

First Network Programming Homework

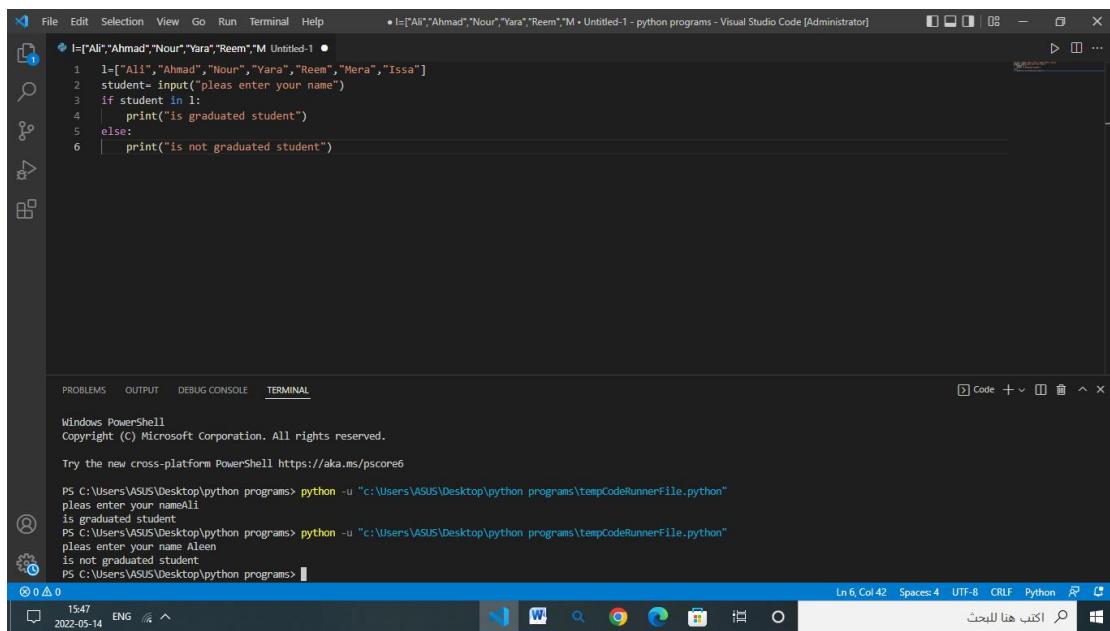
الاسم: يارا عيسى ابراهيم

الرقم الجامعي: 2372

الوظيفة رقم (1) برمجة وإدارة الشبكات

Question 1

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



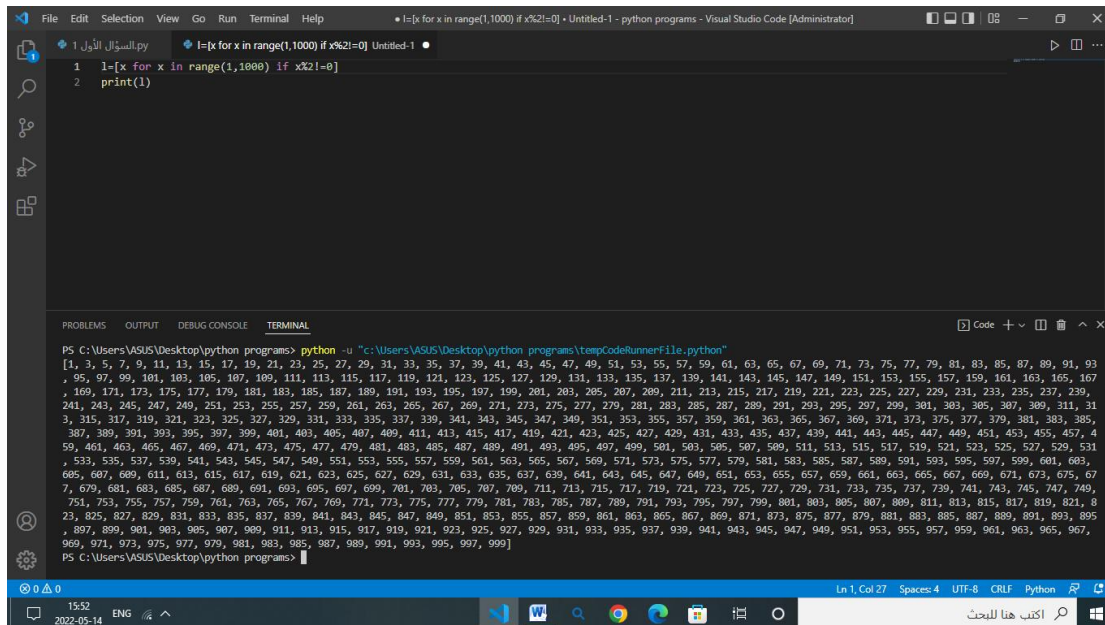
```
1 l=["Ali","Ahmad","Nour","Yara","Reem","M","Issa"]
2 student= input("pleas enter your name")
3 if student in l:
4     print("is graduated student")
5 else:
6     print("is not graduated student")
```

Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.
Try the new cross-platform PowerShell <https://aka.ms/pscore6>

PS C:\Users\VASUS\Desktop\python programs> python -u "c:\Users\VASUS\Desktop\python programs\tempCodeRunnerFile.py"
pleas enter your nameAli
is graduated student
PS C:\Users\VASUS\Desktop\python programs> python -u "c:\Users\VASUS\Desktop\python programs\tempCodeRunnerFile.py"
pleas enter your nameAleen
is not graduated student
PS C:\Users\VASUS\Desktop\python programs>

قمنا بإنشاء list بأسماء 6 طلاب متخرجين وتم طلب إدخال اسم الطالب و تخزينه في متحول student لمعرفة إن كان اسم الطالب المدخل من ضمن القائمة أم لا، وباستخدام حلقة for اختبر إن كان الاسم المدخل من ضمن القائمة اطبع على الخرج الطالب متخرج وإلا اطبع الطالب غير متخرج

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



```
File Edit Selection View Go Run Terminal Help • l=[x for x in range(1,1000) if x%2!=0] • Untitled-1 - python programs - Visual Studio Code [Administrator]

السؤال الأول.py l=[x for x in range(1,1000) if x%2!=0] Untitled-1

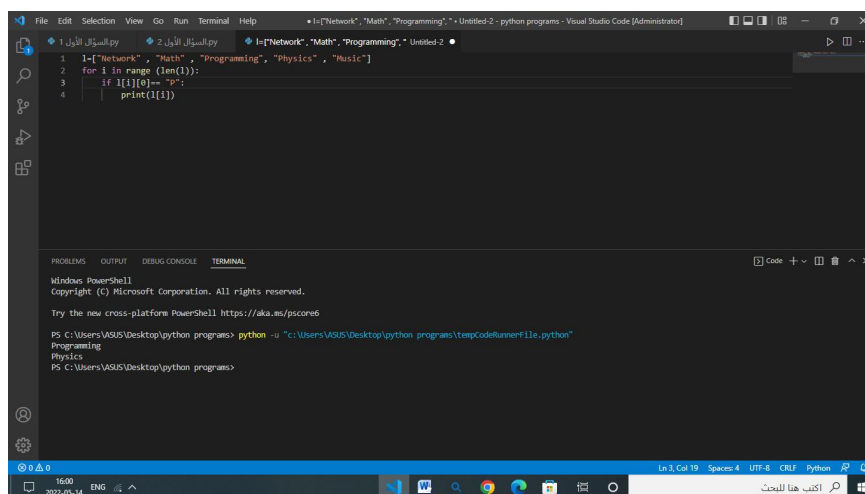
1 l=[x for x in range(1,1000) if x%2!=0]
2 print(l)

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

PS C:\Users\VASUS\Desktop\python programs> python -u "C:\Users\VASUS\Desktop\python programs\tmpCodeRunnerFile.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]
PS C:\Users\VASUS\Desktop\python programs>
```

