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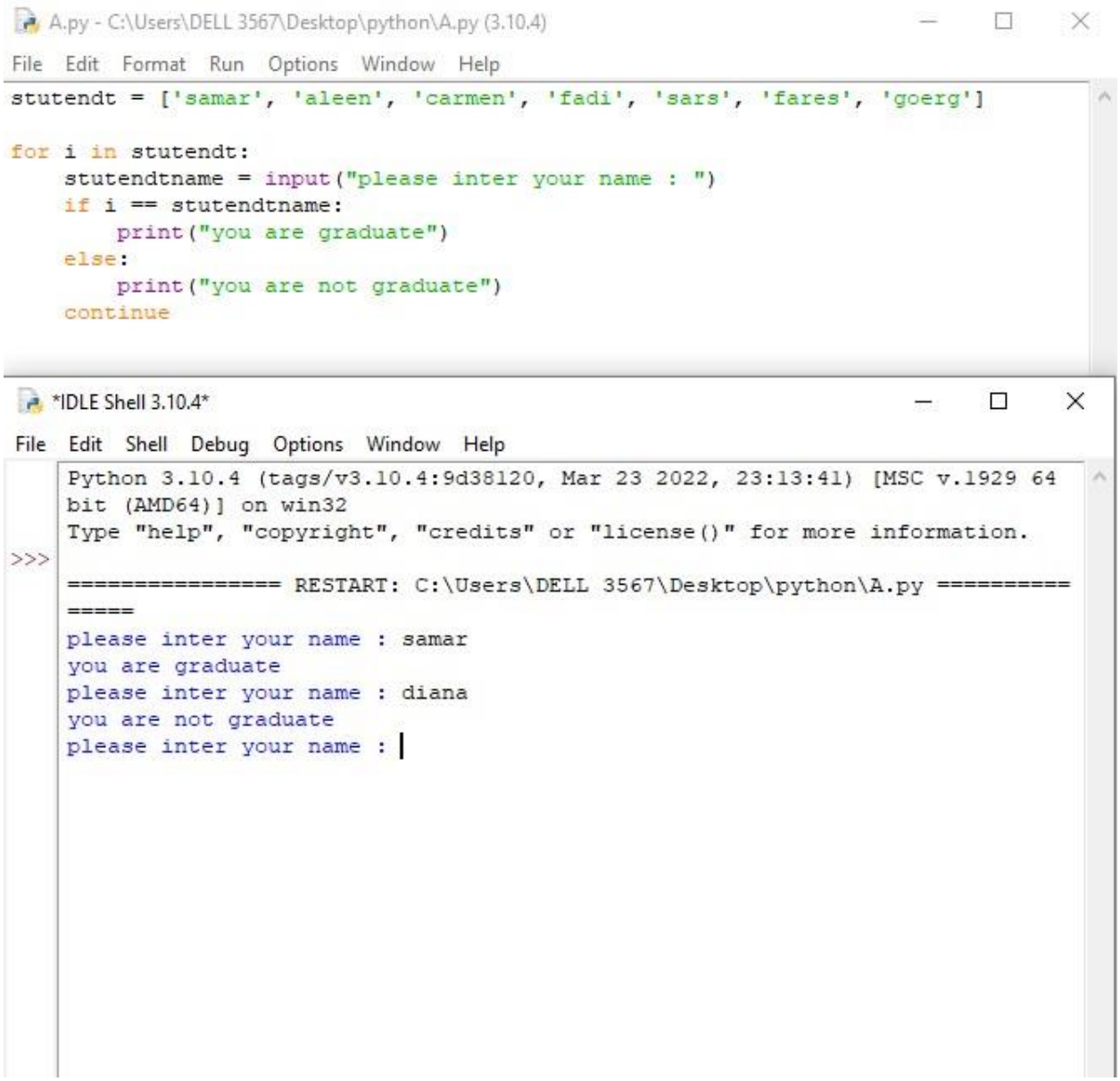
University ID: 2113

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.

Answer:

```
stutendt = ['samar', 'aleen', 'carmen', 'fadi', 'sars', 'fares', 'goerg']

    for i in stutendt:
        stutendtname = input("please inter your name : ")
        if i == stutendtname:
            print("you are graduate")
        else:
            print("you are not graduate")
        continue
```

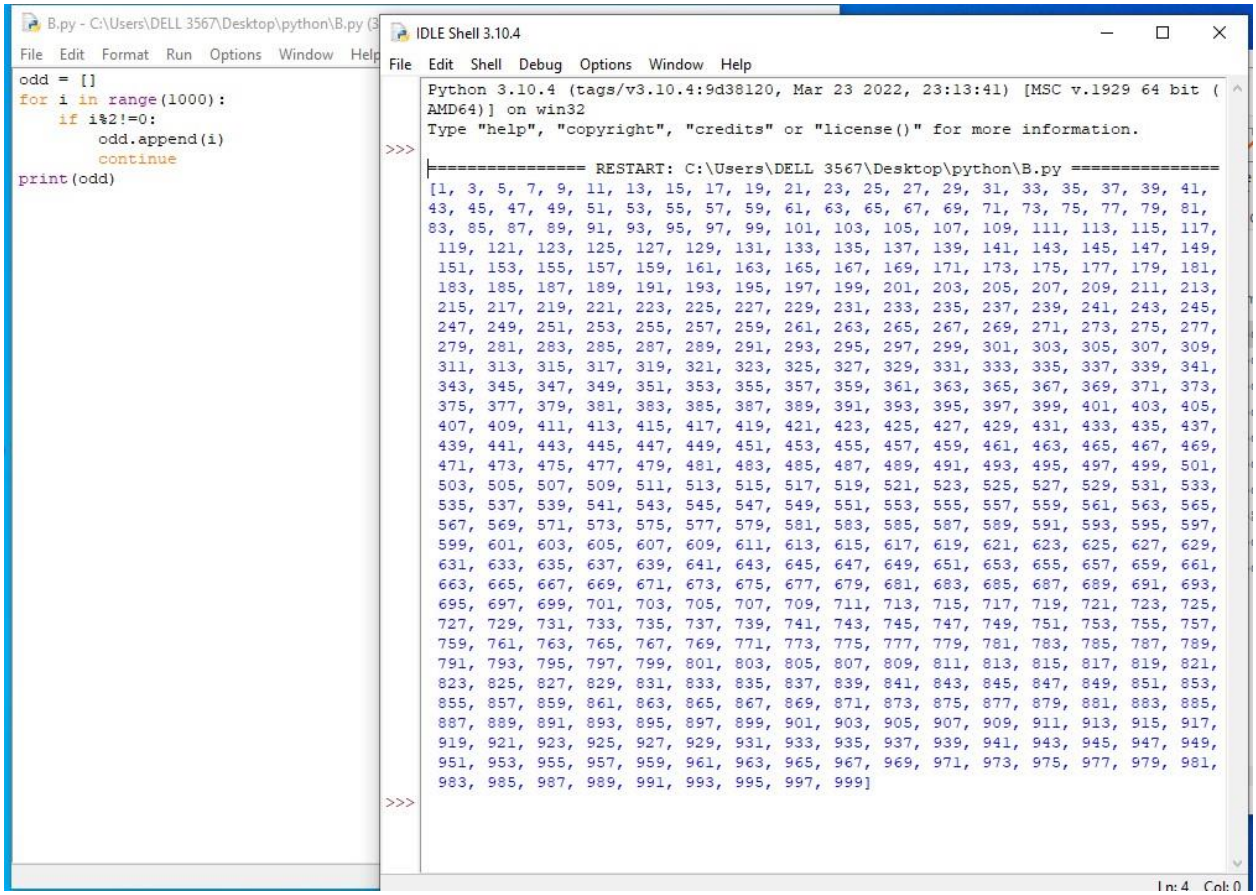

A.py - C:\Users\DELL 3567\Desktop\python\A.py (3.10.4)
File Edit Format Run Options Window Help
stutendt = ['samar', 'aleen', 'carmen', 'fadi', 'sars', 'fares', 'goerg']
for i in stutendt:
stutendtname = input("please inter your name : ")
if i == stutendtname:
print("you are graduate")
else:
print("you are not graduate")
continue
IDLE Shell 3.10.4
File Edit Shell Debug Options Window Help
Python 3.10.4 (tags/v3.10.4:9d38120, Mar 23 2022, 23:13:41) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:\Users\DELL 3567\Desktop\python\A.py ==========
please inter your name : samar
you are graduate
please inter your name : diana
you are not graduate
please inter your name :

