DAILY ONLINE ACTIVITIES SUMMARY

Date:	**12-06-2020**	**Name:**	**ASHIKA**
Sem & Sec	**6 A**	**USN:**	**4AL17CS016**

Online Test Summary

Subject	**-**		
Max. Marks	**-**	**Score**	**-**

Certification Course Summary

Course	**PYTHON FOR DATA SCIENCE**		
Certificate Provider	**Cognitive class**	**Duration**	**5 hour**

Coding Challenges

Problem Statement:

1.Write a Python program to implement Magic Square

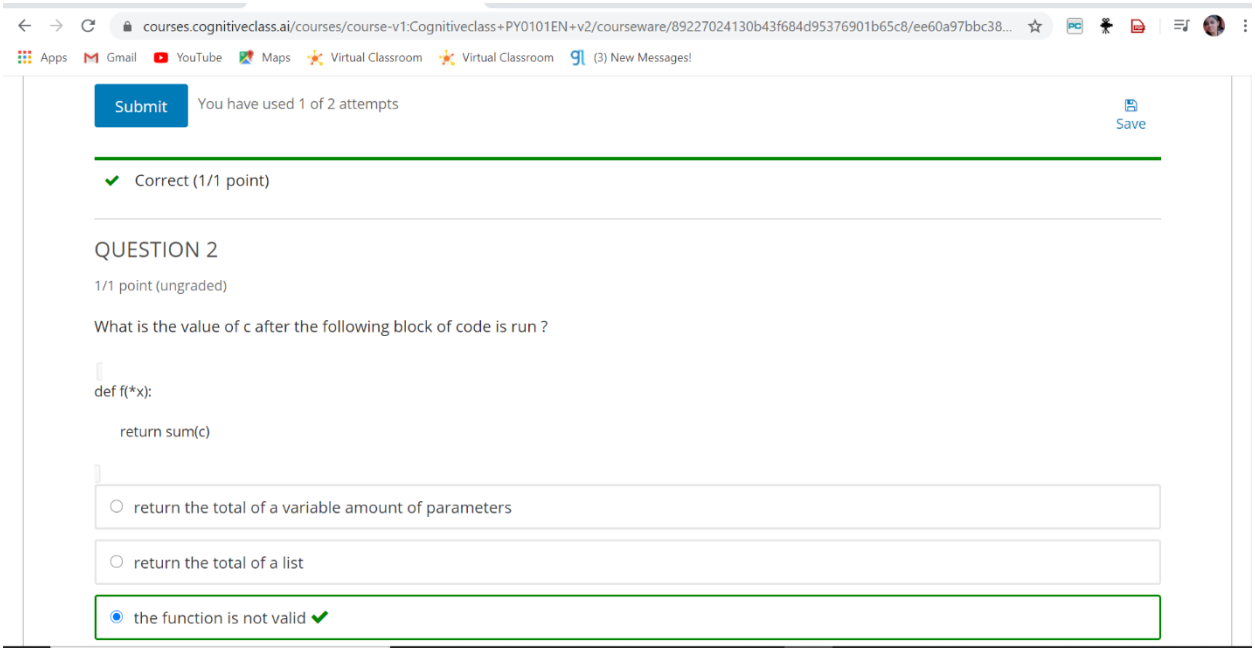
2. Python program to print the pattern

Status: done(executed)

Uploaded the report in Github	**yes**
If yes Repository name	https://github.com/ASHIKA-05/DAILY-REPORT
Uploaded the report in slack	**yes**

NO ONLINE TEST

CERTTIFICATION COURSE



ONLINE CODEING

1.Write a Python program to implement Magic Square

A magic square of order n is an arrangement of n^2 numbers, usually distinct integers, in a square, such that the n numbers in all rows, all columns, and both diagonals sum to the same constant. A magic square contains the integers from 1 to n^2.