باستخدام القائمة list قمنا بطباعة الأعداد الفردية ضمن المجال من 1 حتى 1000

C- you will implement a Python program that reads the items of the previous list and identifies the items that starts with 'P' letter



```
File Edit Selection View Go Run Terminal Help • l=["Network", "Math", "Programming", "Physics", "Music"] • Untitled-2 - python programs - Visual Studio Code [Administrator]

السؤال الأول.py السؤال الثاني.py l=["Network", "Math", "Programming", "Physics", "Music"] Untitled-2

1 l=["Network", "Math", "Programming", "Physics", "Music"]
2 for i in range(len(l)):
3     if l[i][0]=="P":
4         print(l[i])

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

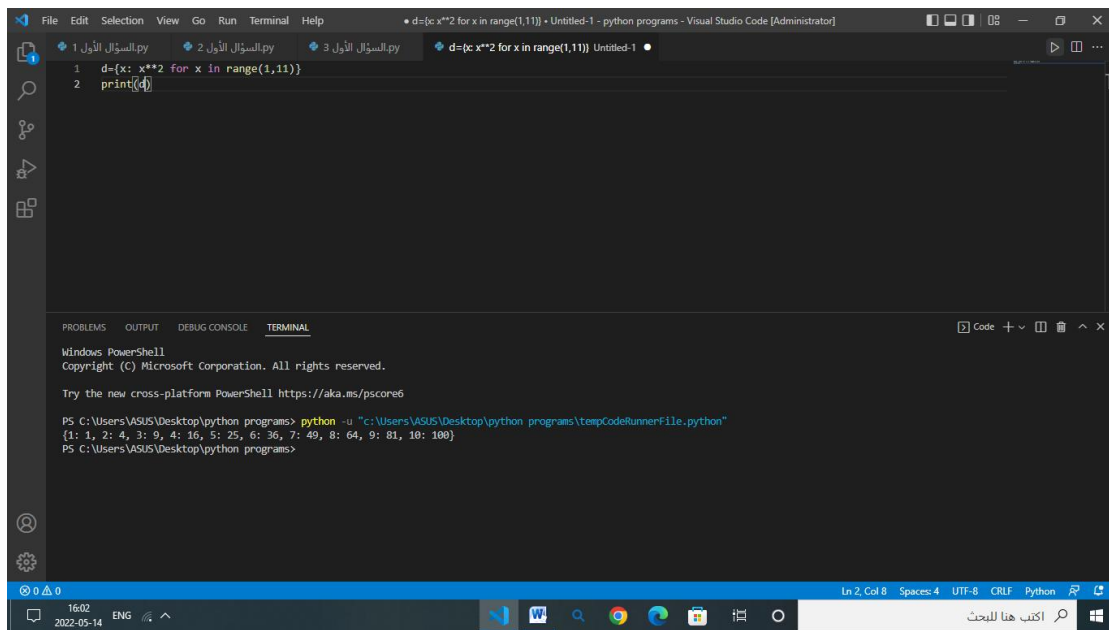
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/powershell

PS C:\Users\VASUS\Desktop\python programs> python -u "C:\Users\VASUS\Desktop\python programs\tmpCodeRunnerFile.py"
Programming
Physics
PS C:\Users\VASUS\Desktop\python programs>
```

تم تشكيل حلقة بكل مرة بتمر قيمة i على طول القائمة a يطبع الكود الكلمات التي تبدأ بحرف p وذلك عندما يكون الفهرس 0 من الكلمة هو p

D- Using Dictionary comprehension, Generate this dictionary



```
d={x: x**2 for x in range(1,11)}
print(d)
```

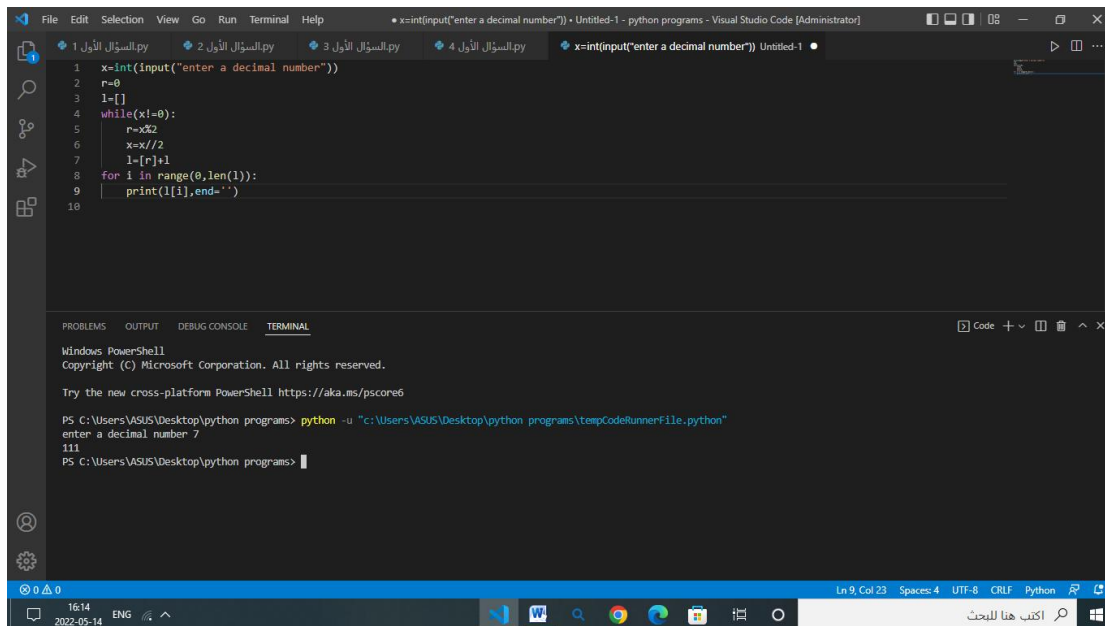
```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\VASUS\Desktop\python programs> python -u "c:\Users\VASUS\Desktop\python programs\tmpCodeRunnerFile.py"
{1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64, 9: 81, 10: 100}
PS C:\Users\VASUS\Desktop\python programs>
```