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

Tips: "List Comprehension"

Answer:

```
odd = []
for i in range(1000):
    if i%2!=0:
        odd.append(i)
        continue
print(odd)
```

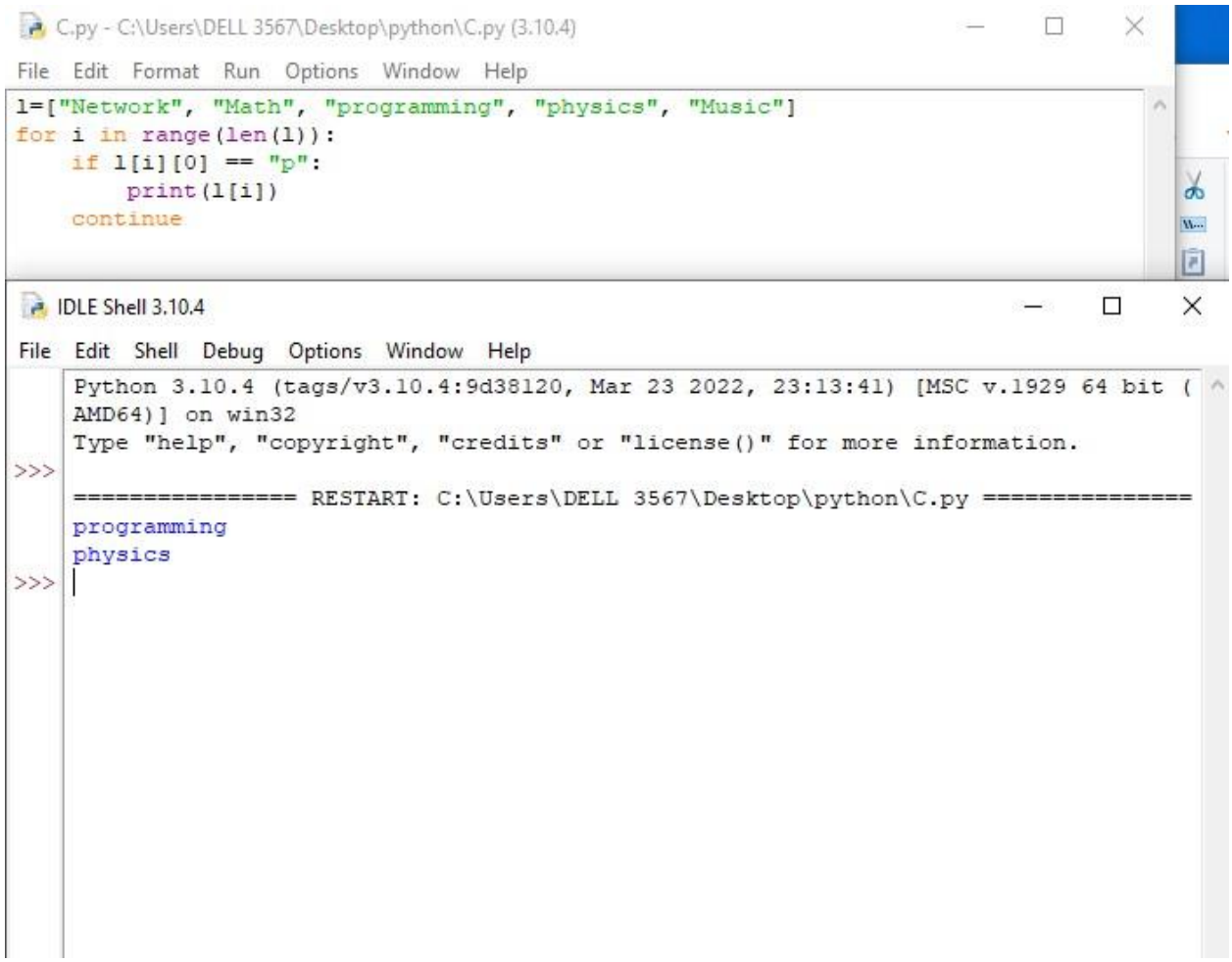


C- L:['Network' , 'Math' , 'Programming ', 'Physics' , 'Music']
In this exercise, you will implement a Python program