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الرقم الجامعي:٢٢٨٩

Homework 1

Syrian Arab Republic

Lattakia - Tishreen University

Department of Communication and electrical engineering

5th Network Programming : Homework No1

الجمهورية العربية السورية

اللاذقية -جامعة تشرين

كلية الهندسة الكهربائية والميكانيكية

قسم هندسة الاتصالات والإلكترونيات

السنة الخامسة: وثيقة: برمجة شبكات

Name:_____, Number:_____, 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.

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

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

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}

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.

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.

Notes

- Homework is accepted as **well explained** Pdf & "Nicely Formatted Code" "You can do all job in one notebook then print as pdf or "copy and paste" on word document "use" then convert into pdf with extra info "
-You have to show:
Question number >>Question itself>> your answer code with explanations > your Result "you can use this doc as template"
-You Have to Show code execution as Screenshots from your laptop or phone''.
-Apply your full name and number, Homework number to pdf.
-Similar Solutions will rejected and not accepted.
- The Homework is accepted until the date of "12/5/2022", if after >> mark=mark- (current_date -12/5/2022)*0.3
- An Extra Marks if you upload your code to your GitHub Account, "PDF + Code"

```
target_words = set()

with codecs.open(path, 'r', encoding='utf-8') as f:
    lines = f.read().split('\n')

    for i,line in enumerate(lines[0:len(lines)-4]):
        print(i,'>>>',line)
        if line.isdigit():
            print(lines[i])
            mylists=[lines[i] ,lines[i+1],lines[i+2],lines[i+3],'\n']
            all_texts.append(mylist)
            print(mylist)
            print('**********')
try:
    os.mkdir('out',0o666)
except OSError as error:
    pass
```

Q1/A:

code:

```
names=['honen','adnan','ibrahem','sara','mohamad']
while True:
    name=input('enter the name and number,please::-1 for terminate program:')
    if name=='-1':
        print('thank you')
        break
    if name in names:
        print(name,'is gruadeted')
    elif name not in names:
        print(name,'is not gruadeted sorry')
```

Output:

```
============== RESTART: C:\Users\lenovo\Desktop\مجلد جديد\q1)a.py ========
enter the name and number,please::-1 for terminate program:honen
honen is gruadeted
enter the name and number,please::-1 for terminate program:ali
ali is not gruadeted sorry
enter the name and number,please::-1 for terminate program:sara
sara is gruadeted
enter the name and number,please::-1 for terminate program:-1
thank you
>>>
```

Q1)b

Generate and print list of odd number from 1 to 1000:

Code:

```
l=[s for s in range(1,1000,2)]
print ('the odd number of 1 to 1000',l)
```

output:

```
========== RESTART: C:\Users\lenovo\Desktop\مجلد جديد\homework1.py ==========
the odd number of 1 to 1000 [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]
>>>
```

Q1)c

L=[Network,Math,Programming,Pyhysics,Music]

Program read the items of previous list and identifies the items that start with 'P' then print on screen.

Code:

```
##code 3
l2=['Network','Math','Programming','Physics','Music']
c=0
for i in range(len(l2)):
    if l2[i].startswith('P'):
        c=c+1
        print('the item {} that starts with P letter is  {} and its index is {} '.format(c,l2[i],i))
```

Output:

```
>>>
========== RESTART: C:\Users\lenovo\Desktop\مجلد جديد\homework1.py ========
the item 1 that starts with P letter is  Programming and its index is 2
the item 2 that starts with P letter is  Physics and its index is 3
>>>
```

Q1/d:

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

Use this statement:

Generate dictionary d={i:i**2 for i in range(1,11,1)}

Modulate value that its index 7:

d[7]=42

code:

```
d={i:i**2 for i in range(1,11,1)}
d[7]=42
print(d)
```

Output:

```
========== RESTART: C:\Users\lenovo\Desktop\q1\d.py ==========
{1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 42, 8: 64, 9: 81, 10: 100}
>>>
```

Q2:convert from decimal to binary

Code:

```
##Question2: from decimal to binary
while True :
    try:##لاحرف  المستخدم  ادخال  حالة  معالجة
        x=int(input('enter decimal number please ,enter -1 to terminate program:'))
        if x==-1:
            break
        list1=[]
        while True:
            l=x%2
            x=x//2
            list1.append(l)
            if(x==0):
                break
        list1.reverse()
        print("the binary number is",list1)
    except ValueError as err :
        print(err)
        print(' error, you must enter just number  for program work')
##
```

Output:

```
============ RESTART: C:\Users\lenovo\Desktop\مجلد جديد\homework1.py ====
enter decimal number please ,enter -1 to terminate program:33
the binary number is [1, 0, 0, 0, 0, 1]
enter decimal number please ,enter -1 to terminate program:64
the binary number is [1, 0, 0, 0, 0, 0, 0]
enter decimal number please ,enter -1 to terminate program:q4
invalid literal for int() with base 10: 'q4'
 error, you must enter just number  for program work
enter decimal number please ,enter -1 to terminate program:-1
>>>
```

Q3)

Store the question of quiz in file(json) is: quiz.json

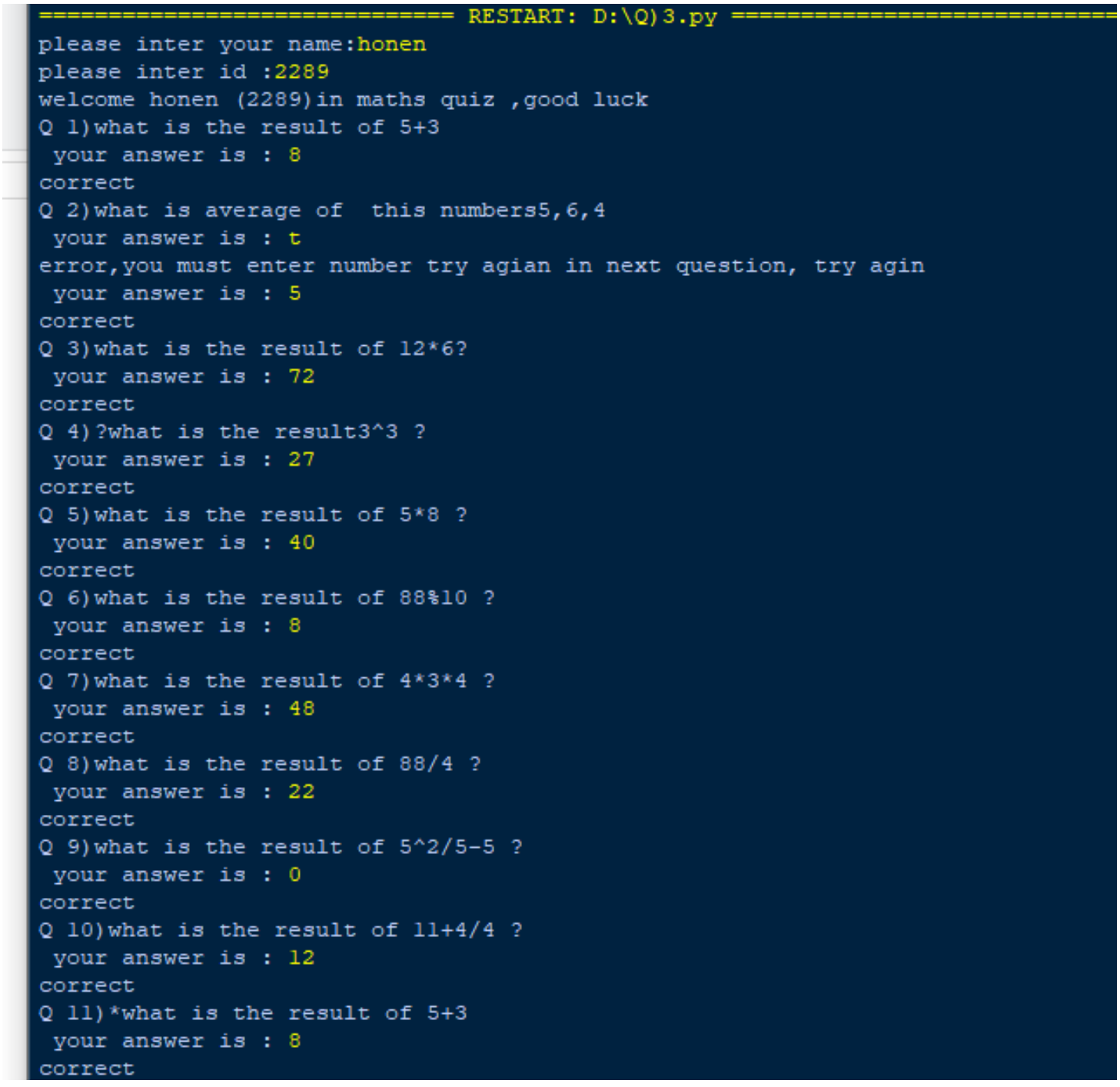
Then load the question of this file

The result and name and id store in file:result.json

Code:

```
import json
Questions={}## empty dictionary for question from file json
result=0##variable for result
count=1##number of question

with open('quiz.json','r') as quiz:
    Questions  =json.load(quiz)##load question and answer
name=input('please inter your name:') #name
Id=input('please inter id :')#id
print('welcome {} ({})in maths quiz ,good luck'.format(name,Id))
for q in Questions.keys():
     print('Q',count,end=')')
     print(q)#print question
     answer=input(' your answer is : ')
     while not answer.isdigit():#for processing entering letter
          print('error,you must enter number try agian in next question, try
          answer=input(' your answer is : ')

     if answer==Questions[q] :
          print('correct')
          result+=10
     else :
          print('wrong')

     count+=1
print(name,'your result is  {}%'.format(result))

if result>=80:
     print('excellent')
elif 70<result<80:
     print('very good')
elif 60<result<=70:
     print(' good')
else:
     print('sorry, you are not pass this quiz')#store result in separate file
result_data={name:{'id':Id,'result':result}}
with open('result.json','w') as result:
     json.dump(result_data,result)
     result.close()
```

Output:

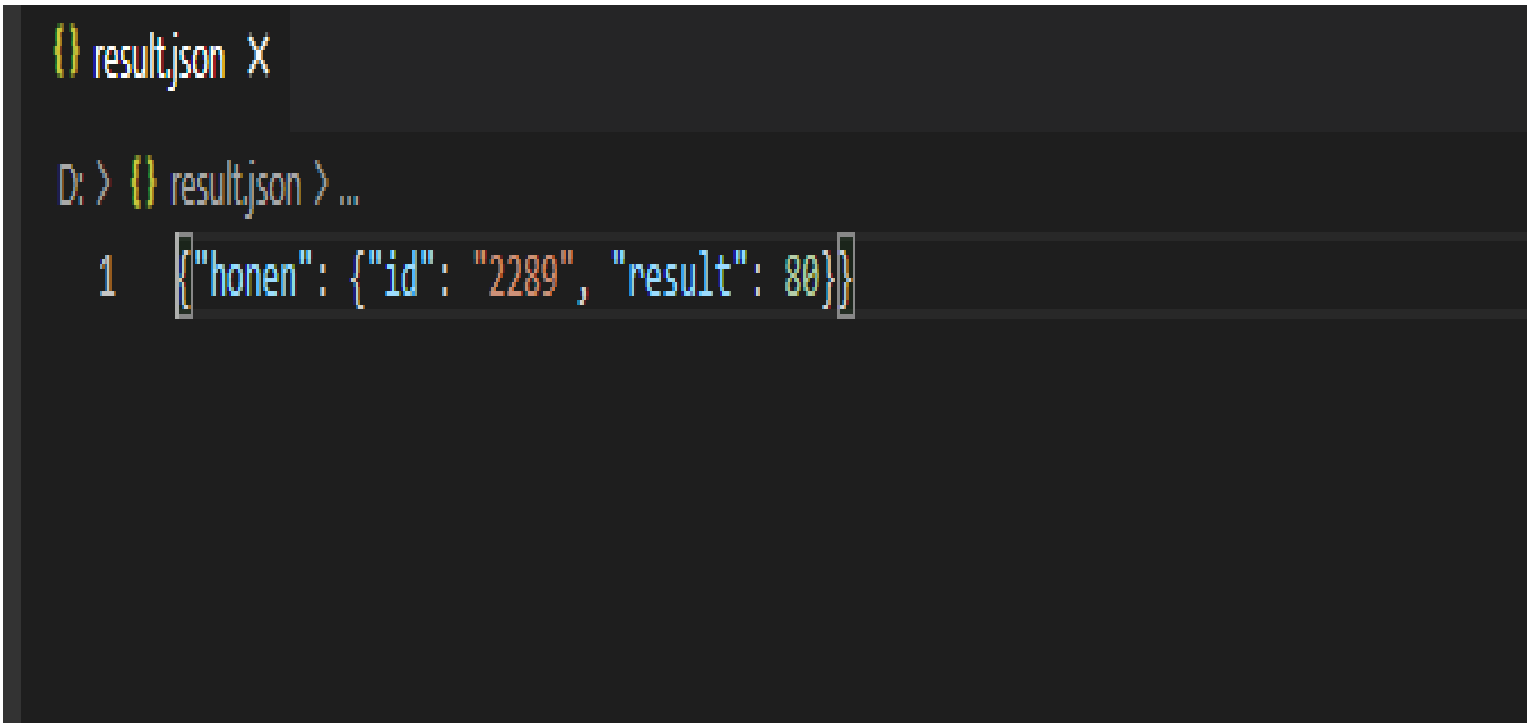


```
========== RESTART: D:\Q)3.py ==========
please inter your name:honen
please inter id :2289
welcome honen (2289)in maths quiz ,good luck
Q 1)what is the result of 5+3
 your answer is : 8
correct
Q 2)what is average of  this numbers5,6,4
 your answer is : t
error,you must enter number try agian in next question, try agin
 your answer is : 5
correct
Q 3)what is the result of 12*6?
 your answer is : 72
correct
Q 4)?what is the result3^3 ?
 your answer is : 27
correct
Q 5)what is the result of 5*8 ?
 your answer is : 40
correct
Q 6)what is the result of 88%10 ?
 your answer is : 8
correct
Q 7)what is the result of 4*3*4 ?
 your answer is : 48
correct
Q 8)what is the result of 88/4 ?
 your answer is : 22
correct
Q 9)what is the result of 5^2/5-5 ?
 your answer is : 0
correct
Q 10)what is the result of 11+4/4 ?
 your answer is : 12
correct
Q 11)*what is the result of 5+3
 your answer is : 8
correct
```

```
correct
Q 12)*what is average of  this numbers5,6,4
 your answer is : 5
correct
Q 13)*what is the result of 12*6?
 your answer is : 6
wrong
Q 14)*?what is the result3^3 ?
 your answer is : 27
correct
Q 15)*what is the result of 5*8 ?
 your answer is : 40
correct
Q 16)*what is the result of 88%10 ?
 your answer is : 8
correct
Q 17)*what is the result of 4*3*4 ?
 your answer is : 48
correct
Q 18)*what is the result of 88/4 ?
 your answer is : 47
wrong
Q 19)*what is the result of 5^2/5-5 ?
 your answer is : 8
wrong
Q 20)*what is the result of 11+4/4 ?
 your answer is : 15
wrong
honen your result is  80%
excellent
>>>
```

الصف

The result store in result.json



The end