

First Network Programming Homework

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.

الكود :

p1.py - C:/Users/ASUS/AppData/Local/Programs/Python/Python37/p1.py (3.7.2)

File Edit Format Run Options Window Help

```
Grad=["eman","ahmad","ali","zeinab","sara"]
name=input("enter a name:")
if name in Grad :
    print(name,"is graduated")
else :
    print(name,"is not graduated")
```

الخرج :

Python 3.7.2 Shell

File Edit Shell Debug Options Window Help

Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 23:09:28) [MSC v.1916 64 bit (AMD64)] on win32

Type "help", "copyright", "credits" or "license()" for more information.

>>>

==== RESTART: C:/Users/ASUS/AppData/Local/Programs/Python/Python37/p1.py ====

enter a name:eman

eman is graduated

>>> hasan

Traceback (most recent call last):

File "<pyshell#0>", line 1, in <module>

hasan

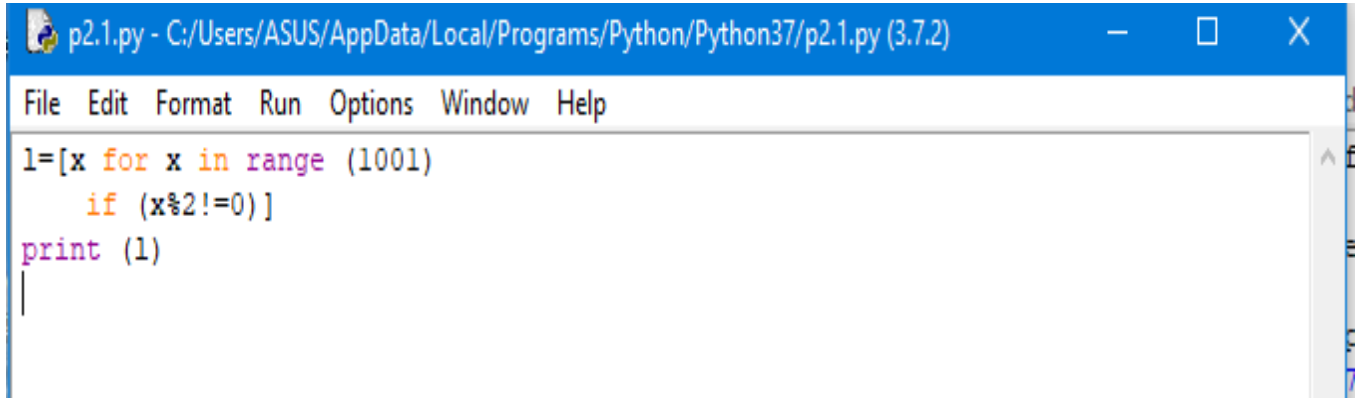
NameError: name 'hasan' is not defined

>>>

✓ عند إدخال اسم من القائمة يعطينا عاخرج ان الطالب تخرج
✓ وعند إدخال اسم من خارج القائمة يعطي خطأ وان الطالب غير متخرج..

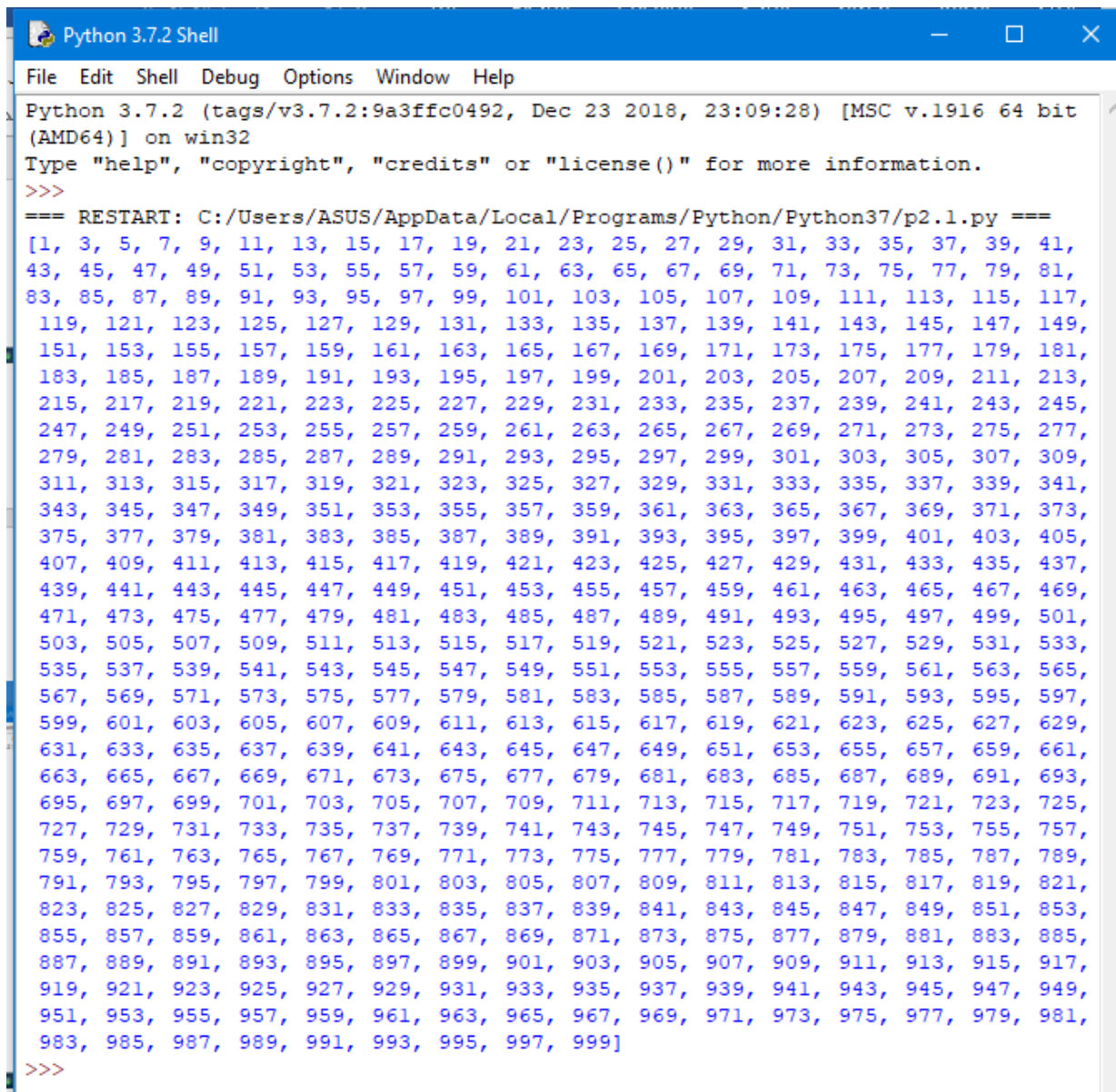
B- Generate and print a list of odd numbers from 1 to 1000.

الكود :



```
p2.1.py - C:/Users/ASUS/AppData/Local/Programs/Python/Python37/p2.1.py (3.7.2)
File Edit Format Run Options Window Help
l=[x for x in range (1001)
    if (x%2!=0)]
print (l)
```

الخرج :