Question 2

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



The screenshot shows the Visual Studio Code editor with a Python file named 'Untitled-1'. The code is a function that takes a decimal number as input and converts it to binary. It uses a while loop to repeatedly divide the number by 2 and store the remainders in a list. After the loop, it prints the list of remainders in reverse order to form the binary string.

```
1 x=int(input("enter a decimal number"))
2 r=0
3 l=[]
4 while(x!=0):
5     r=x%2
6     x=x//2
7     l=[r]+l
8 for i in range(0,len(l)):
9     print(l[i],end="")
10
```

The terminal window shows the execution of the program. It prompts the user to enter a decimal number, and the user enters 7. The program outputs the binary representation of 7, which is 111.

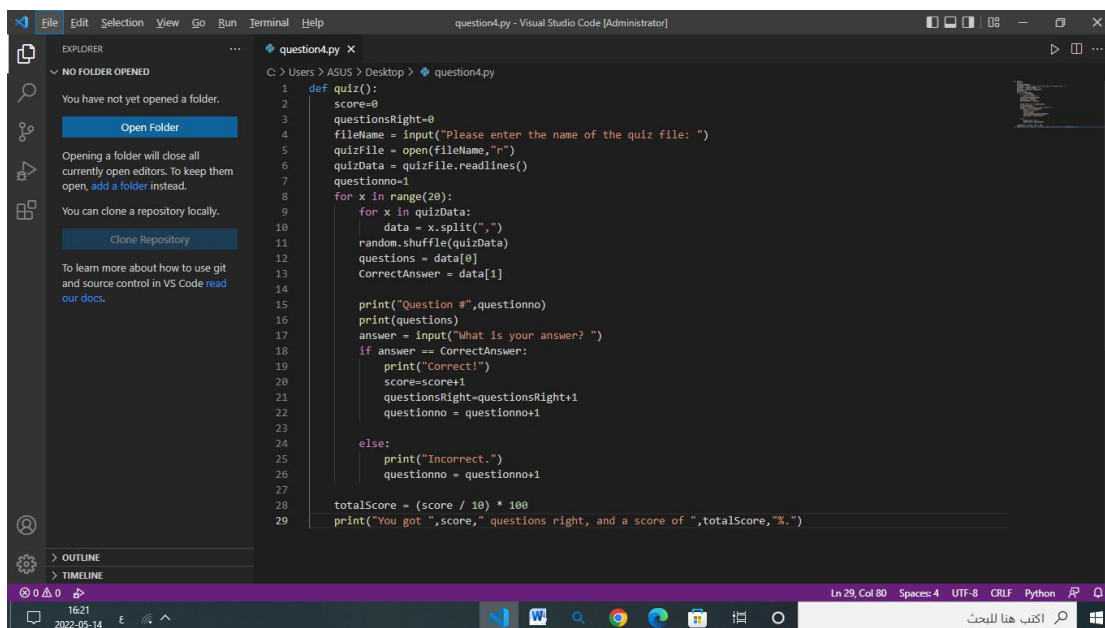
```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/powershell

PS C:\Users\ASUS\Desktop\python programs> python -u "c:\Users\ASUS\Desktop\python programs\tmpCodeRunnerFile.python"
enter a decimal number 7
111
PS C:\Users\ASUS\Desktop\python programs>
```

Question 3

Type python quiz program that takes a text or json or csv file as input for (20 (Questions, Answers))



The screenshot shows the Visual Studio Code editor with a Python file named 'question4.py'. The code is a function that takes a quiz file as input and generates 20 questions from it. It reads the file, splits the content into questions and answers, shuffles them, and then asks the user to answer each question. It keeps track of the number of correct answers and calculates the total score at the end.

```
1 def quiz():
2     score=0
3     questionsRight=0
4     fileName = input("Please enter the name of the quiz file: ")
5     quizFile = open(fileName,"r")
6     quizData = quizFile.readlines()
7     questionno=1
8     for x in range(20):
9         for x in quizData:
10             data = x.split(",")
11             random.shuffle(quizData)
12             questions = data[0]
13             CorrectAnswer = data[1]
14
15             print("Question #",questionno)
16             print(questions)
17             answer = input("What is your answer? ")
18             if answer == CorrectAnswer:
19                 print("Correct!")
20                 score=score+1
21                 questionsRight=questionsRight+1
22                 questionno = questionno+1
23
24             else:
25                 print("Incorrect.")
26                 questionno = questionno+1
27
28     totalScore = (score / 10) * 100
29     print("You got ",score," questions right, and a score of ",totalScore,"%")
```