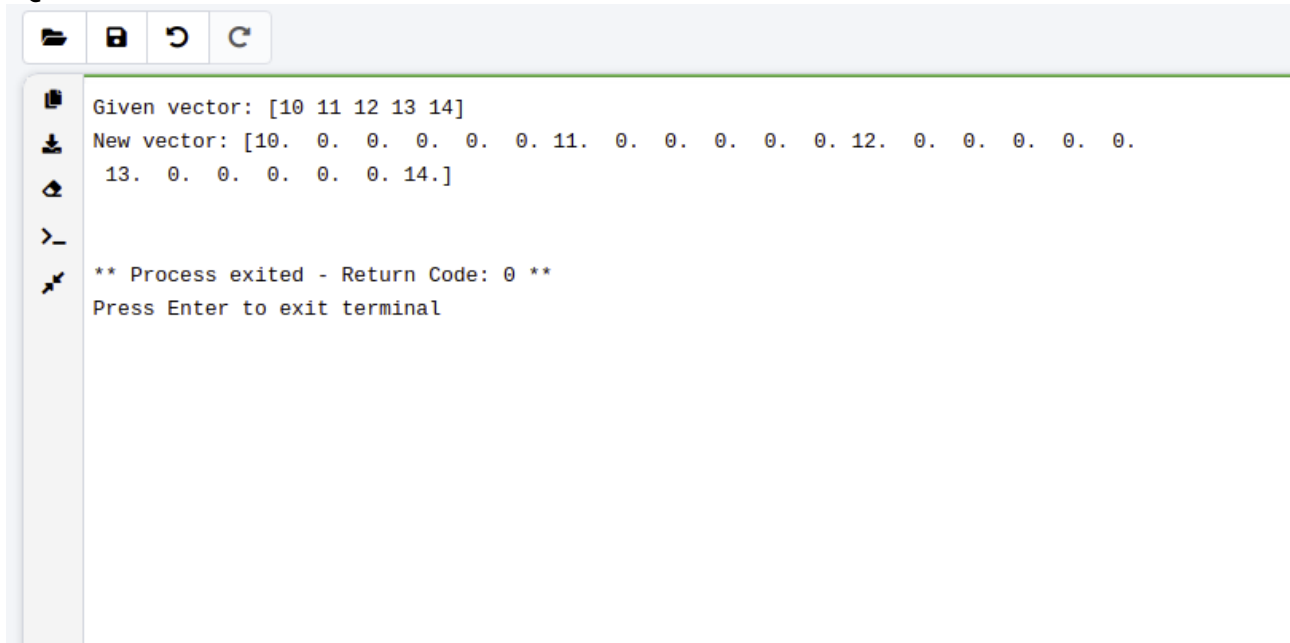


Task-8

Python – Mediocre Level

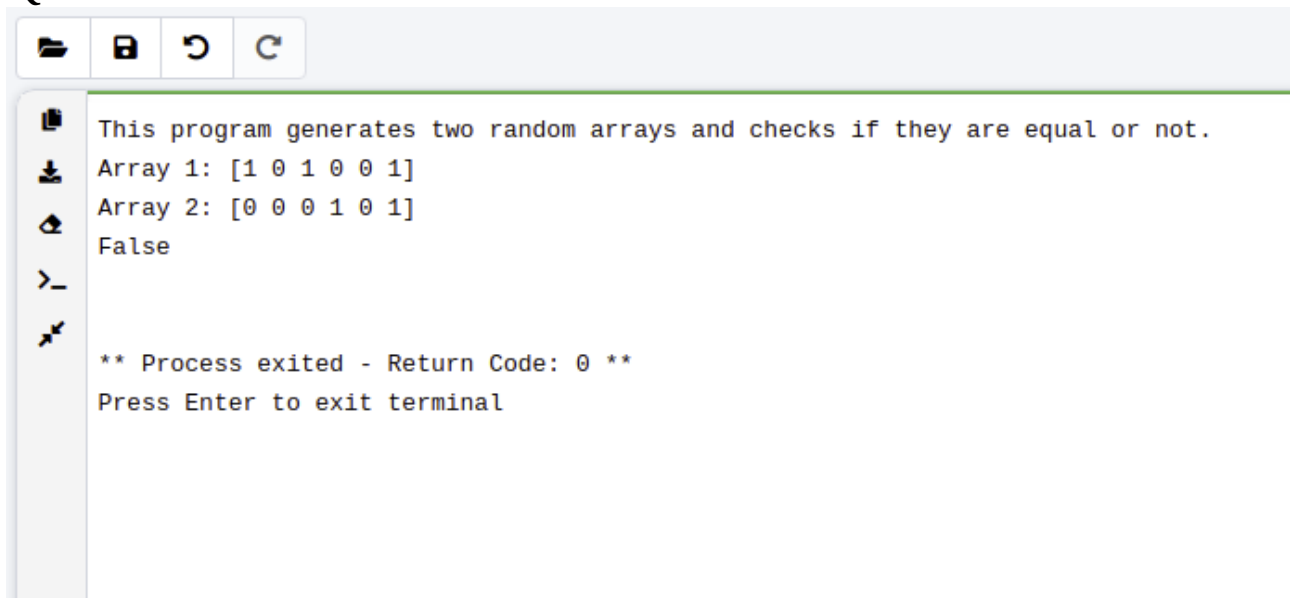
Question-1:



A terminal window with a light blue header bar containing icons for file operations. The terminal output shows a Python script that defines two vectors. The first vector is [10, 11, 12, 13, 14]. The second 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.]. The script then compares the two vectors and prints the result. The terminal shows the process exited with a return code of 0.

```
Given vector: [10 11 12 13 14]
New vector: [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 exited - Return Code: 0 **
Press Enter to exit terminal
```

Question-2:



A terminal window with a light blue header bar containing icons for file operations. The terminal output shows a Python script that generates two random arrays and checks if they are equal. The first array is [1, 0, 1, 0, 0, 1] and the second array is [0, 0, 0, 1, 0, 1]. The script then compares the two arrays and prints the result. The terminal shows the process exited with a return code of 0.

```
This program generates two random arrays and checks if they are equal or not.
Array 1: [1 0 1 0 0 1]
Array 2: [0 0 0 1 0 1]
False
>_
** Process exited - Return Code: 0 **
Press Enter to exit terminal
```

Question-3:

```
nan
True
False
nan
False

** Process exited - Return Code: 0 **
Press Enter to exit terminal
```

Question-4:

```
Series with first letter of each element capitalised in index form:
0      Amrita
1      School
2         Of
3  Engineering
4      Chennai
5      Campus
dtype: object

As a sentence,
Amrita School Of Engineering Chennai Campus

** Process exited - Return Code: 0 **
Press Enter to exit terminal
```

Question-5iii:

```

The identity matrix is:
[[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 exited - Return Code: 0 **
Press Enter to exit terminal
```

Question-5iv:

```

Array: [1.8 0.3 7.8 4.5]
The type of this array is float64

The array type is changed using 'arr = arr.astype(np.int64)', so the type of the array now is int64
The converted array is: [1 0 7 4]

** Process exited - Return Code: 0 **
Press Enter to exit terminal
```

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