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Question 1: Python Basics?

A-if you have two lists

L1=[‘HTTP’,’HTTPS’,’FTP’,’DNS’]

L2= [80,443,20,53]

Convert it to generate this dictionary

d={‘HTTP’:80,’HTTPS’:443,’FTP’:20,’DNS’:53}

```
d= { }
L1=['HTTP','HTTPS','FTP','DNS']
L2=[80,443,20,53]
for i,j in zip(L1,L2):
    d[i]=j
print(d)
```

```
{'HTTP': 80, 'HTTPS': 443, 'FTP': 20, 'DNS': 53}
```

B- Generate and print a list of primary numbers from 1 to 1000

```
primary=[x for x in range (1,1000)
       if all(x % y !=0 for y in range (2,x))]
print(primary)
```

```
[1, 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97, 101, 103, 107, 109, 113, 12
7, 131, 137, 139, 149, 151, 157, 163, 167, 173, 179, 181, 191, 193, 197, 199, 211, 223, 227, 229, 233, 239, 241, 251, 257, 263,
269, 271, 277, 281, 283, 293, 307, 311, 313, 317, 331, 337, 347, 349, 353, 359, 367, 373, 379, 383, 389, 397, 401, 409, 419, 42
1, 431, 433, 439, 443, 449, 457, 461, 463, 467, 479, 487, 491, 499, 503, 509, 521, 523, 541, 547, 557, 563, 569, 571, 577, 587,
593, 599, 601, 607, 613, 617, 619, 631, 641, 643, 647, 653, 659, 661, 673, 677, 683, 691, 701, 709, 719, 727, 733, 739, 743, 75
1, 757, 761, 769, 773, 787, 797, 809, 811, 821, 823, 827, 829, 839, 853, 857, 859, 863, 877, 881, 883, 887, 907, 911, 919, 929,
937, 941, 947, 953, 967, 971, 977, 983, 991, 997]
```

C-L= [‘Network’, ’Math’, ’Programming’, ’Physics’, ’Music]

In this exercise, you will implement a python program that reads the items of the previous list and identifies the items that starts with ‘PH’ then print it on screen

```
L=['Network', 'Math', 'Programming', 'Physics', 'Music']
i=0
for i in range(len(L)):
    if L[i].startswith("Ph"):
        print(L[i])
```

```
Physics
```

D- Using Dictionary comprehension, Generate this dictionary d= {1:2,2:3,3:4,4:5,5:6,6:7,7:8,8:9,9:10,10:11}

```
d={a:a+1 for a in range(1,11)}
print(d)
```

```
{1: 2, 2: 3, 3: 4, 4: 5, 5: 6, 6: 7, 7: 8, 8: 9, 9: 10, 10: 11}
```

Question 2: Convert from Binary to Decimal

Writ python program that convert a Binary number into its equivalent Decimal number

The program should start reading the binary number from the user. Then the Decimal equivalent number must be calculated. Finally, the program must display the equivalent decimal number on the screen

```
b_num= list(input("Input a binary number:"))
value=0
for i in range (len(b_num)):
    digit= b_num.pop()
    if digit == '1':
        value=value+pow(2,i)
print("The decimal value of the numbr is",value)
```

```
Input a binary number:2
The decimal value of the numbr is 0
```