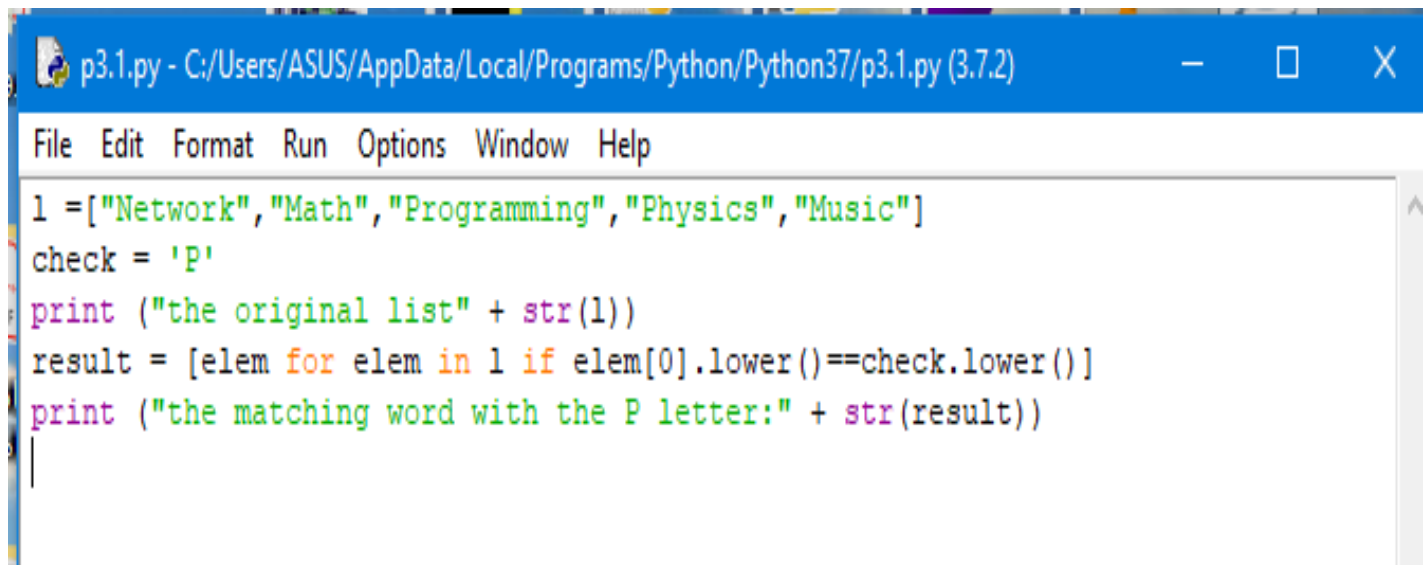


```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 23:09:28) [MSC v.1916 64 bit
(AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
=== RESTART: C:/Users/ASUS/AppData/Local/Programs/Python/Python37/p2.1.py ===
[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]
>>>
```

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

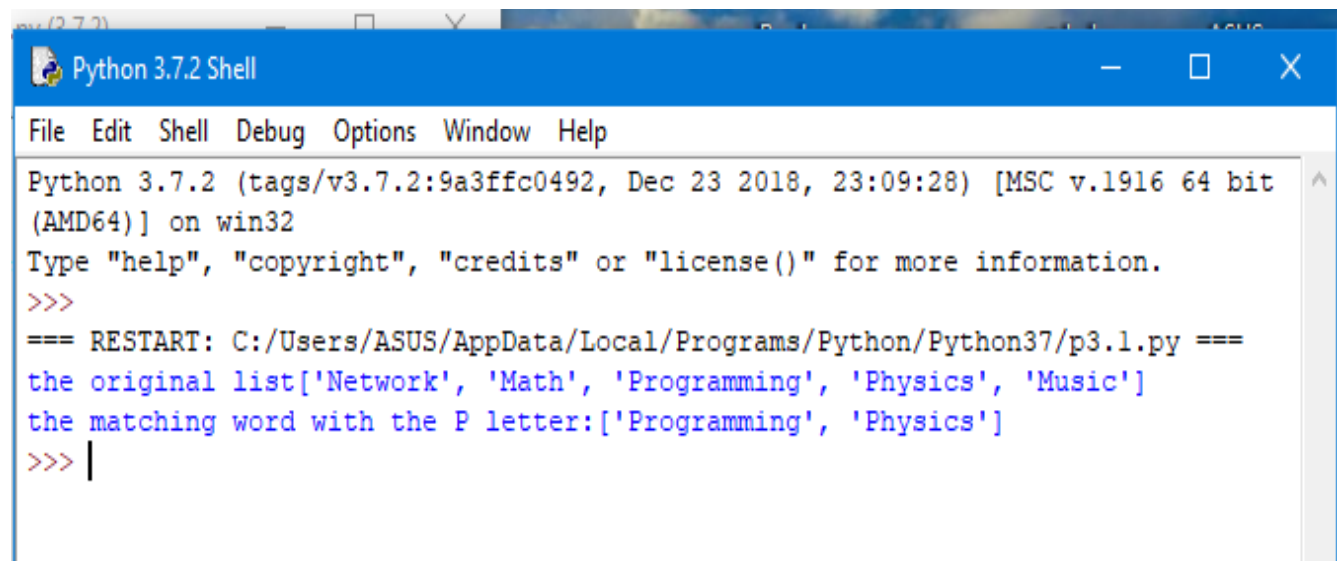
In this exercise, you will implement a Python program that reads the items of the previous list and identifies the items that starts with 'P' letter, then print it on screen.

