



الجمهورية العربية السورية
اللاذقية- جامعة تشرين
كلية الهندسة الكهربائية والميكانيكية
قسم هندسة الاتصالات والالكترونيات
السنة الخامسة: وظيفة ١ برمجة شبكات



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Question 1: Python Basics?

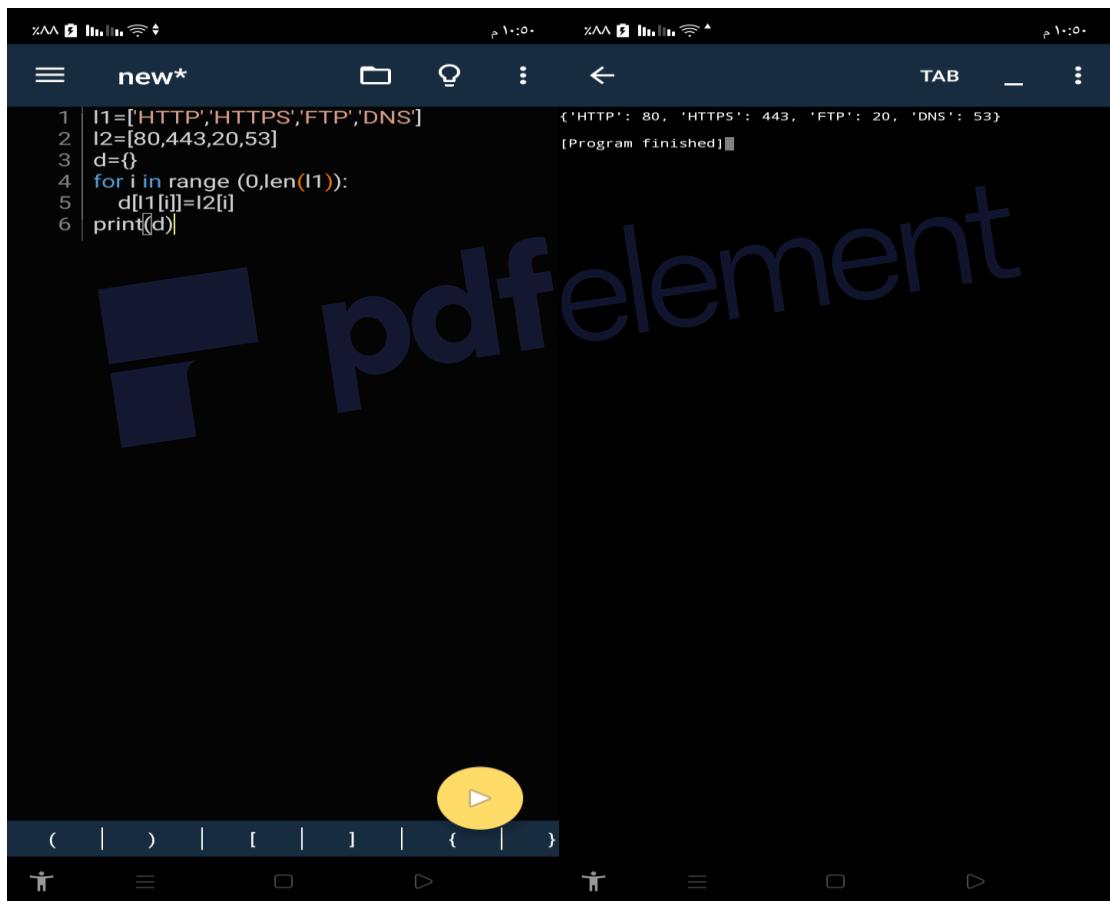
A-If you have two lists, L1=['HTTP','HTTPS','FTP','DNS']

L2=[80,443,20,53], convert it to generate this

dictionary d={'HTTP':80,'HTTPS':443,'FTP':20,'DNS':53 }

شرح الكود:

هذا تم وضع قيم كل من 1ا) مفاتيح (keys) و2ا) قيم (values) عبر حلقة for



The screenshot shows a mobile application interface with a dark theme. At the top, there are two small windows showing signal strength and battery level. Below them is a toolbar with icons for file operations like new, save, and copy/paste, along with a search icon and a tab labeled 'TAB'. The main area contains a code editor with the following Python code:

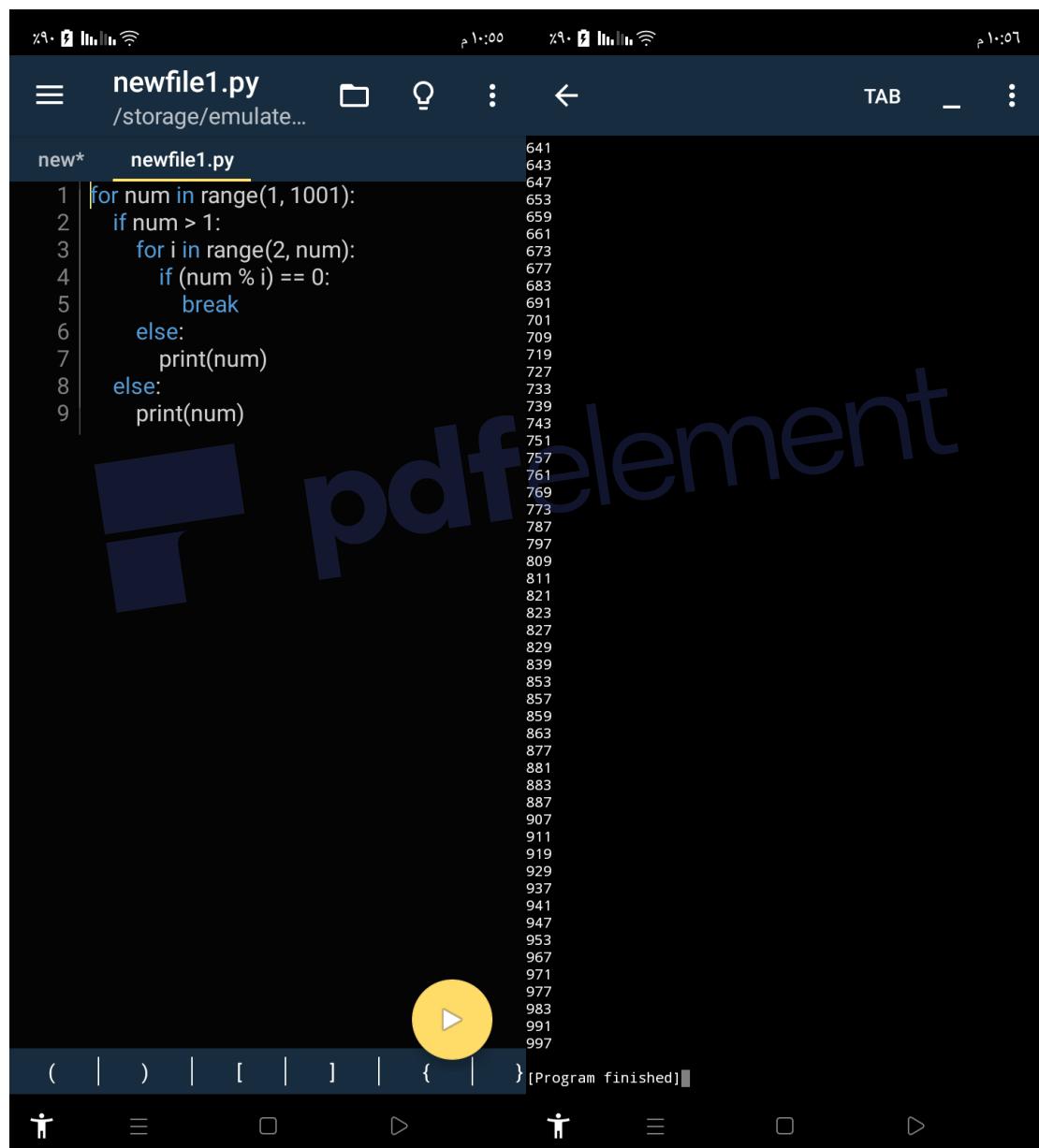
```
1 | l1=['HTTP','HTTPS','FTP','DNS']
2 | l2=[80,443,20,53]
3 | d={}
4 | for i in range (0,len(l1)):
5 |     d[l1[i]]=l2[i]
6 | print(d)
```

To the right of the code editor is a terminal window showing the output of the program: {'HTTP': 80, 'HTTPS': 443, 'FTP': 20, 'DNS': 53}. Below the terminal, a message says '[Program finished]'. At the bottom of the screen is a navigation bar with icons for back, forward, and other system functions.

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

شرح الكود:

فمنا عن طريق حلقة `for` بطباعة مجموعة الاعداد الاولية من ال[1,1000] وذلك باستخدام شرط باقي قسمة العدد على جميع الاعداد الذي اصغر منه فإذا قبل العدد القسمة على رقم واحد غير نفسه و الواحد يكون غير اولي



```

newfile1.py
/storage/emulate...
new* newfile1.py
1 for num in range(1, 1001):
2     if num > 1:
3         for i in range(2, num):
4             if (num % i) == 0:
5                 break
6         else:
7             print(num)
8     else:
9         print(num)

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887
907
911
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941
947
953
967
971
977
983
991
997

( | ) | [ | ] | { | } [Program finished]

```

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

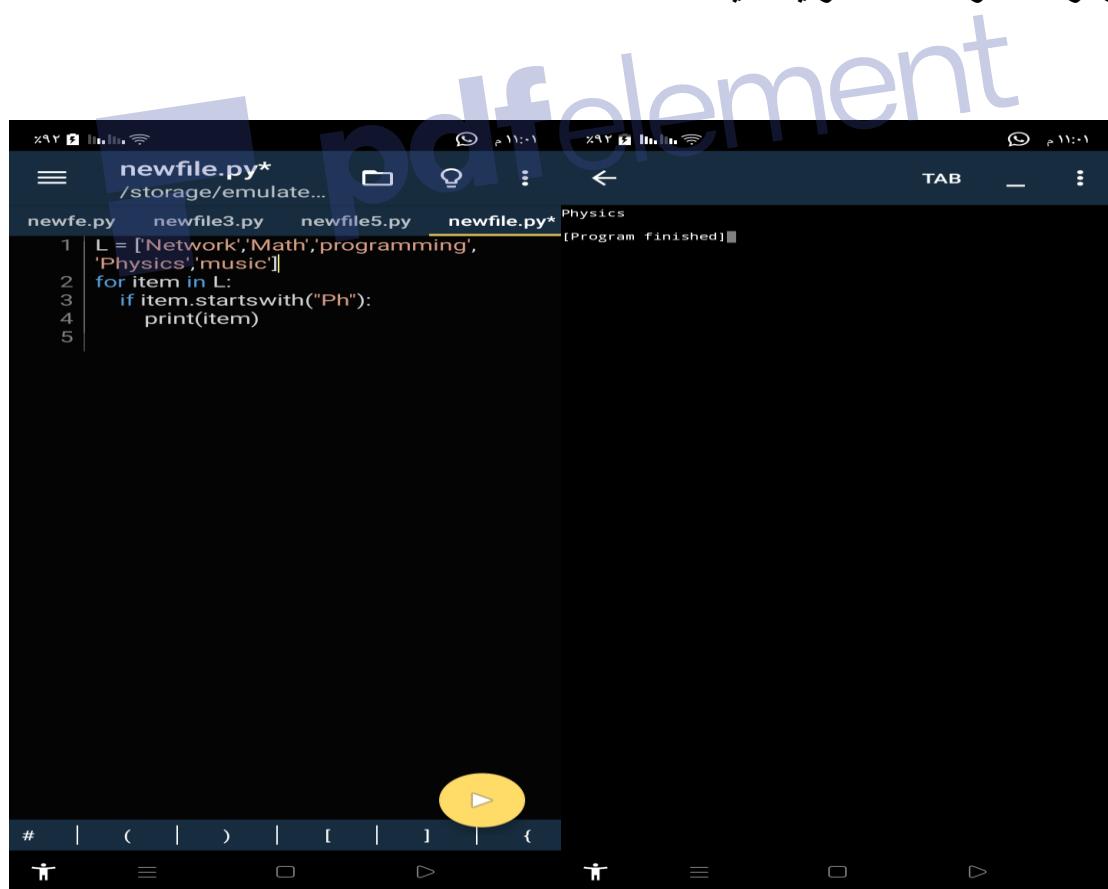
In this exercise, you will implement a Python program that reads the items of the previous list and identifies

the items that starts with 'Ph' letter, then print it on screen.

Tips: using loop, 'len ()' , startswith() methods

شرح الكود:

تم استخدام حلقة `for` وذلك للمرور على عناصر القائمة والتي هي من نوع `(str)`
وكما استخدمنا `startswith()` والتي تقوم بفحص اذا كان عنصر من القائمة قد بدأ
بحرف ما او سلسلة محرفية معينة



```

newfile.py*
/storage/emulate...
newfe.py  newfile3.py  newfile5.py  newfile.py* [Physics]
1 | L = ['Network','Math','programming',
2 | 'Physics','music']
3 | for item in L:
4 |     if item.startswith("Ph"):
5 |         print(item)

```

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}

شرح الكود :

صمنا ذلك وفق Dictionary comprehension :

Value=key+1

```
newfile5.py
/storage/emulate...
newfe.py  newfile3.py  newfile5.py  newfile.py*
1 d={}
2 for i in range(1,11):
3     d[i]=i+1
4 print (d)
[Program finished]
{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

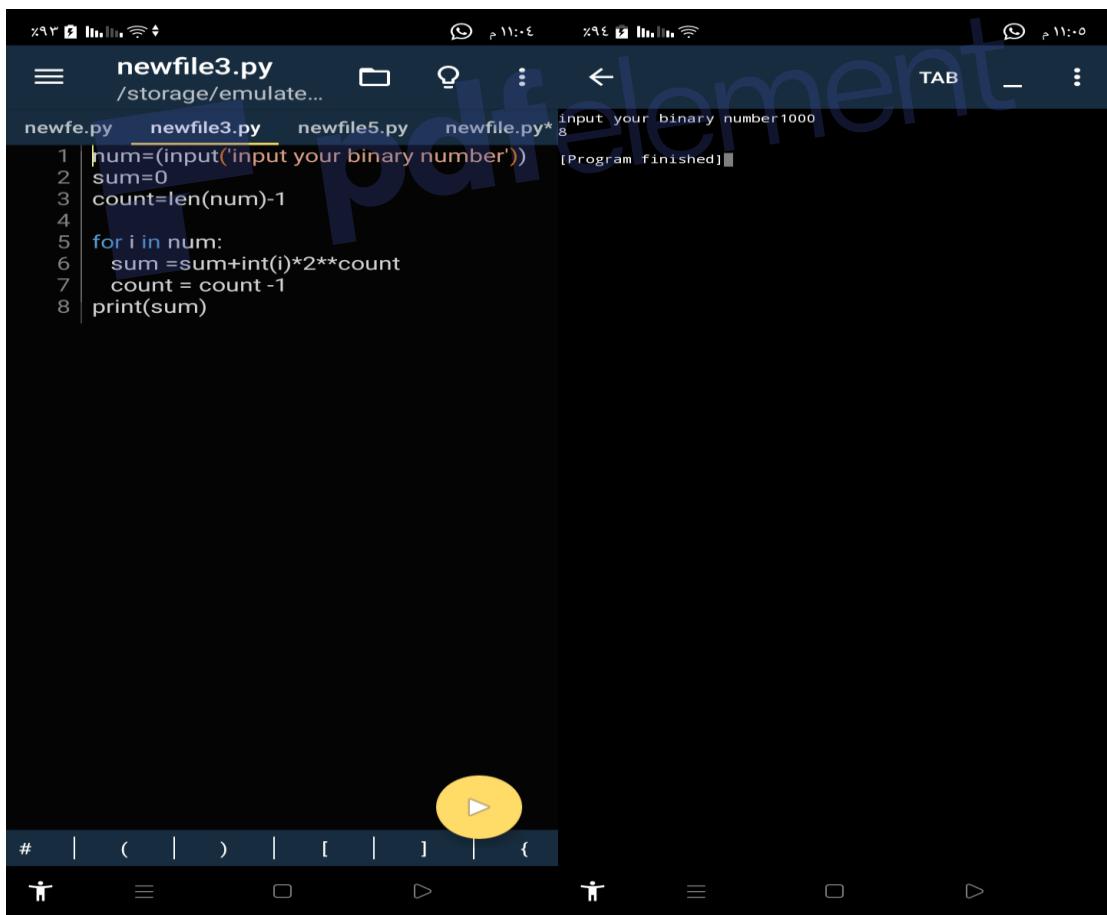
Write a Python program that converts a Binary number into its equivalent Decimal number.

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.

شرح الكود:

يقوم هذا الكود بتحويل من نظام العد الثنائي الى نظام العد العشري



The screenshot shows a mobile terminal application with a dark theme. At the top, there are two status bars showing signal strength, battery level, and time (11:04 and 11:05). Below the status bars is a navigation bar with icons for back, forward, and tabs. The main area displays a Python script named 'newfile3.py' located at '/storage/emulate...'. The script contains the following code:

```
1 num=(input('input your binary number'))
2 sum=0
3 count=len(num)-1
4
5 for i in num:
6     sum =sum+int(i)*2**count
7     count = count -1
8 print(sum)
```

When the script is run, it prompts the user to input a binary number ('input your binary number'). The user enters '1000'. The program calculates the decimal value (8) and prints it to the console. A yellow circle highlights the play button at the bottom center of the terminal interface.

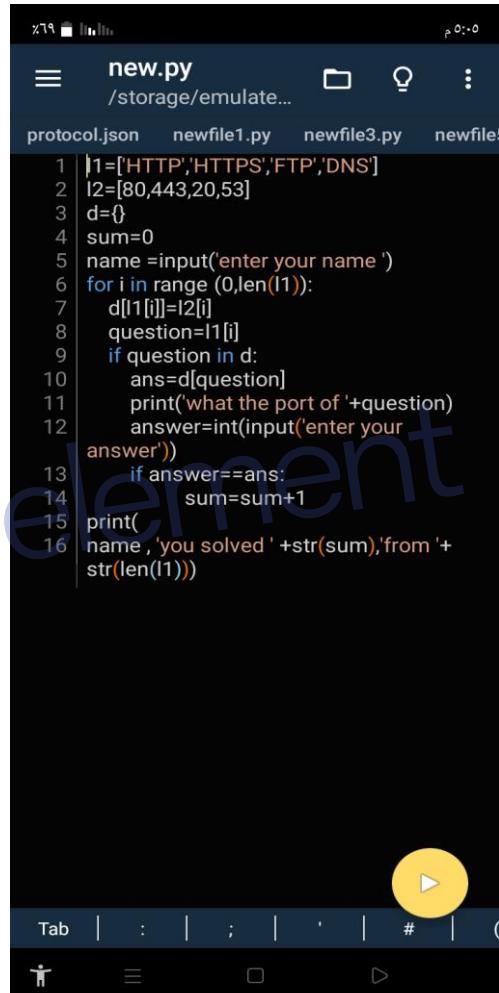
Question 3: Working with Files” Quiz Program”

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.



```
enter your name hasan
what the port of HTTP
enter your answer80
what the port of HTTPS
enter your answer443
what the port of FTP
enter your answer20
what the port of DNS
enter your answer53
hasan you solved 3 from 4
[Program finished]
```



```
1 l1=['HTTP','HTTPS','FTP','DNS']
2 l2=[80,443,20,53]
3 d={}
4 sum=0
5 name =input('enter your name ')
6 for i in range (0,len(l1)):
7     d[l1[i]]=l2[i]
8     question=l1[i]
9     if question in d:
10         ans=d[question]
11         print('what the port of '+question)
12         answer=int(input('enter your
answer'))
13         if answer==ans:
14             sum=sum+1
15 print(
16 name , 'you solved ' +str(sum),'from ' +
str(len(l1)))
```