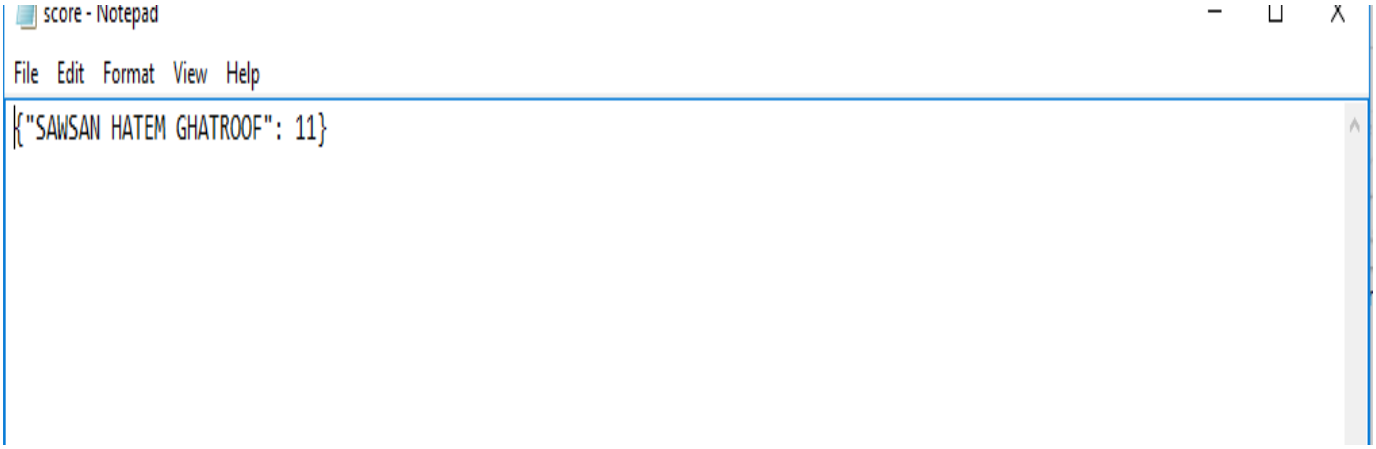
Question 3: Working with Files" Quiz Program"

Type Python program that takes a text or json or csv file as input for(20(Questions, Answers)).It asks the questions and finally computes and prints user result in separate file csv or json file.

```
# -*- coding: utf-8 -*-
"""
Created on Wed May 24 22:41:10 2023

@author: EUROPELAPTOP
"""

import json
questions={ }
#define a variable for the score
scores=0
#define the question number
number=1
#loading question to the program
f = open("questions.txt",'r')
questions = json.load(f)
f.close()

print("python quiz programm")
print("enter t for True or f for False")
name=input("enter yor full name:")
#display the questions
for ques in questions.keys():
    #display the question
    print("question",number,":",ques)
    ans=input("the answer is")
    #testing the result
    if ans.upper()==questions[ques].upper():
        scores=scores+1
        print("correct")
    else:
        print("wrong")
    number=number+1
    #write the name and the score is a separate file
    result={name:scores}
    m=open("score.text",'w')
    result=json.dump(result,m)
    m.close()
```

```
"10.0.0.5 is a private ip address. ":"t",
"153.16.2.8 is a private ip address. ":"f",
"ARP refers to Address Resolution Protocol. ":"t",
"TCP is a network layer protocol. ":"f",
"IPv4 is a 128-bit address. ":"f",
"IPv6 is a 128-bit address. ":"t",
"SDN refers to Software Defined Network. ":"t",
"UDP is a Transport Layer protocol. ":"t",
"224.0.0.9 is a multicast address. ":"t",
"192.168.1.1 is a class A address. ":"f",
"Python is a machine language. ": "f",
"130.130.130.130 is a class C address. ":"f",
"MAC is address is 6 byte address. ":"t",
"IPv4 is a 32-bit address. ":"t",
"IP is a network Layer protocol. ":"t",
"OSPF is a Routing Protocol. ":"t",
"ARP request message is a unicast message. ":"f",
"ICMP refers to Internet Control Message Protocol. ":"t",
"hub is a layer 2 device . ":"f",
"bridge is a layer 3 device. ":"f"}
```

```
python quiz programm
enter t for True or f for False

enter yor full name:SAWSAN HATEM GHATROOF
question 1 : 10.0.0.5 is a private ip address.

the answer isT
correct
question 2 : 153.16.2.8 is a private ip address.

the answer isF
correct
question 3 : ARP refers to Address Resolution Protocol.

the answer isT
correct
question 4 : TCP is a network layer protocol.

the answer isF
correct
question 5 : IPv4 is a 128-bit address.

the answer isT
wrong
question 6 : IPv6 is a 128-bit address.

the answer isF
wrong
question 7 : SDN refers to Software Defined Network.
```


score - Notepad
File Edit Format View Help
{"SAWSAN HATEM GHATROOF": 11}