Task-8

Q1)

```
Original vector is
[10 11 12 13 14]

New vector is
[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.]

Process finished with exit code 0
```

Q2)

```
Enter the size of array:6

Enter the elements of first array
Element:1
Element:0
Element:1
Element:1
Element:0
Element:1

First array:
[1. 0. 1. 1. 0. 1.]

Enter the elements of second array
Element:0
Element:1
Element:1
Element:1
Element:0
Element:1

Second array:
[0. 1. 1. 1. 0. 1.]

False
```

Q3)

```
nan

True

False

nan

False

Process finished with exit code 0
```

Q4)

```
0          Amrita
1          School
2              Of
3     Engineering
4         Chennai
5          Campus
dtype: object
```

Q5)

1. Addition of 2 numpy arrays:

```
x1: [9 5 0 6]
x2: [7 7 8 1]
x1 + x2 = x3 = : [16 12  8  7]

Process finished with exit code 0
```

3. Identity Matrix:

```
C:\Users\nagac\PycharmProjects\Cogniza
1  0  0  0  0
0  1  0  0  0
0  0  1  0  0
0  0  0  1  0
0  0  0  0  1

Process finished with exit code 0
|
```