

Task-8

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

```
first: 10
last: 14
[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.]
```

2. Consider two random array A and B, check if they are equal

```
Enter size:3
Enter 1st array's element:1
Enter 1st array's element:2
Enter 1st array's element:3
Enter 2nd array's element:3
Enter 2nd array's element:4
Enter 2nd array's element:5
False
```

3. What is the result of the following expression?

```
nan
True
False
nan
False
```

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

```
Enter the string : love you till the sun dies
Love You Till The Sun Dies
```

5. Addition of 2 numpy arrays

```
Size: 3
Enter 1st array element:1
Enter 1st array element:2
Enter 1st array element:3
Enter 2nd array element:4
Enter 2nd array element:5
Enter 2nd array element:6
1st array : [1 2 3]
2nd array : [4 5 6]
Added array: [5 7 9]
```

6. Identity Matrix

```
Enter order of IO : 4
[[1. 0. 0. 0.]
 [0. 1. 0. 0.]
 [0. 0. 1. 0.]
 [0. 0. 0. 1.]]
```