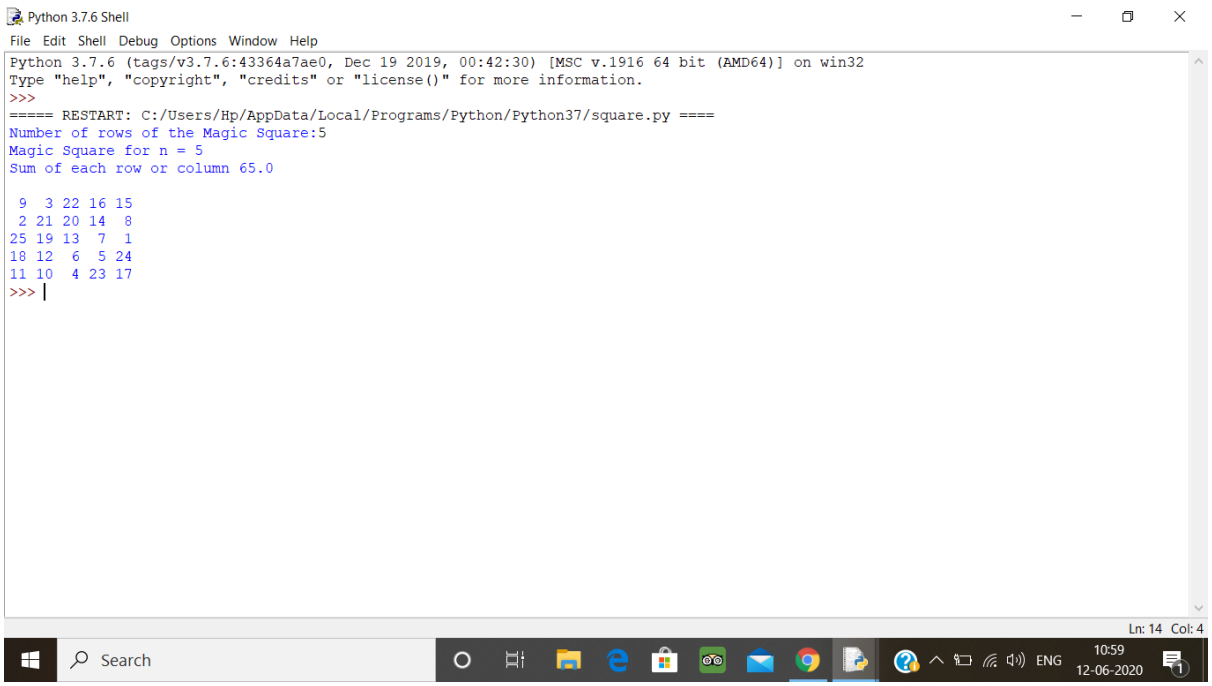
The constant sum in every row, column and diagonal is called the magic constant or magic sum, M. The magic constant of a normal magic square depends only on n and has the following value:
M = n(n^2+1)/2
example
Magic Square of size 5

9 3 22 16 15
2 21 20 14 8
25 19 13 7 1
18 12 6 5 24
11 10 4 23 17
Sum in each row & each column = 5*(5^2+1)/2 = 65

```
def generateSquare(n):

    magicSquare = [[0 for x in range(n)]

                   for y in range(n)]

    i = n / 2

    j = n - 1

    num = 1

    while num <= (n * n):

        if i == -1 and j == n:

            j = n - 2

            i = 0

        else:

            if j == n:
```

```
            j = 0
        if i < 0:
            i = n - 1
    if magicSquare[int(i)][int(j)]:
        j = j - 2
        i = i + 1
        continue
    else:
        magicSquare[int(i)][int(j)] = num
        num = num + 1
    j = j + 1
    i = i - 1
print ("Magic Square for n =", n)
print ("Sum of each row or column",n * (n * n + 1) / 2, "\n")
for i in range(0, n):
    for j in range(0, n):
        print('%2d ' % (magicSquare[i][j]),end = '')
        if j == n - 1:
            print()


n=int(input("Number of rows of the Magic Square:"))
generateSquare(n)
```

output:



2. Python program to print the pattern

```
        *
      * *
    * * *
  * * * *
* * * * *
  * * * *
    * * *
      * *
        *
```

```
def pattern(n):
    k = 2 * n - 2
    for i in range(0, n-1):
        for j in range(0, k):
            print(end=" ")
        k = k - 2
        for j in range(0, i + 1):
```

```
            print("* ", end="")
        print("")
    k = -1
    for i in range(n-1,-1,-1):
        for j in range(k,-1,-1):
            print(end=" ")
        k = k + 2
        for j in range(0, i + 1):
            print("* ", end="")
        print("")
```

pattern(5)

output: