Sree Chandana.M   **CH.EN.U4CSE20042**

Program-1

```
Size of array:5

Enter element:10

Enter element:11

Enter element:12

Enter element:13

Enter element:14
[10. 11. 12. 13. 14.]

New array:
[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.]
```

Program-2

```
1st array:100010
2nd array:001101
False
```

Program-3

```
nan
True
False
nan
False
```

Program-4

User Input:

```
Enter String: amrita school of engineering chennai campus
Original Series:
0    amrita school of engineering chennai campus
dtype: object
Amrita school of engineering chennai campus
```

Without user input:

```
Original Series:
0              amrita
1              school
2                  of
3   engineeringchennai
4              campus
dtype: object
Amrita School Of Engineeringchennai Campus
```

Program-5

5-1

```
Enter 1st num: 10
Enter 2nd num: 20
Result after Addition:  30
```

5-2

```
Enter order of 1st matrix:
3 3
Enter Row wise values:
Enter row 0 value:
0 1 2
Enter row 1 value:
1 2 3
Enter row 2 value:
2 3 4
Enter order of 2nd matrix:
3 3
Enter Row wise values:
Enter row 0 value:
1 2 3
Enter row 1 value:
2 3 4
Enter row 2 value:
0 1 2
Matrix 1:  [[0, 1, 2], [1, 2, 3], [2, 3, 4]]
Matrix 2:  [[1, 2, 3], [2, 3, 4], [0, 1, 2]]
Matrix Multiplication:
[2 5 8]
[ 5 11 17]
[ 8 17 26]
```

5-3

```
Enter dimension of identitiy matrix: 4
[[1 0 0 0]
 [0 1 0 0]
 [0 0 1 0]
 [0 0 0 1]]
```

5-4

```
Size of array: 5
Element: 1
Element: 2
Element: 3
Element: 4
Element: 5
[1. 2. 3. 4. 5.]
```

5-5

```
Initialised array
[1 2 3 4]
current shape of the array
(4,)
changing shape to 2,3
[[1 2]
 [3 4]]
```

5-6

```
[1 1 1 2 2 2 3 3 3 1 2 3 1 2 3 1 2 3]
```

5-7

```
(array([3, 6], dtype=int64),)
```