Syrian Arab Republic
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5th , Network Programming : Homework1

لجمهورية العربية السورية
اللاذقية-جامعـــة تشريـــن
كلية الهندسة الكهربائية والميكانيكي
قسم هندسة الاتصالات والالكترونيات

السنة الخامسة: وظيفة1برمجة شبكات

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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 }

Answer:

```
l1=["HTTP","HTTPS","FTP","DNS"]
l2=[80,443,20,53]

D={}
for i in range(len(l1)):
    D[l1[i]]=l2[i]
print(D)
```

Output:

```
PS C:\Users\cham.tech> python -u "d:\project\network programming\t05.py"
{'HTTP': 80, 'HTTPS': 443, 'FTP': 20, 'DNS': 53}
```

B- Generate and print a list of primary numbers from 1 to 1000.
Tips: "List Comprehension"

Answer:

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

Output:

```
PS C:\Users\cham.tech> python -u "d:\project\network programming\t07.py"
[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, 127, 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, 421, 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, 751, 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’ letter, then print it on screen.
Tips: using loop, ‘len ()’ , startswith() methods

Answer:

```
L=['Network','Math','Programming','Physics','Music']
t=True
for i in range(len(L)):
    if t==L[i].startswith('Ph'):
        index=i
        item=L[i]
print('index:',i,"item",item)
```

Output:

```
PS C:\Users\cham.tech> python -u "d:\project\network programming\t05.py"
index:  4 item:  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}

Answer:

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

Output:

```
{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

Write a Python program that converts 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.
Tips: solve input errors.

Answer:

```
x=input('Enter Binary Number:')
s=[]
for i in range(len(x)):
    c=int(x[i])
    s.extend([c])
dis=0
s.reverse()
for  i in  range(len(s)):

    dis+=(s[i]*(2**i))

print(dis)
```

Output:

```
PS C:\Users\cham.tech> python -u "d:\project\network programming\t05.py"
Enter Binary Number:110
6
```

Question 3: Working with Files" Quiz Program"

Type python quiz 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 results and store user name and result in separate file csv or json file.

Answer:

```
import json

f1=open('D:\\project\\network programming\\quiz .json','r')
d1=json.load(f1)
f1.close()
f2=open('D:\\project\\network programming\\score.json','w')
d2={}
name=input("Enter your name: ")
d2['user name']=[name]
score=0
for key,val in d1.items():
    print(key)
    x=int(input("Enter your Answer: "))
    d2[key]=[x]
    if x==d1[key]:score+=1
d2["the score is: "]=score
json.dump(d2,f2)
f2.close()
print(d2)
```

t02.py | {} quiz.json X | {} score.json

{} quiz.json > # Q20:what is the square of the number 20 ?

```
{"Q1:what is the square of the number 1 ? ":1,
"Q2:what is the square of the number 2 ? ":4,
"Q3:what is the square of the number 3 ? ":9,
"Q4:what is the square of the number 4 ? ":16,
"Q5:what is the square of the number 5 ? ":25,
"Q6:what is the square of the number 6 ? ":36,
"Q7:what is the square of the number 7 ? ":49,
"Q8:what is the square of the number 8 ? ":64,
"Q9:what is the square of the number 9 ? ":81,
"Q10:what is the square of the number 10 ? ":100,
"Q11:what is the square of the number 11 ? ":121,
"Q12:what is the square of the number 12 ? ":144,
"Q13:what is the square of the number 13 ? ":169,
"Q14:what is the square of the number 14 ? ":196,
"Q15:what is the square of the number 15 ? ":255,
"Q16:what is the square of the number 16 ? ":256,
"Q17:what is the square of the number 17 ? ":289,
"Q18:what is the square of the number 18 ? ":324,
"Q19:what is the square of the number 19 ? ":361,
"Q20:what is the square of the number 20 ? ":400
}
```

Output:

t02.py | quiz .json | score.json

score.json > [ ] Q6:what is the square of the number 6 ?