الكود :



```
p3.1.py - C:/Users/ASUS/AppData/Local/Programs/Python/Python37/p3.1.py (3.7.2)
File Edit Format Run Options Window Help
l=["Network","Math","Programming","Physics","Music"]
check = 'P'
print ("the original list" + str(l))
result = [elem for elem in l if elem[0].lower()==check.lower()]
print ("the matching word with the P letter:" + str(result))
|
```

الخرج :

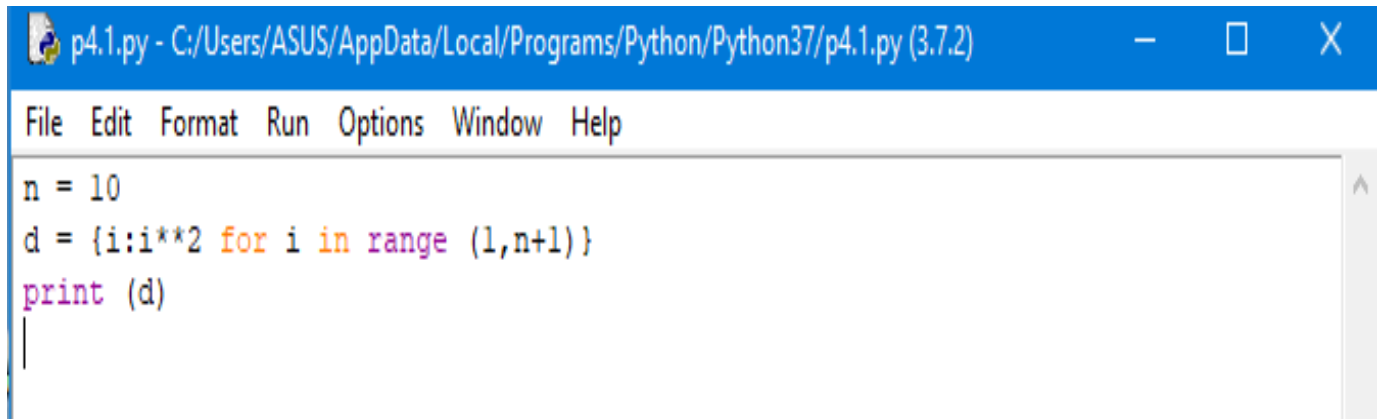


```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
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Type "help", "copyright", "credits" or "license()" for more information.
>>>
=== RESTART: C:/Users/ASUS/AppData/Local/Programs/Python/Python37/p3.1.py ===
the original list['Network', 'Math', 'Programming', 'Physics', 'Music']
the matching word with the P letter:['Programming', 'Physics']
>>> |
```

D: Using Dictionary comprehension, Generate this dictionary

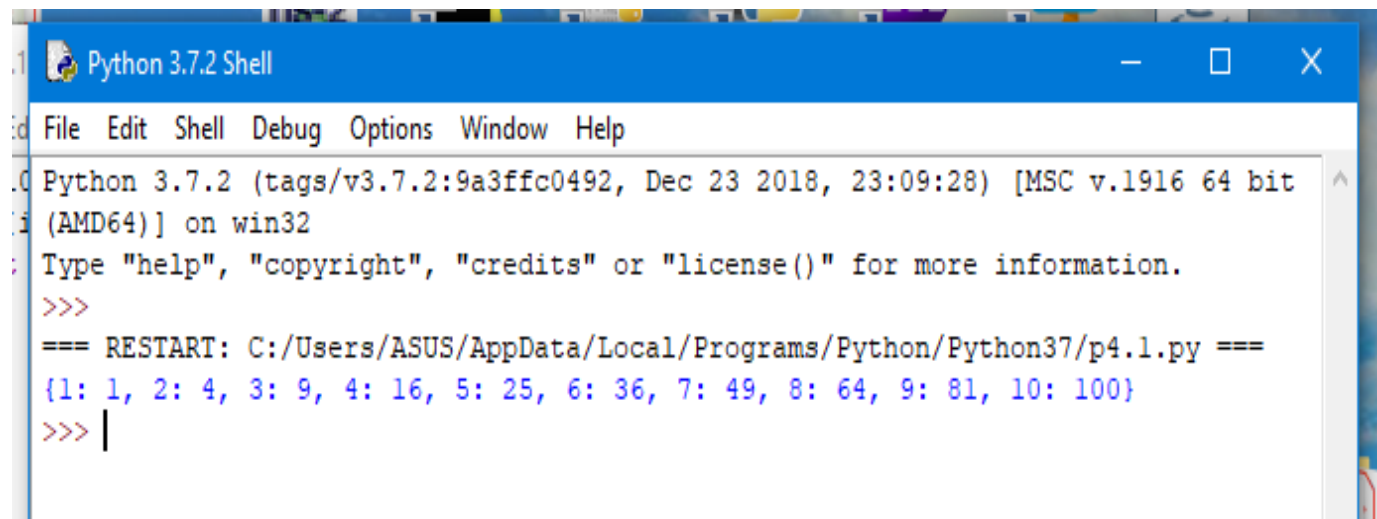
d={1:1,2:4,3:9,4:16,5:25,6:36,7:42,8:64,9:81,10:100}

