

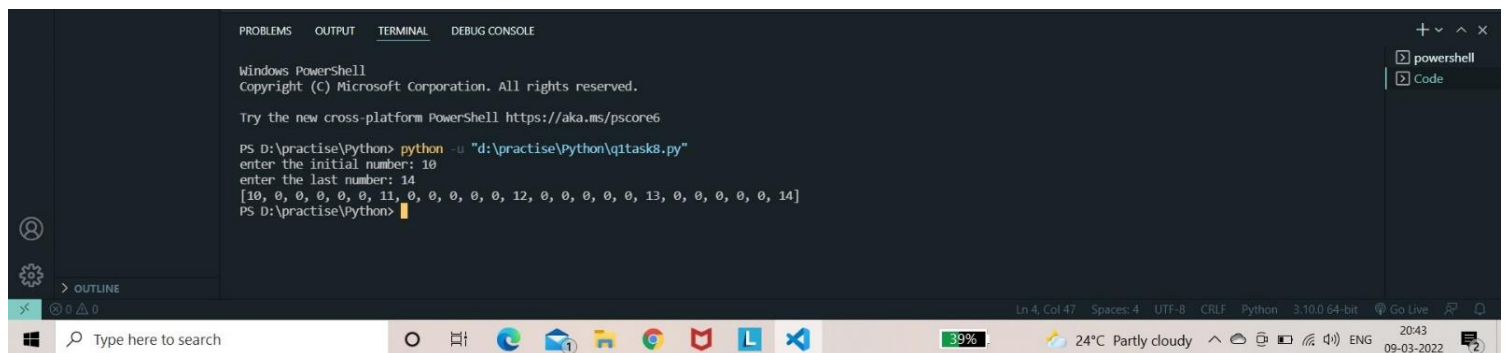
COGNIZANCE TASK-8

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CCE 1st year

Q1

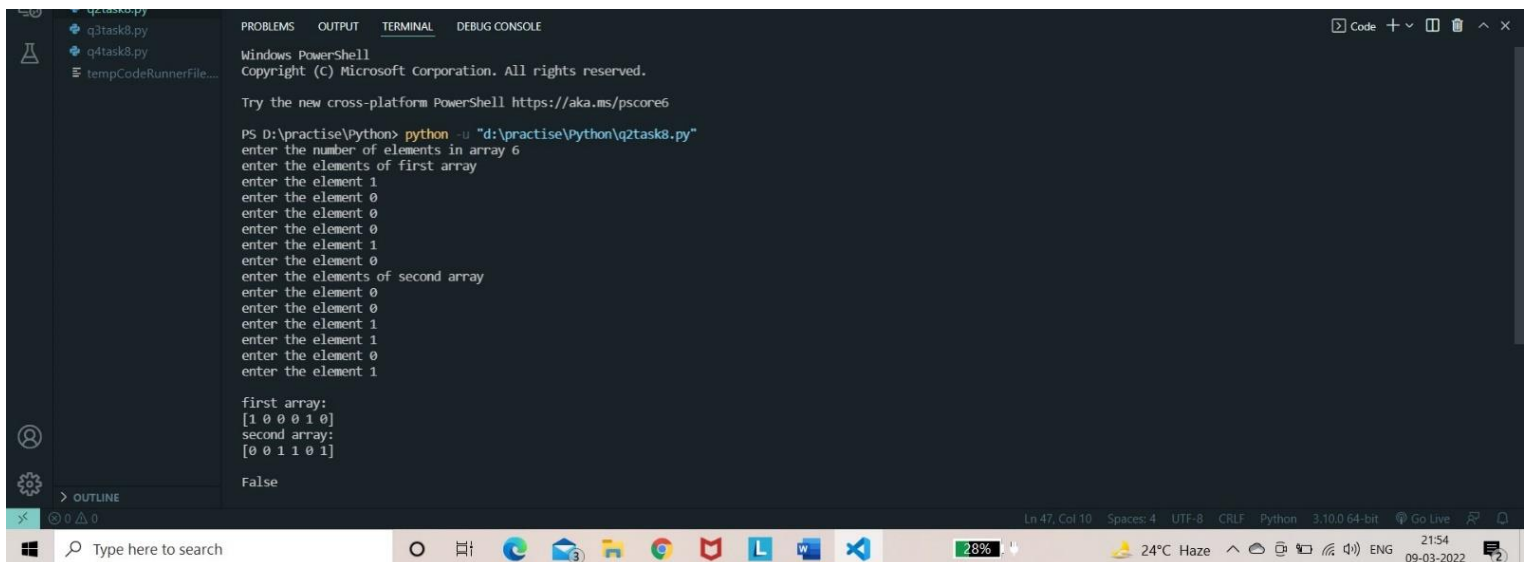


```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS D:\practise\Python> python -u "d:\practise\Python\q1task8.py"
enter the initial number: 10
enter the last number: 14
[10, 0, 0, 0, 0, 0, 0, 11, 0, 0, 0, 0, 12, 0, 0, 0, 0, 13, 0, 0, 0, 0, 14]
PS D:\practise\Python>
```