```
{"user name": ["braa"],
"Q1:what is the square of the number 1 ? ": [1],
"Q2:what is the square of the number 2 ? ": [4],
"Q3:what is the square of the number 3 ? ": [9],
"Q4:what is the square of the number 4 ? ": [16],
"Q5:what is the square of the number 5 ? ": [25],
"Q6:what is the square of the number 6 ? ": [36],
"Q7:what is the square of the number 7 ? ": [49],
"Q8:what is the square of the number 8 ? ": [64],
"Q9:what is the square of the number 9 ? ": [81],
"Q10:what is the square of the number 10 ? ": [100],
"Q11:what is the square of the number 11 ? ": [121],
"Q12:what is the square of the number 12 ? ": [144],
"Q13:what is the square of the number 13 ? ": [169],
"Q14:what is the square of the number 14 ? ": [196],
"Q15:what is the square of the number 15 ? ": [225],
"Q16:what is the square of the number 16 ? ": [365],
"Q17:what is the square of the number 17 ? ": [389],
"Q18:what is the square of the number 18 ? ": [458],
"Q19:what is the square of the number 19 ? ": [698],
"Q20:what is the square of the number 10 ? ": [400],
"the score is: ": 14}
```

```
PS D:\project\network programming> python -u "d:\project\network programming\t02.py"
Enter your name: braa
Q1:what is the square of the number 1 ?
Enter your Ansower: 1
Q2:what is the square of the number 2 ?
Enter your Ansower: 4
Q3:what is the square of the number 3 ?
Enter your Ansower: 9
Q4:what is the square of the number 4 ?
Enter your Ansower: 16
Q5:what is the square of the number 5 ?
Enter your Ansower: 25
Q6:what is the square of the number 6 ?
Enter your Ansower: 36
Q7:what is the square of the number 7 ?
Enter your Ansower: 49
Q8:what is the square of the number 8 ?
Enter your Ansower: 64
Q9:what is the square of the number 9 ?
Enter your Ansower: 81
Q10:what is the square of the number 10 ?
Enter your Ansower: 100
Q11:what is the square of the number 11 ?
Enter your Ansower: 121
Q12:what is the square of the number 12 ?
Enter your Ansower: 144
Q13:what is the square of the number 13 ?
Enter your Ansower: 169
Q14:what is the square of the number 14 ?
Enter your Ansower: 196
Q15:what is the square of the number 15 ?
Enter your Ansower: 225
```

```
Q15:what is the square of the number 15 ?
Enter your Ansower: 225
Q16:what is the square of the number 16 ?
Enter your Ansower: 365
Q17:what is the square of the number 17 ?
Enter your Ansower: 389
Q18:what is the square of the number 18 ?
Enter your Ansower: 458
Q19:what is the square of the number 19 ?
Enter your Ansower: 698
Q20:what is the square of the number 10 ?
Enter your Ansower: 400
{'user name': ['braa'], 'Q1:what is the square of the number 1 ? ': [1], 'Q2:what is the square of the number 2 ? ': [4], 'Q3:what is the square of the
 number 3 ? ': [9], 'Q4:what is the square of the number 4 ? ': [16], 'Q5:what is the square of the number 5 ? ': [25], 'Q6:what is the square of the n
umber 6 ? ': [36], 'Q7:what is the square of the number 7 ? ': [49], 'Q8:what is the square of the number 8 ? ': [64], 'Q9:what is the square of the nu
mber 9 ? ': [81], 'Q10:what is the square of the number 10 ? ': [100], 'Q11:what is the square of the number 11 ? ': [121], 'Q12:what is the square of
the number 12 ? ': [144], 'Q13:what is the square of the number 13 ? ': [169], 'Q14:what is the square of the number 14 ? ': [196], 'Q15:what is the sq
uare of the number 15 ? ': [225], 'Q16:what is the square of the number 16 ? ': [365], 'Q17:what is the square of the number 17 ? ': [389], 'Q18:what i
s the square of the number 18 ? ': [458], 'Q19:what is the square of the number 19 ? ': [698], 'Q20:what is the square of the number 10 ? ': [400], 'th
e score is: ': 14}
PS D:\project\network programming>
```