that reads the items of the previous list and identifies the items that starts with 'P' letter, then print it on screen.

Tips: using loop, list 'len ()' method

Answer:

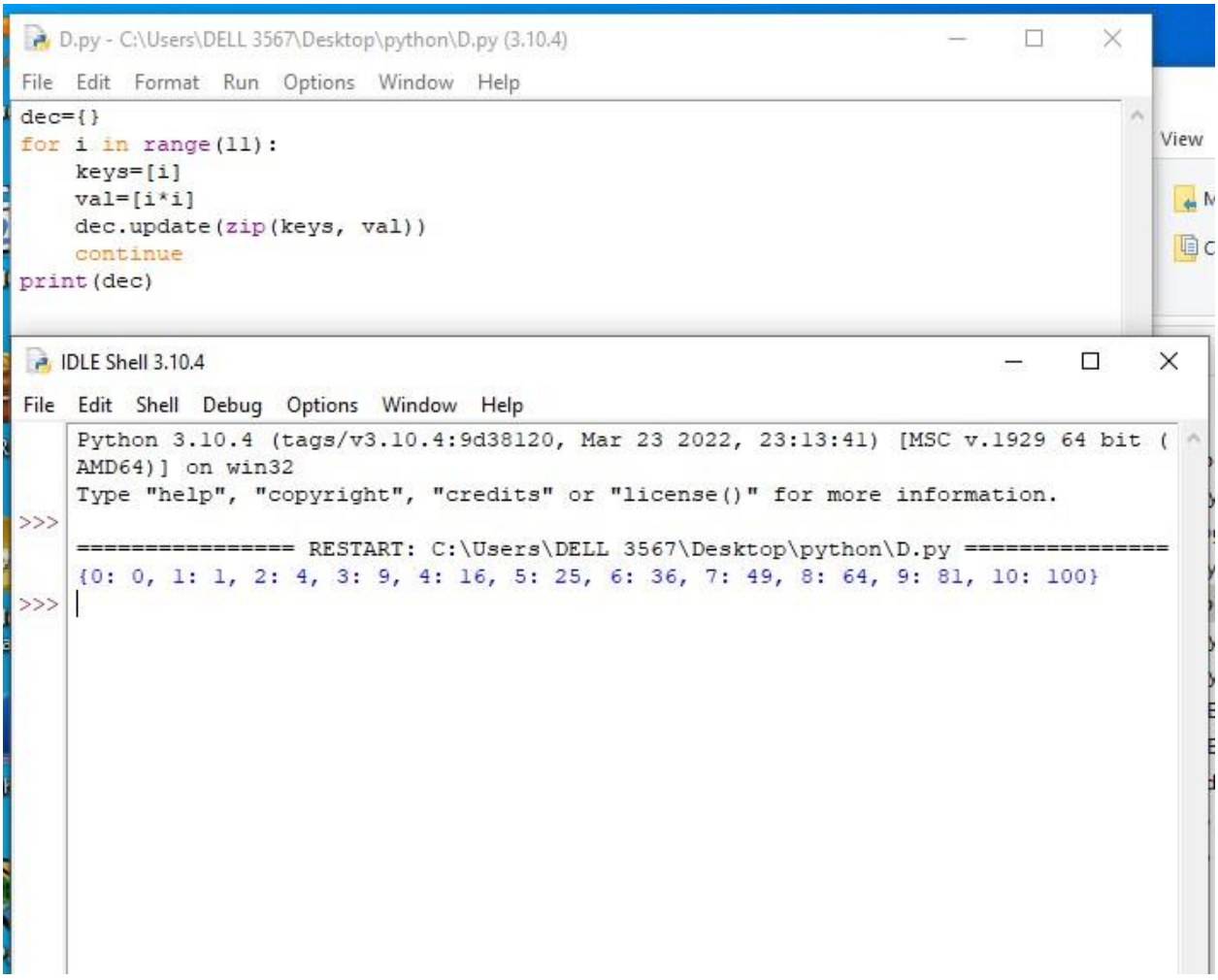
```
l=["Network", "Math", "programming", "physics", "Music"]
for i in range(len(l)):
    if l[i][0] == "p":
        print(l[i])
    continue
```