Q2



```
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PS D:\practise\Python> python -u "d:\practise\Python\q2task8.py"
enter the number of elements in array 6
enter the elements of first array
enter the element 1
enter the element 0
enter the element 0
enter the element 0
enter the element 1
enter the element 0
enter the elements of second array
enter the element 0
enter the element 0
enter the element 1
enter the element 1
enter the element 0
enter the element 1

first array:
[1 0 0 0 1 0]
second array:
[0 0 1 1 0 1]

False
```

Q3

```
PS D:\practise\Python> python -u "d:\practise\Python\q3task8.py"
1st
nan
2nd
True
3rd
False
4th
nan
5th
False
PS D:\practise\Python>
```

Q4

```
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PS D:\practise\Python> python -u "d:\practise\Python\q4task8.py"
enter the number of elements in series: 6
enter the element: amrita
enter the element: school
enter the element: of
enter the element: engineering
enter the element: chennai
enter the element: campus

Amrita School Of Engineering Chennai Campus
PS D:\practise\Python>
```

Q5 (a) addition of two NumPy arrays

```
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PS D:\practise\Python> python -u "d:\practise\Python\addition_of_matrix.py"
enter the number of rows
3
enter the number of columns
3
enter the elements for first array:
2
3
4
7
8
5
6
9
1
enter the elements for second array:
1
2
3
4
5
6
7
8
9
the first array is
[[2 3 4]
 [7 8 5]
 [6 9 1]]
the second array is
[[1 2 3]
 [4 5 6]
 [7 8 9]]
the sum of arrays is:
[[3 5 7]
 [11 13 11]
 [13 17 10]]
PS D:\practise\Python>
```

Q5 (b) Product of matrix

```
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PS D:\practise\Python> python -u "d:\practise\Python\matrix_multiplication.py"
enter the number of rows for first matrix
3
enter the number of columns for first matrix
2
enter the number of rows for second matrix
2
enter the number of columns for second matrix
3
enter the elements for first matrix
2
4
6
8
10
12
enter the elements for second matrix
1
3
5
7
9
11

the first matrix is
[[ 2  4]
 [ 6  8]
 [10 12]]
the second matrix is
[[ 1  3  5]
 [ 7  9 11]]

the product of matrices is
[[ 30 42 54]
 [ 62 90 118]
 [ 94 138 182]]
PS D:\practise\Python>
```

Case when the number of columns of first matrix is not equal to no. of rows of second matrix

```
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PS D:\github\cognizance\task-8> python -u "d:\github\cognizance\task-8\Q5(b)\matrix_multiplication.py"
enter the number of rows for first matrix
2
enter the number of columns for first matrix
3
enter the number of rows for second matrix
2
enter the number of columns for second matrix
3

the matrix multiplication is not possible as the number of column in first matrix are not equal to number of row in second matrix which is a necessary condition for matrix multiplication
PS D:\github\cognizance\task-8>
```