

COGNIZANCE

Tharaniesh P R

21257

QUESTION 1

```
main.py
import numpy as np
a = np.array([10,11,12,13,14])
print(a)
nz = 5
Z = np.zeros(len(a) + (len(a)-1)*(nz))
Z[nz:] = a
print(np.floor(Z))
```

```
main x
E:\PERSONAL\Projects\pythonProject1\venv\Scripts\python.exe E:/PERSONAL/Projects/pythonProject1/main.py
[10 11 12 13 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.]

Process finished with exit code 0
```

QUESTION 2

```
main.py x
1 import numpy as np
2 a=input("Enter The Array :").split()
3 a=np.array(list(map(int,a)))
4 b=input("Enter The Array :").split()
5 b=np.array(list(map(int,b)))
6 comparison = (a == b)
7 Condition= comparison.all()
8 if(Condition is True):
9     print(True)
10 else:
11     print(False)
```

```
main x
E:\PERSONAL\Projects\pythonProject1\venv\Scripts\python.exe E:/PERSONAL/Projects/pythonProject1/main.py
Enter The Array :1 0 0 0 1
Enter The Array :1 0 0 0 2
False

Process finished with exit code 0
```

QUESTION 3

```
dsn E:\PERSONAL\Projects\okdsn
venv library root
main.py
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atches and Consoles

1 import numpy as np
2 print(0 * np.nan)
3 print(np.nan != np.nan)
4 print(np.inf > np.nan)
5 print(np.nan - np.nan)
6 print(0.3 == 3 * 0.1)

main x
E:\PERSONAL\Projects\okdsn\venv\Scripts\python.exe E:/PERSONAL/Projects/okdsn/main.py
nan
True
False
nan
False
```

QUESTIONS 4

```
1 import pandas as pd
2 result=''
3 length=int(input("Enter The Length Of The Array:"))
4 statement=[input("Enter The Element:") for i in range(length)]
5 s_statement=pd.Series(statement)
6 for i in range(len(statement)):
7     result+=(" "+s_statement[i])
8 print(result.title())
9 if length==statement:
10     print("True")

if length==statement

main x
E:\PERSONAL\Projects\pythonProject1\venv\Scripts\python.exe E:/PERSONAL/Projects/pythonProject1/main.py
Enter The Length Of The Array:3
Enter The Element:amrita
Enter The Element:vishwa
Enter The Element:vidhyapeetam
Amrita Vishwa Vidhyapeetam

Process finished with exit code 0
```

QUESTION 5 (1)

```
import numpy as np
p = ([1, 2, 3], [3, 4, 8], [2, 3, 120])
q = ([1, 1, 6], [3, 4, 7], [6, 9, 4])
r = np.dot(p, q)
print(r)
```

main ×

E:\PERSONAL\Projects\pythonProject1\venv\Scripts\python.exe E:/PERSONAL/Projects/pythonProject1/main.py

```
[[ 25  36  32]
 [ 63  91  78]
 [380 509 864]]
```

Process finished with exit code 0

QUESTION 5 (2))

```
1 import numpy as np
2 q = np.identity(3)
3 print("\nMatrix a : \n", q)
```

main ×

E:\PERSONAL\Projects\pythonProject1\venv\Scripts\python.exe E:/PERSONAL/Projects/pythonProject1/main.py

Matrix a :

```
[[1. 0. 0.]
 [0. 1. 0.]
 [0. 0. 1.]]
```

Process finished with exit code 0