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

Answer:

```
dec={}
for i in range(11):
    keys=[i]
    val=[i*i]
    dec.update(zip(keys, val))
    continue
print(dec)
```



Question 2: Convert from decimal to binary

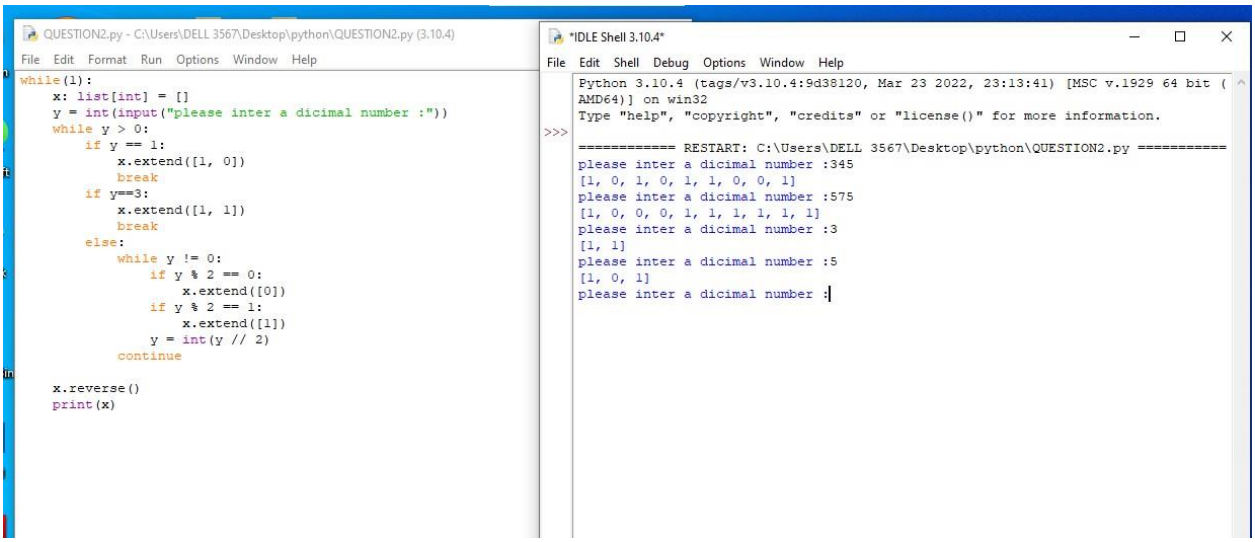
Write a Python program that converts a decimal number into its equivalent binary number.

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.

Answer:

```
while(1):
    x: list[int] = []
    y = int(input("please inter a dicimal number :"))
    while y > 0:
        if y == 1:
            x.extend([1, 0])
            break
        if y==3:
            x.extend([1, 1])
            break
        else:
            while y != 0:
                if y % 2 == 0:
                    x.extend([0])
                if y % 2 == 1:
                    x.extend([1])
                y = int(y // 2)
            continue

    x.reverse()
    print(x)
```



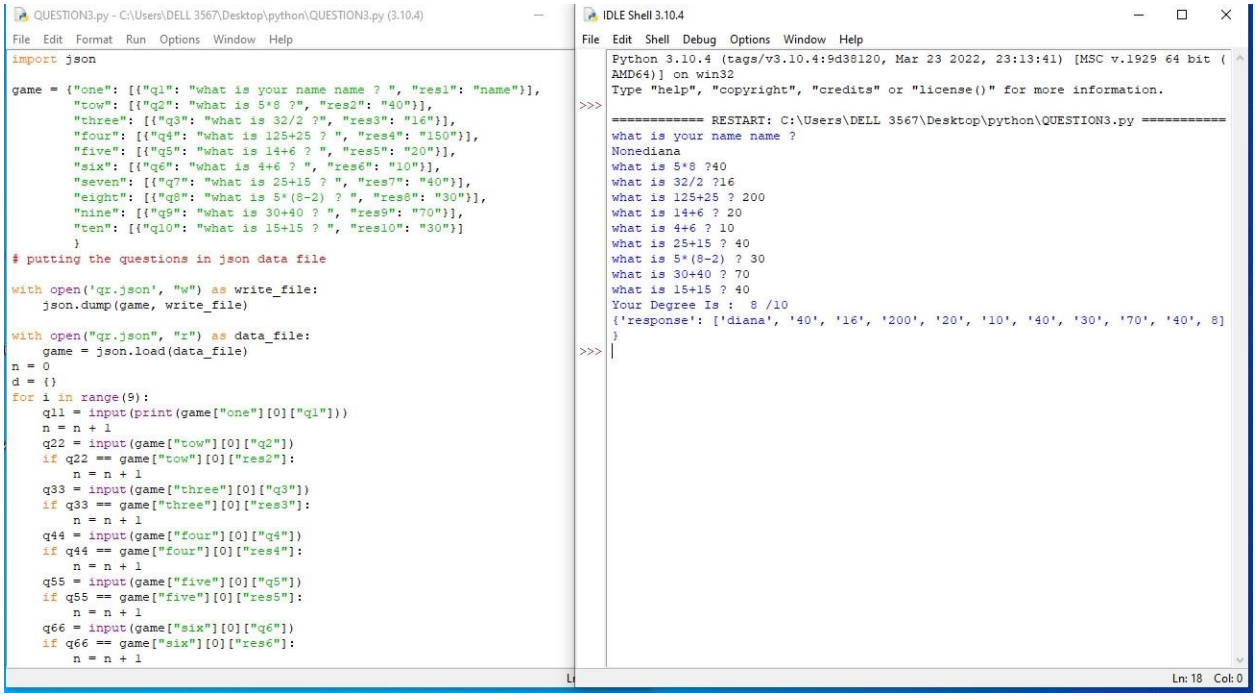
Question 3: Working with Files" Quiz Program"

Type python quiz program that takes a text or json or csv file as input for (20 (Questions, Answers)). I tasks the questions and finally computes and prints user results and store user name and result in separate file.

