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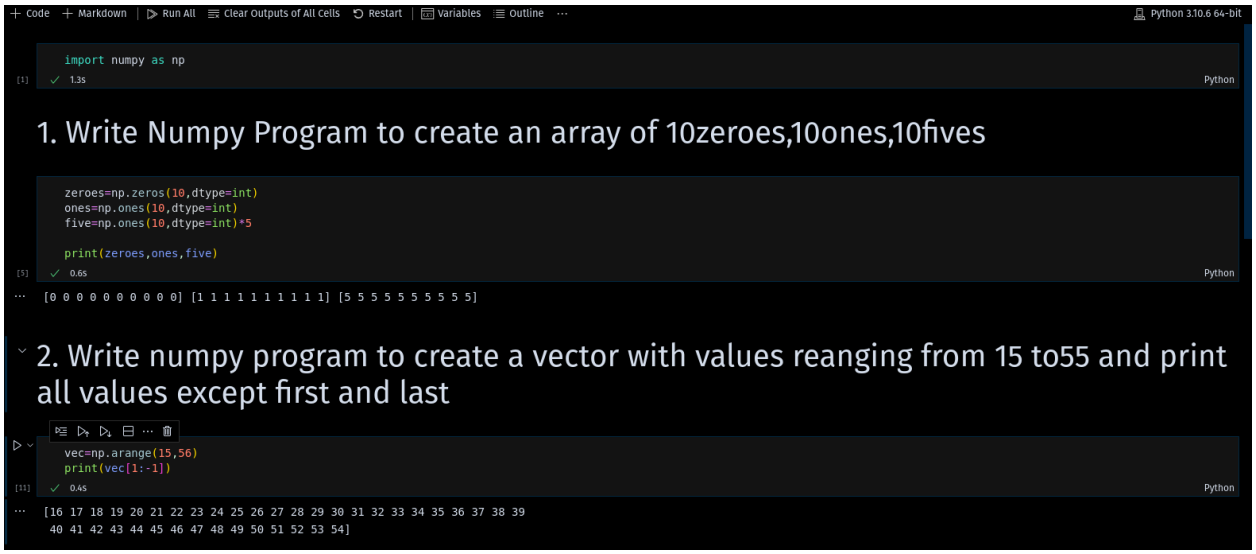

```
import numpy as np
```

1.3s Python

1. Write Numpy Program to create an array of 10zeroes,10ones,10fives

```
zeroes=np.zeros(10,dtype=int)
ones=np.ones(10,dtype=int)
five=np.ones(10,dtype=int)*5

print(zeroes,ones,five)
```

0.6s Python

```
[0 0 0 0 0 0 0 0 0 0] [1 1 1 1 1 1 1 1 1 1] [5 5 5 5 5 5 5 5 5 5]
```

2. Write numpy program to create a vector with values reanging from 15 to55 and print all values except first and last

```
vec=np.arange(15,56)
print(vec[1:-1])
```

0.4s Python

```
[16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39
 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54]
```

3. Write a numpy program to create a 3x3 identity matrix

```
identity=np.identity(3)
print(identity)
```

0.5s Python

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

4. Write a numpy program to create a 5x5 zero matrix with elements on the main diagonal equal to 1,2,3,4,5

```
matrix5x5=np.diag([1,2,3,4,5])
print(matrix5x5)
```

0.1s Python

```
[[1 0 0 0 0]
 [0 2 0 0 0]
 [0 0 3 0 0]
 [0 0 0 4 0]
 [0 0 0 0 5]]
```

5. Write a numpy program to find missing data in a given array

```
nums = np.array([[8, 4, np.nan, 2],[10, 13, 12, 0],[8, np.nan, 10, np.nan]])
print(np.isnan(nums))
```

0.6s Python

```
[[False False  True False]
 [False False False False]
 [False  True False  True]]
```