

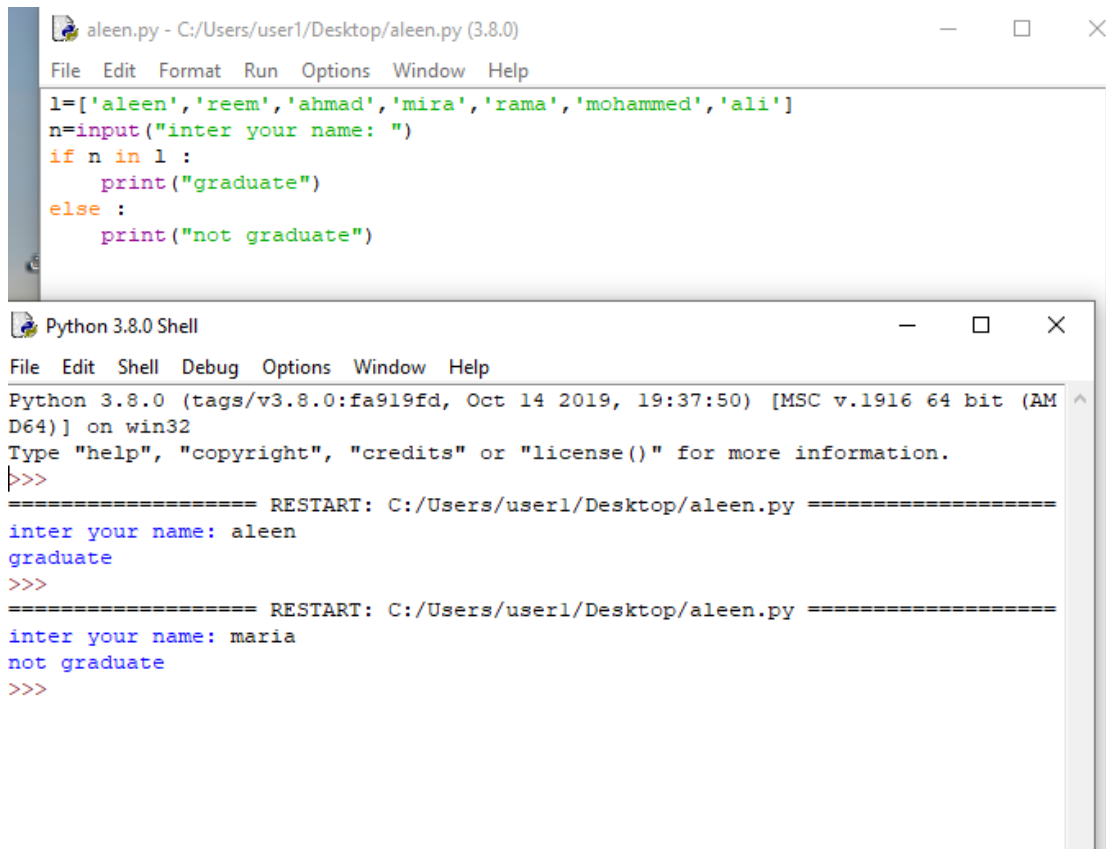
## السؤال الأول:

### Question 1: Python Basics?

A-Define a list that contain the names of graduated students" 5 students at least":

Create a program that accept student name and prints if the user is graduated or not.

:A



```
aleen.py - C:/Users/user1/Desktop/aleen.py (3.8.0)
File Edit Format Run Options Window Help
l=['aleen','reem','ahmad','mira','rama','mohammed','ali']
n=input("inter your name: ")
if n in l :
    print("graduate")
else :
    print("not graduate")

Python 3.8.0 Shell
File Edit Shell Debug Options Window Help
Python 3.8.0 (tags/v3.8.0:fa919fd, Oct 14 2019, 19:37:50) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/user1/Desktop/aleen.py =====
inter your name: aleen
graduate
>>>
===== RESTART: C:/Users/user1/Desktop/aleen.py =====
inter your name: maria
not graduate
>>>
```

نعرف LIST تحتوي اسماء الطلاب المتخرجين ثم نكتب برنامج يأخذ اسم الطالب ويطبع اذا الطالب ناجح او لا

: B

3- Generate and print a list of odd numbers from 1 to 1000.

Tips: "List Comprehension"

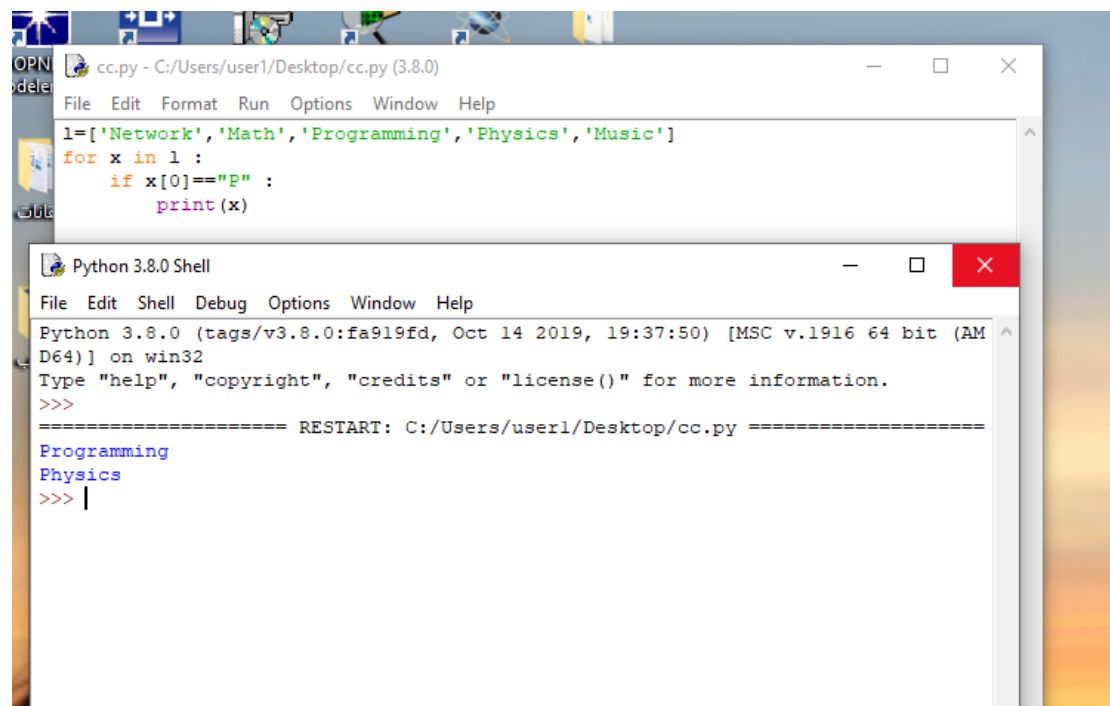
```
b.py - C:/Users/user1/Desktop/b.py (3.8.0)
File Edit Format Run Options Window Help
l=[i for i in range(1,1000,2)]
print(l)

Python 3.8.0 Shell
File Edit Shell Debug Options Window Help
Python 3.8.0 (tags/v3.8.0:fa919fd, Oct 14 2019, 19:37:50) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/user1/Desktop/b.py =====
[1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41,
43, 45, 47, 49, 51, 53, 55, 57, 59, 61, 63, 65, 67, 69, 71, 73, 75, 77, 79, 81,
83, 85, 87, 89, 91, 93, 95, 97, 99, 101, 103, 105, 107, 109, 111, 113, 115, 117,
119, 121, 123, 125, 127, 129, 131, 133, 135, 137, 139, 141, 143, 145, 147, 149,
151, 153, 155, 157, 159, 161, 163, 165, 167, 169, 171, 173, 175, 177, 179, 181,
183, 185, 187, 189, 191, 193, 195, 197, 199, 201, 203, 205, 207, 209, 211, 213,
215, 217, 219, 221, 223, 225, 227, 229, 231, 233, 235, 237, 239, 241, 243, 245,
247, 249, 251, 253, 255, 257, 259, 261, 263, 265, 267, 269, 271, 273, 275, 277,
279, 281, 283, 285, 287, 289, 291, 293, 295, 297, 299, 301, 303, 305, 307, 309,
311, 313, 315, 317, 319, 321, 323, 325, 327, 329, 331, 333, 335, 337, 339, 341,
343, 345, 347, 349, 351, 353, 355, 357, 359, 361, 363, 365, 367, 369, 371, 373,
375, 377, 379, 381, 383, 385, 387, 389, 391, 393, 395, 397, 399, 401, 403, 405,
407, 409, 411, 413, 415, 417, 419, 421, 423, 425, 427, 429, 431, 433, 435, 437,
439, 441, 443, 445, 447, 449, 451, 453, 455, 457, 459, 461, 463, 465, 467, 469,
471, 473, 475, 477, 479, 481, 483, 485, 487, 489, 491, 493, 495, 497, 499, 501,
503, 505, 507, 509, 511, 513, 515, 517, 519, 521, 523, 525, 527, 529, 531, 533,
535, 537, 539, 541, 543, 545, 547, 549, 551, 553, 555, 557, 559, 561, 563, 565,
567, 569, 571, 573, 575, 577, 579, 581, 583, 585, 587, 589, 591, 593, 595, 597,
599, 601, 603, 605, 607, 609, 611, 613, 615, 617, 619, 621, 623, 625, 627, 629,
631, 633, 635, 637, 639, 641, 643, 645, 647, 649, 651, 653, 655, 657, 659, 661,
663, 665, 667, 669, 671, 673, 675, 677, 679, 681, 683, 685, 687, 689, 691, 693,
695, 697, 699, 701, 703, 705, 707, 709, 711, 713, 715, 717, 719, 721, 723, 725,
727, 729, 731, 733, 735, 737, 739, 741, 743, 745, 747, 749, 751, 753, 755, 757,
759, 761, 763, 765, 767, 769, 771, 773, 775, 777, 779, 781, 783, 785, 787, 789,
791, 793, 795, 797, 799, 801, 803, 805, 807, 809, 811, 813, 815, 817, 819, 821,
823, 825, 827, 829, 831, 833, 835, 837, 839, 841, 843, 845, 847, 849, 851, 853,
855, 857, 859, 861, 863, 865, 867, 869, 871, 873, 875, 877, 879, 881, 883, 885,
887, 889, 891, 893, 895, 897, 899, 901, 903, 905, 907, 909, 911, 913, 915, 917,
919, 921, 923, 925, 927, 929, 931, 933, 935, 937, 939, 941, 943, 945, 947, 949,
951, 953, 955, 957, 959, 961, 963, 965, 967, 969, 971, 973, 975, 977, 979, 981,
983, 985, 987, 989, 991, 993, 995, 997, 999]
>>>
```

نريد ان ننبي LIST COMPREHESION بحيث نطبع الاعداد الفرديه بين ال1 و ال 1000

:C

```
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 'P' letter, then print it on screen.
Tips: using loop, list 'len ()' method
```



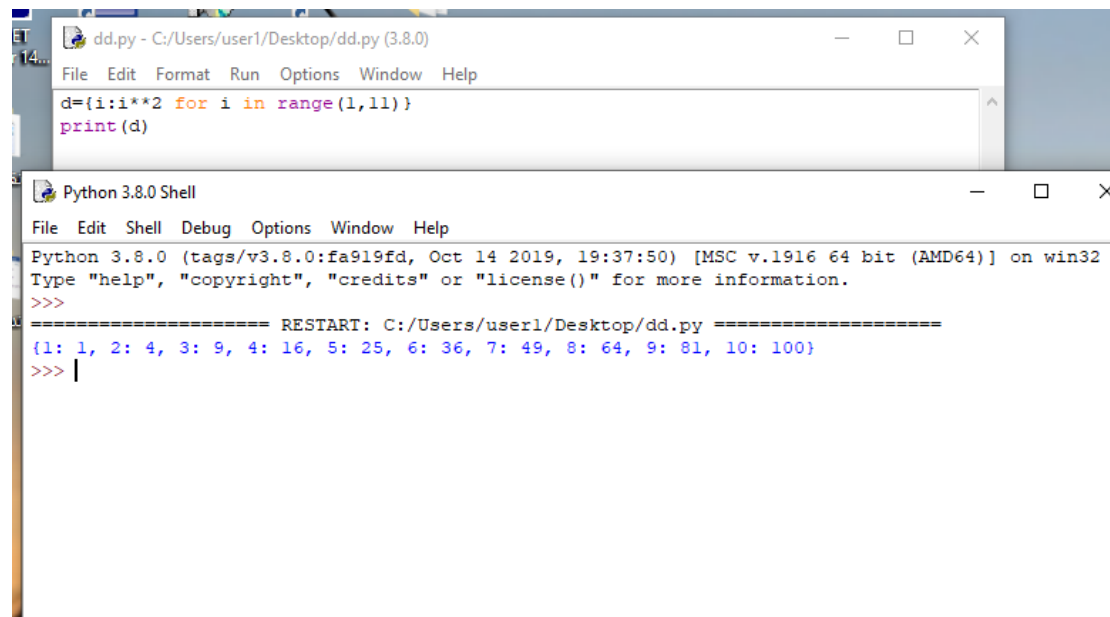
```
cc.py - C:/Users/user1/Desktop/cc.py (3.8.0)
File Edit Format Run Options Window Help
l=['Network','Math','Programming','Physics','Music']
for x in l:
    if x[0]=='P':
        print(x)

Python 3.8.0 Shell
File Edit Shell Debug Options Window Help
Python 3.8.0 (tags/v3.8.0:fa919fd, Oct 14 2019, 19:37:50) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/user1/Desktop/cc.py =====
Programming
Physics
>>> |
```

لدينا LIST معرفه تحتوي اسماء المواد ننشئ برنامج بايثون يقرأ عناصر ال LIST ويميز الكلمات التي تبد ب P ويطبعتها

: D

Using Dictionary comprehension, Generate this dictionary d={1:1,2:4,3:9,4:16,5:25,6:36,7:42,8:64,9:81,10:100}



```
dd.py - C:/Users/user1/Desktop/dd.py (3.8.0)
File Edit Format Run Options Window Help
d={i:i**2 for i in range(1,11)}
print(d)

Python 3.8.0 Shell
File Edit Shell Debug Options Window Help
Python 3.8.0 (tags/v3.8.0:fa919fd, Oct 14 2019, 19:37:50) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/user1/Desktop/dd.py =====
{1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64, 9: 81, 10: 100}
>>>
```

نريد توليد DICTIONARY تحتوي العدد ومربعه من 1 الى 10

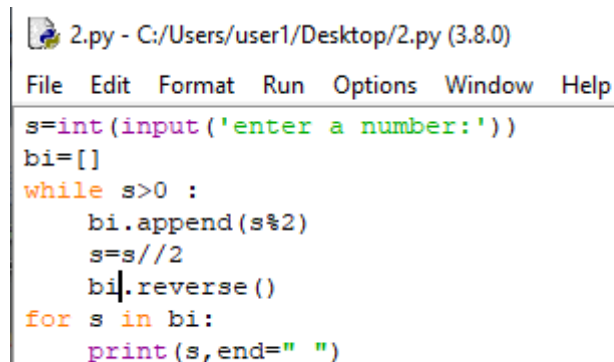
السؤال الثاني:

#### Question 2: Convert from decimal to binary

Write a Python program that converts a decimal number into its equivalent binary number.

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

**Tips:** use empty list to hold binary number, use loop, use % operator, use // operator, use list append method, reverse the list.



```
2.py - C:/Users/user1/Desktop/2.py (3.8.0)
File Edit Format Run Options Window Help
s=int(input('enter a number:'))
bi=[]
while s>0 :
    bi.append(s%2)
    s=s//2
    bi.reverse()
for s in bi:
    print(s,end=" ")
```

```
Python 3.8.0 Shell
File Edit Shell Debug Options Window Help
Python 3.8.0 (tags/v3.8.0:fa919fd, Oct 14 2019, 19:37:50) [MSC v.1916 64 bit (AMD64)]
on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/user1/Desktop/2.py =====
enter a number:10
1 1 0 0
>>>
===== RESTART: C:/Users/user1/Desktop/2.py =====
enter a number:120
1 1 0 0 0 1 1
>>>
===== RESTART: C:/Users/user1/Desktop/2.py =====
enter a number:2
1 0
>>>
```

كود يحول من العدد العشري الى الثنائي حيث يحسب العدد الثنائي المكافئ للعدد العشري ويعرضه على الخرج

حيث للتحويل نقسم العدد العشري على 2 ونحتفظ بباقي القسمة قم نقسم الناتج على 2 ونحتفظ بباقي القسمة وهكذا حتى نحصل على ناتج صفر نظهر فقط باقي القسمة ولكن بعد ان نعكسها لكي تظهر بالترتيب المناسب

السؤال الثالث:

#### 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.

al.py - C:/Users/user1/Desktop/al.py (3.8.0)

File Edit Format Run Options Window Help

```
import json
a="1+5=?"
b="5+7=?"
c="20-13=?"
d="49/7=?"
e="25*3=?"
f="12-4=?"
g="100/10=?"
h="4**2=?"
soulution={a="6",b="12",c="7",d="7",e="75",f="8",g="10",h="16"}
al=json.dumps(soulution)
with open ("al.json","w") as k:
    k.write(al)
```

333.py - C:\Users\user1\Desktop\exam.python\333.py (3.8.0)

File Edit Format Run Options Window Help

```
import json
n=input("enter your name:")
mark=0
v=[]
with open ("al.json","r") as k:
    al=json.loads(k.read())
for i in al :
    resp=input("enter the response:")
    v.append(resp)
    if resp==al[i]:
        print("true answer")
        maark=mark+1
    else :
        print("false answer")
q={n,v}
print(q)
print("your mark is : ",mark)
```

ننشئ ملف json يحتوي على اسئلة ونضع اجوبه محدده لها ثم نكتب برنامج بايثون يجعل المستخدم يدخل اسمه ويعرض عليه الاسئلة وياخذ الاجابه ويقارنها مع الجواب الصحيح في

الملف السابق وعند كل اجابه صحيحه يزيد العلامه بمقدار 1 ويعرض في النهايه نتيجة الحل مع اسم الطالب وعلامته بعد الانتهاء من الحل