Answer:

```
import json

game = {"one": [{"q1": "what is your name name ? ", "res1": "name"}],
        "tow": [{"q2": "what is 5*8 ?", "res2": "40"}],
        "three": [{"q3": "what is 32/2 ?", "res3": "16"}],
        "four": [{"q4": "what is 125+25 ? ", "res4": "150"}],
        "five": [{"q5": "what is 14+6 ? ", "res5": "20"}],
        "six": [{"q6": "what is 4+6 ? ", "res6": "10"}],
        "seven": [{"q7": "what is 25+15 ? ", "res7": "40"}],
        "eight": [{"q8": "what is 5*(8-2) ? ", "res8": "30"}],
        "nine": [{"q9": "what is 30+40 ? ", "res9": "70"}],
        "ten": [{"q10": "what is 15+15 ? ", "res10": "30"}]
        }
# putting the questions in json data file

with open('qr.json', "w") as write_file:
    json.dump(game, write_file)

with open("qr.json", "r") as data_file:
```

```
    game = json.load(data_file)
n = 0
d = {}
for i in range(9):
    q11 = input(print(game["one"][0]["q1"]))
    n = n + 1
    q22 = input(game["tow"][0]["q2"])
    if q22 == game["tow"][0]["res2"]:
        n = n + 1
    q33 = input(game["three"][0]["q3"])
    if q33 == game["three"][0]["res3"]:
        n = n + 1
    q44 = input(game["four"][0]["q4"])
    if q44 == game["four"][0]["res4"]:
        n = n + 1
    q55 = input(game["five"][0]["q5"])
    if q55 == game["five"][0]["res5"]:
        n = n + 1
    q66 = input(game["six"][0]["q6"])
    if q66 == game["six"][0]["res6"]:
        n = n + 1
    q77 = input(game["seven"][0]["q7"])
    if q77 == game["seven"][0]["res7"]:
        n = n + 1
    q88 = input(game["eight"][0]["q8"])
    if q88 == game["eight"][0]["res8"]:
        n = n + 1
    q99 = input(game["nine"][0]["q9"])
    if q99 == game["nine"][0]["res9"]:
        n = n + 1
    q1010 = input(game["ten"][0]["q10"])
    if q1010 == game["ten"][0]["res10"]:
        n = n + 1
    break
print("Your Degree Is : ", n, "/10")

game_responses ={ "response": [q11, q22, q33, q44, q55, q66, q77, q88, q99,
q1010, n] }
with open('RES.json', "w") as write_file:
    json.dump(game_responses, write_file)

print(game_responses)
```


QUESTION3.py - C:\Users\DELL 3567\Desktop\python\QUESTION3.py (3.10.4)
File Edit Format Run Options Window Help
import json
game = {"one": [{"q1": "what is your name name ? ", "res1": "name"}],
"tow": [{"q2": "what is 5*8 ?", "res2": "40"}],
"three": [{"q3": "what is 32/2 ?", "res3": "16"}],
"four": [{"q4": "what is 125+25 ? ", "res4": "150"}],
"five": [{"q5": "what is 14+6 ? ", "res5": "20"}],
"six": [{"q6": "what is 4+6 ? ", "res6": "10"}],
"seven": [{"q7": "what is 25+15 ? ", "res7": "40"}],
"eight": [{"q8": "what is 5*(8-2) ? ", "res8": "30"}],
"nine": [{"q9": "what is 30+40 ? ", "res9": "70"}],
"ten": [{"q10": "what is 15+15 ? ", "res10": "30"}]
}
# putting the questions in json data file
with open('qr.json', "w") as write_file:
json.dump(game, write_file)
with open("qr.json", "r") as data_file:
game = json.load(data_file)
n = 0
d = {}
for i in range(9):
q11 = input(print(game["one"][0]["q1"]))
n = n + 1
q22 = input(game["tow"][0]["q2"])
if q22 == game["tow"][0]["res2"]:
n = n + 1
q33 = input(game["three"][0]["q3"])
if q33 == game["three"][0]["res3"]:
n = n + 1
q44 = input(game["four"][0]["q4"])
if q44 == game["four"][0]["res4"]:
n = n + 1
q55 = input(game["five"][0]["q5"])
if q55 == game["five"][0]["res5"]:
n = n + 1
q66 = input(game["six"][0]["q6"])
if q66 == game["six"][0]["res6"]:
n = n + 1
IDLE Shell 3.10.4
File Edit Shell Debug Options Window Help
Python 3.10.4 (tags/v3.10.4:9d38120, Mar 23 2022, 23:13:41) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:\Users\DELL 3567\Desktop\python\QUESTION3.py ==========
what is your name name ?
Nonediana
what is 5*8 ?40
what is 32/2 ?16
what is 125+25 ? 200
what is 14+6 ? 20
what is 4+6 ? 10
what is 25+15 ? 40
what is 5*(8-2) ? 30
what is 30+40 ? 70
what is 15+15 ? 40
Your Degree Is : 8 /10
{'response': ['diana', '40', '16', '200', '20', '10', '40', '30', '70', '40', 8]
}
>>>
Ln: 18 Col: 0