NameAbd Al kader Mhjazi , Number: 2314 , Submitted To GitHub:

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.

Code:

```
#تعريف القائمة
graduated_students = ['Salam','mohammed','zena','sahar','ali']
#إدخال اسم الطالب
name = input("Enter  name: ")
#اختبار إذا كان الطالب متخرج
if name in graduated_students:
    print(name,"is graduated")
else:
    print(name,"isn't graduated")
```

Code execution:

```
Enter  name: mohammed
mohammed is graduated
```

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

Code:

```
odd_number = [odd for odd in range(1,1001) if odd%2!=0]
print(odd_number)
```

Code execution:

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```
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.

Tips: using loop, list ‘len ()’ method

Code:

```
L = ['Network','Math','Programming', 'Physics','Music']
for i in L:
#اختبار إذا كانت المادة تبدأ بالحرف المطلوب
    if i.startswith('P'):
        print(i,end=', ')
```

Code execution:

```
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}

Code:

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

Code execution:

```
{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

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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.

Code:

```
d=int(input("Enter decimal number: "))
binary_namber=[]
while(d>0):
    temp = d%2
    binary_namber.append(temp)
    d=d//2
binary_namber.reverse()
print("Equivalent in binary is :", end = " ")
for i in binary_namber:
    print(i,end="")
```

Code execution:

```
Enter decimal number: 1547
Equivalent in binary is : 11000001011
```

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.

Code:

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```
import json
d = { }
#define a variable for the score
right_answer = 0
#define the question number
number=1
#loading question to the program
f = open("ques.txt",'r')
d = json.load(f)
f.close()

name = input("Enter your full name: ")
for q in d.keys():
    print("Question",number,": ", q)
    ans = input("The answer is ")
    #testing the result
    if ans.lower() == d[q].lower():
        right_answer = right_answer + 1
        print("Correct ")
    else:
        print ("Wrong")
    number = number + 1

#write the name and the score is a separate file
result={name:right_answer}
m = open("score.txt",'w')
result = json.dump(result,m)
m.close()
```

Code execution:

```
Enter your full name: abd al kader mhjazi
Question 1 :  Phone calls suffer from the shared medium problem.

The answer is t
Correct
Question 2 :  Cells with radius less than 500m are macro cells.

The answer is f
```

Score file:

```
{"abd al kader mhjazi": 13}
```