSSEUS,Ulysses,Greek Hero
```

Step 6

Opening the new file

Opened in the same way as the last (embedded inside the if statement), referred to as “file 2” instead of just file and stored in “file2Array”

```
12      if romanName in fileArray:
13          indexOfRomanName=fileArray.index(romanName)
14
15          file2=open("greekGods.txt","r")
16          file2Array=file2.read().splitlines()
17          file2.close()
```

Once the file is imported into the array, it can be closed as it will not be used again in the code, as the arrays will be used instead

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split()

The split() method in Python split a string into a list of strings after breaking the given string by the specified separator.The split() method is much like the splitLines() method used previously.

```
greekInformationSplit=greekInformation.split(",")
```

The specified character here is a comma. This will split the string wherever there is a comma and will act much like an array as to where to index each of the split elements.

If “hello, I, will, split, this “ were to be split:

Hello	greekInformationSplit[0]
i	greekInformationSplit[1]
Will	greekInformationSplit[2]
Split	greekInformationSplit[3]
This	greekInformationSplit[4]

Step 7

Splitting into the 4 categories

The first thing we want to do is to find the Greek equivalent to the Roman name entered by the user. This is done by first going to the line where the Roman God's name can be found (indexOfRomanName which was declared in step 5)

```
12      if romanName in fileArray:
13          indexOfRomanName=fileArray.index(romanName)
14
15          file2=open("greekGods.txt","r")
16          file2Array=file2.read().splitlines()
17          file2.close()
18
19          greekInformation=file2Array[indexOfRomanName]
20          greekInformationSplit=greekInformation.split(",")
21          greekName=greekInformationSplit[0]
```

This line is then stored in the variable "greekInformation" which then goes on to be split at every comma, and stored in the variable "greekInformationSplit"

The Greek name is stored in the first position [0], as that is where it can be found relative to the text file

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Concatenation operators

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```
string="My name is..."
print("The string is: "+string)
```

```
The string is: My name is...
```

+ is the concatenation operator and will join two strings together in a print statement

```
integer=4
print("The number is: ",integer)
```

```
The number is:  4
```

, is used when you want to output two different data types in a print statement. The string in quotation marks and the integer are different data types and so + cannot be used

Step 8

The Greek name

Using the variable, greekName that was created in line 21, we will concatenate this with the romanName and the following strings

```
12      if romanName in fileArray:
13          indexOfRomanName=fileArray.index(romanName)
14
15          file2=open("greekGods.txt","r")
16          file2Array=file2.read().splitlines()
17          file2.close()
18
19          greekInformation=file2Array[indexOfRomanName]
20          greekInformationSplit=greekInformation.split(",")
21          greekName=greekInformationSplit[0]
22          print("The Greek equivalent of the Roman name "+romanName+" is "+greekName+"\n")
```

\n means that a new line will be printed (like starting a new paragraph)

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Step 9

What does the god do?

The user will be asked if they want to hear what the god or goddesses role is. If the user says yes (“y”), then the role will be printed

```
24          userInput=input("\n"+"Would you like to know what "+romanName+" is the God/Goddess of (y or n)?")
25          if userInput=="y":
26              print(greekInformationSplit[2])
27
```

This will be located at position [2] of the split line variable (much like how the Greek name equivalent is located at [0])

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Step 10

Story?

The user will be asked if they want to hear a story about the god or goddess. If the user says yes (“y”), then the link to will be printed, which can be copied and pasted into a search engine

```
28          userInput=input("\n"+"Would you like to hear a story about this God this god (y or n)?")
29          if userInput=="y":
30              print("Copy and paste the link to see the story")
31              print(greekInformationSplit[3])
```

EXTENSION : There is only a story for about half of the gods and goddesses; see if you can edit the text file with any stories that you might find online about my remaining brothers and sisters and add the links to the textfile

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What the code should look like…

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```
fileArray=[]
file2Array=[]
def romanToGreekName():
    romanName=input("What is the name of the Roman God you would like to find?")
    romanName=romanName.upper()
    file = open("romanGods.txt","r")

    fileArray=file.read().splitlines()
    file.close()


    if romanName in fileArray:
        indexOfRomanName=fileArray.index(romanName)

        file2=open("greekGods.txt","r")
        file2Array=file2.read().splitlines()
        file2.close()

        greekInformation=file2Array[indexOfRomanName]
        greekInformationSplit=greekInformation.split(",")
        greekName=greekInformationSplit[0]
        print("The Greek equivalent of the Roman name "+romanName+" is "+greekName+"\n")

        userInput=input("\n"+"Would you like to know what "+romanName+" is the God/Goddess of (y or n)?")
        if userInput=="y":
            print(greekInformationSplit[2])

        userInput=input("\n"+"Would you like to hear a story about this God this god (y or n)?")
        if userInput=="y":
            print("Copy and paste the link to see the story")
            print(greekInformationSplit[3])
    else:
        print("ERROR: that is not the name of a Roman god\n")


#main program
print("WELCOME TO THE ROMAN TO GREEK NAME TRANSLATOR!")
romanToGreekName()
```

```
WELCOME TO THE ROMAN TO GREEK NAME TRANSLATOR!
What is the name of the Roman God you would like to find?Jupiter
The Greek equivalent of the Roman name JUPITER is ZEUS


Would you like to know what JUPITER is the God/Goddess of (y or n)?y
King of the Gods

Would you like to hear a story about this God this god (y or n)?y
Copy and paste the link to see the story
https://greekgodsandgoddesses.net/gods/zeus/
```

Conclusion

Learning outcomes- After this lesson you should be able to:

- ✔ Print outputs and use input to get inputs to and from the user
- ✔ Use if in statements
- ✔ Read from a text file into an array
- ✔ Use split() on a string
- ✔ Use splitline() when reading from a textfile

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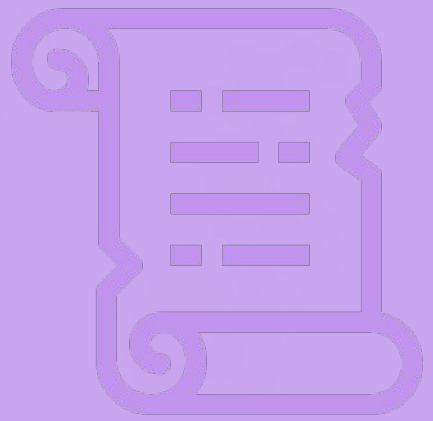

Links to everyday life…

At work- Play

play - can be used to create a fun quiz game between friends or to use imagination to create own stories using the Greek mythology characters

at work- teaching about ancient Greek gods can have applications to school knowledge and ancient languages like Latin

Website used for all stories and info

- https://greekgodsandgoddesses.net

Fun worksheet game:

- https://www.liveworksheets.com/worksheets/en/History/Ancient_Greece/Greek_Gods_and_Goddesses_my318yl

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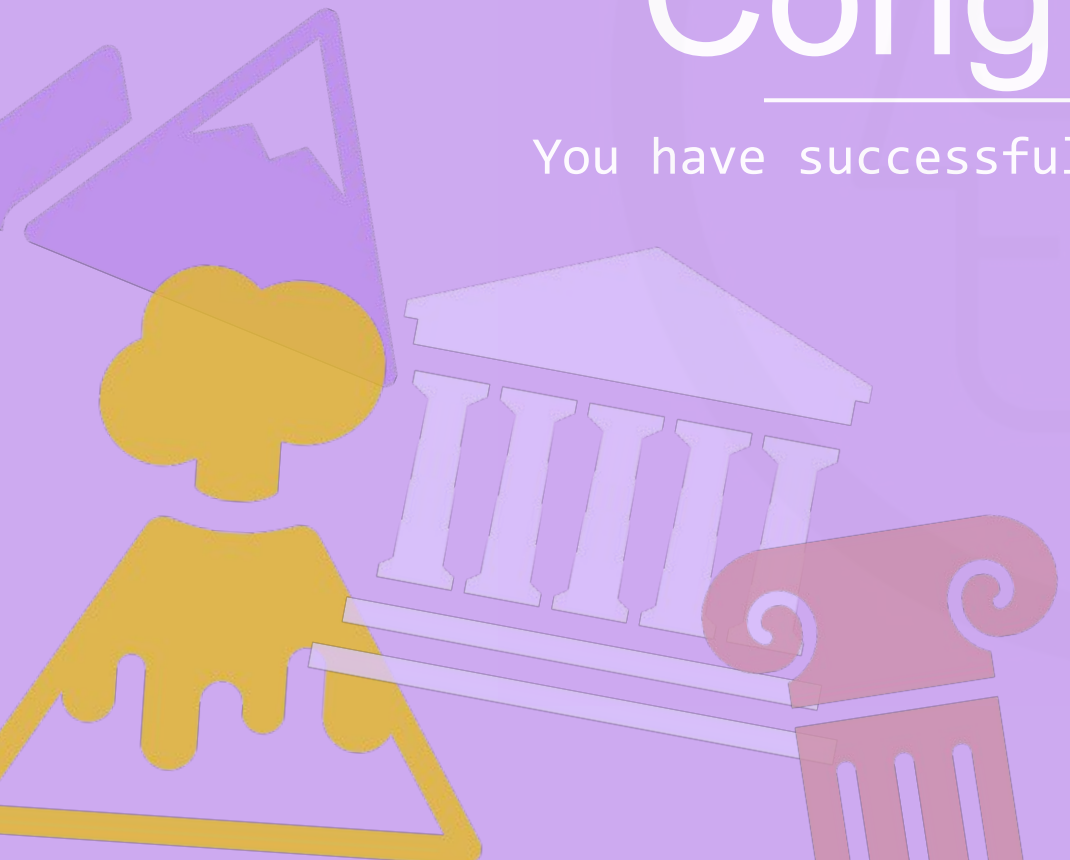

Congratulations!

You have successfully handled text files in python!

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