TASK - 8
PYTHON – MEDICORE LVL

DONE BY:

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1) Consider the vector [10, 11, 12, 13, 14], how to build a new vector with 5 consecutive zeros interleaved between each value?

OUTPUT:

```
IDLE Shell 3.10.2                                                    —    □    X

File  Edit  Shell  Debug  Options  Window  Help

    Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (AMD64)] on win32
    Type "help", "copyright", "credits" or "license()" for more information.
>>>
    =========================== RESTART: D:\TASK-8\Q1.py ===========================
    Q1) To build a new vector with 5 consecutive zeros interleaved between each value
    [10.  0.  0.  0.  0.  0. 11.  0.  0.  0.  0.  0. 12.  0.  0.  0.  0.  0.
     13.  0.  0.  0.  0.  0. 14.]
>>>
                                                                        Ln: 8  Col: 0
```

2) Consider two random array A anb B, check if they are equal

OUTPUT:

```
IDLE Shell 3.10.2                                                    —    □    X

File  Edit  Shell  Debug  Options  Window  Help

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>>>
    =========================== RESTART: D:\TASK-8\Q2.py ===========================
    Q2) TO CHECK THE ARRAYS ARE EQUAL
    FIRST ARRAY:
    [0 1 1 0 0 1]
    SECOND ARRAY:
    [1 1 1 1 1 1]
    False
>>>
>>>
                                                                        Ln: 12  Col: 0
```

3) What is the result of the following expression ?

print(0 * np.nan)

print(np.nan != np.nan)

print(np.inf > np.nan)

print(np.nan - np.nan)

print(0.3 == 3 * 0.1)

OUTPUT:

```
IDLE Shell 3.10.2                                                    —   □   X

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>>>
    =========================== RESTART: D:\TASK-8\Q3.py ===========================
    Q3) RESULT FOR GIVEN EXPRESSION
    nan
    True
    False
    nan
    False
>>> |
                                                                      Ln: 11  Col: 0
```

4) Convert the first character of each element in a series to uppercase?

OUTPUT:

```
IDLE Shell 3.10.2                                                    —   □   X

File  Edit  Shell  Debug  Options  Window  Help

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>>>
    =========================== RESTART: D:\TASK-8\Q4.py ===========================

    Q4) TO CONVERT THE FIRST CHARACTER OF EACH ELEMENT IN A SERIES TO UPPERCASE
    0          Amrita
    1          School
    2              Of
    3     Engineering
    4         Chennai
    5          Campus
    dtype: object
>>>
                                                                      Ln: 14  Col: 0
```
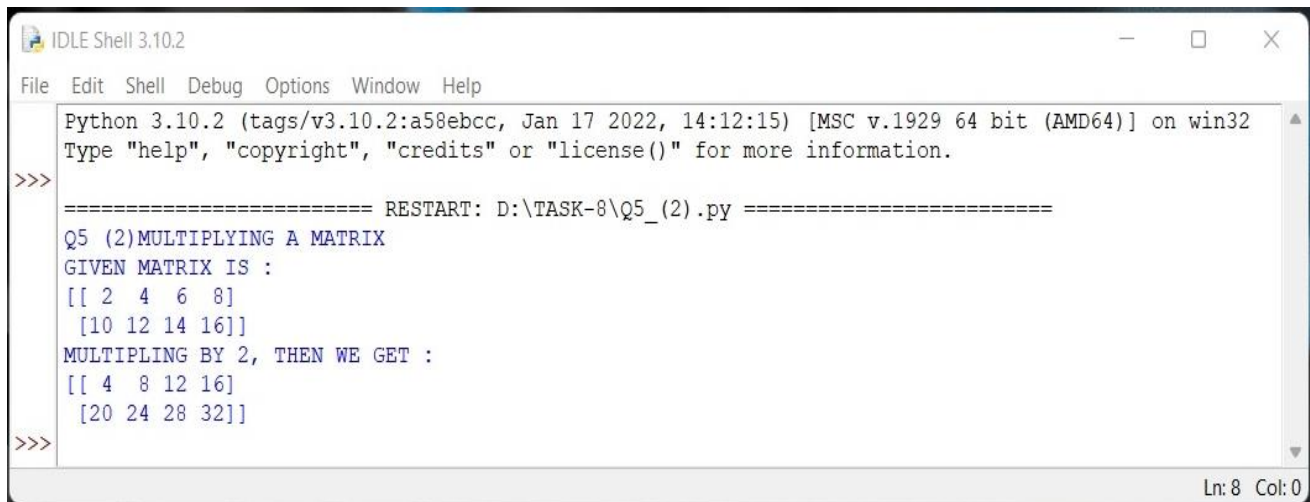
5) (1) addition of 2 numpy arrays

OUTPUT:

```
IDLE Shell 3.10.2                                                    —   □   X

File  Edit  Shell  Debug  Options  Window  Help

    Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (AMD64)] on win32
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>>>
    =========================== RESTART: D:\TASK-8\Q5_(1).py ===========================
    Q5 (1)ADDITION OF 2 NUMPY ARRAYS
    FIRST NUMBER :  20
    SECOND NUMBER :  28
    OUTPUT:  48
>>>
                                                                      Ln: 9  Col: 0
```

(2) Multiplying a matrix

OUTPUT:

```
IDLE Shell 3.10.2                                                    —    □    ×
File  Edit  Shell  Debug  Options  Window  Help
      Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (AMD64)] on win32
      Type "help", "copyright", "credits" or "license()" for more information.
>>>
      ========================= RESTART: D:\TASK-8\Q5_(2).py =========================
      Q5 (2)MULTIPLYING A MATRIX
      GIVEN MATRIX IS :
      [[ 2  4  6  8]
       [10 12 14 16]]
      MULTIPLING BY 2, THEN WE GET :
      [[ 4  8 12 16]
       [20 24 28 32]]
>>>
                                                                            Ln: 8  Col: 0
```