الكود :



```
p4.1.py - C:/Users/ASUS/AppData/Local/Programs/Python/Python37/p4.1.py (3.7.2)
File Edit Format Run Options Window Help
n = 10
d = {i:i**2 for i in range (1,n+1)}
print (d)
```

الخرج :



```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 23:09:28) [MSC v.1916 64 bit
(AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
=== RESTART: C:/Users/ASUS/AppData/Local/Programs/Python/Python37/p4.1.py ===
{1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64, 9: 81, 10: 100}
>>>
```

Question 2: Convert from decimal to binary

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

الكود :

p2.py - C:\Users\ASUS\AppData\Local\Programs\Python\Python37\p2.py (3.7.2)

File Edit Format Run Options Window Help

```
n = int(input("please enter a decimal number: "))
b = []
while (n!= 0):
    r = n% 2
    b.append(r)
    n = n// 2
b.reverse()
for i in range(0,len(b)):
    b[i]=int (b[i])
    print (b[i],end="")
```

الخرج :

Python 3.7.2 Shell

File Edit Shell Debug Options Window Help

Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 23:09:28) [MSC v.1916 64 bit (AMD64)] on win32

Type "help", "copyright", "credits" or "license()" for more information.

```
>>>
==== RESTART: C:\Users\ASUS\AppData\Local\Programs\Python\Python37\p2.py ====
please enter a decimal number: 9
1001
>>> |
```

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.

الكود :

```
p3.py - C:\Users\ASUS\AppData\Local\Programs\Python\Python37\p3.py (3.7.2)
File Edit Format Run Options Window Help
file1=open('D:\\questions.txt','r')
file2=open('D:\\user.txt','w')
q=file1.readlines()
questions=[x[:x.index('=')+1] for x in q]
answers=[x[x.index('=')+1:-1] for x in q]
print (q[0])
ok=0
for i in range(1,21):
    s=input(questions[i])
    if s==answers[i]:
        ok+=1
name=input('enter username: ')
print(name,'answer on',ok,'from 20 ')
file2.write(name+'\t'+str(ok))
file1.close()
file2.close()
```

الخرج :

```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
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(AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
==== RESTART: C:\Users\ASUS\AppData\Local\Programs\Python\Python37\p3.py ====
!S='my heart will go on'

s[0]=m
s[1]=y
s[2]=
s[3]=h
s[4]=e
s[5]=a
s[6]=r
s[7]=t
s[8]=
s[9]=w
len(s)=20
s[:1]=m
s[-1]=!
s[0]=m
s[1]=y
s[2]=
s[3]=h
s[4]=e
s[5]=a
s[6]=r
enter username: eman
eman answer on 20 from 20 |
>>>
```

الملف النصي اللي قرأنا منو :

```
questions.txt - المفكرة
ملف تحرير تنسيق عرض تعليمات
'S='my heart will go on!

s[0]=m
s[1]=y
=[2]s
s[3]=h
s[4]=e
s[5]=a
s[6]=r
s[7]=t
=[8]s
s[9]=w
len(s)=20
s[:1]=m
!= [1-]s
s[0]=m
s[1]=y
=[2]s
s[3]=h
s[4]=e
```


الملف النصي يلي كتبنا فيه :

