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Kelas : Datamining D

1. f. import numpy as np

```
arr = np.array([[4,4,5],[7,6,4],[9,7,4],[6,3,7]])  
print(arr)
```

g. import numpy as np

```
arr = np.array([[[7,8,5],[4,7,7],[7,1,9],[5,4,10]],  
                [[2,1,2],[9,8,5],[3,7,3],[4,9,9]],  
                [[2,9,3],[2,4,8],  
                 [1,6,6],[8,1,3]])]  
print(arr)
```

2. d. import numpy as np

```
arr = np.array([[1,8,8,2],[8,2,1,2],[10,1,4,7],[1,4,7,8],[8,2,3,4]])  
print("array awal")  
print(arr)
```

```
arr[1::2] += 1
```

```
print("baris index ganjil +1")  
print(arr)
```

```
arr[:,0::2] += 2
```

```
print("kolom index genap +2")  
print(arr)
```

e. import numpy as np

```
arr = np.array([[[7,8,5],[4,7,7],[7,1,9],[5,4,10]],  
                [[2,1,2],[9,8,5],[3,7,3],[4,9,9]],  
                [[2,9,3],[2,4,8],  
                 [1,6,6],[8,1,3]])]  
print("array awal")
```

```
print(arr)
```

```
print("array flip")
```

```
print(arr[::-1])
```

2. f. import numpy as np

```
arr = np.array([[[7,8,5],[4,7,7],[7,1,9],[5,4,10]],  
                [[2,1,2],[9,8,5],[3,7,3],[4,9,9]],  
                [[2,9,3],[2,4,8],[1,6,6],[8,1,3]]])
```

```
print("array awal")
```

```
print(arr)
```

```
print("array 2D 6x6")
```

```
x = arr.reshape(6,6)
```

```
Print(x)
```

3. e. import numpy as np

```
arr = np.array([[5,10,10,7],[7,8,4,10],[9,10,2,5],  
                [1,8,9,3],[6,10,5,2],[4,6,9,9]])
```

```
print("array awal")
```

```
print(arr)
```

```
arrsplit = np.array_split(arr, 2, axis = 1)
```

```
split1 = np.vsplit(arrsplit[0], [3])
```

```
split2 = np.vsplit(arrsplit[1], [3])
```

```
a = split1[0]
```

```
b = split1[1]
```

```
c = split2[0]
```

```
d = split2[1]
```





```
conct1 = np.concatenate((d,c), axis = 0)
```

```
conct2 = np.concatenate((b,a), axis = 0)
```

```
newarr = np.concatenate((conct1,conct2), axis = 1)
```

```
print("hasil perubahan")
```

```
print(newarr)
```

 1f.py 1g.py 2d.py 2e.py 2f.py 3e.py 1f.py > ...

```
1 import numpy as np
2 arr = np.array([[4,4,5], [7,6,4], [9,7,4], [6,3,7]])
3 print(arr)
4 |
```

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PROBLEMS

DEBUG CONSOLE

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kelas/datmin/1f.pyppData/Local/Programs/Python/Python38-32/python.exe d:/Coding/k

```
[[4 4 5]
 [7 6 4]
 [9 7 4]
 [6 3 7]]
```

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\$

1f.py

1g.py



2d.py

2e.py

2f.py

3e.py

1g.py > ...

```
1 import numpy as np
2 arr = np.array([[[7,8,5], [4,7,7], [7,1,9], [5,4,10]],
3 [[2,1,2], [9,8,5], [3,7,3], [4,9,9]],
4 [[2,9,3], [2,4,8], [1,6,6], [8,1,3]]])
5 print(arr)
6
```

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```
$ C:/Users/ZephZ/AppData/Local/Programs/Python/Python38-32/python.exe d:/Coding/kelas/datmin/1g.py
```

```
[[[ 7  8  5]
 [ 4  7  7]
 [ 7  1  9]
 [ 5  4 10]]
```

```
[[ 2  1  2]
 [ 9  8  5]
 [ 3  7  3]
 [ 4  9  9]]
```

```
[[ 2  9  3]
 [ 2  4  8]
 [ 1  6  6]
 [ 8  1  3]]]
```

```
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```

```
$
```

1f.py

1g.py

2d.py

X

2e.py

2f.py

3e.py

2d.py > ...

```
1  import numpy as np
2  arr=np.array([
3      [1,8,8,2],
4      [8,2,1,2],
5      [10,1,4,7],
6      [1,4,7,8],
7      [8,2,3,4]
8  ])
9  print("array awal")
10 print(arr)
11
12 arr[1::2] +=1
13 print("baris index ganjil + 1")
14 print(arr)
15
16 arr[:,0::2] +=2
17 print("kolom index genap + 2")
18 print(arr)
19
```

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```
$ C:/Users/ZephZ/AppData/Local/Programs/Python/Python38-32/python.exe d:/Coding/kelas/datmin/2d.py
array awal
[[ 1  8  8  2]
 [ 8  2  1  2]
 [10  1  4  7]
 [ 1  4  7  8]
 [ 8  2  3  4]]
baris index ganjil + 1
[[ 1  8  8  2]
 [ 9  3  2  3]
 [10  1  4  7]
 [ 2  5  8  9]
 [ 8  2  3  4]]
kolom index genap + 2
[[ 3  8 10  2]
 [11  3  4  3]
 [12  1  6  7]
 [ 4  5 10  9]
 [10  2  5  4]]
```


1f.py

1g.py

2d.py

2e.py

X

2f.py

3e.py

2e.py > ...

```
1 import numpy as np
2 arr = np.array([
3     [[7,8,5], [4,7,7], [7,1,9], [5,4,10]],
4     [[2,1,2], [9,8,5], [3,7,3], [4,9,9]],
5     [[2,9,3], [2,4,8], [1,6,6], [8,1,3]]
6 ])
7 print("array awal")
8 print(arr)
9 print("array flip")
10 print(arr[::-1])
11
```

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DEBUG CONSOLE

array awal

```
[[[ 7  8  5]
   [ 4  7  7]
   [ 7  1  9]
   [ 5  4 10]]]
```

```
[[ 2  1  2]
 [ 9  8  5]
 [ 3  7  3]
 [ 4  9  9]]]
```

```
[[ 2  9  3]
 [ 2  4  8]
 [ 1  6  6]
 [ 8  1  3]]]
```

array flip

```
[[[ 2  9  3]
   [ 2  4  8]
   [ 1  6  6]
   [ 8  1  3]]]
```

```
[[ 2  1  2]
 [ 9  8  5]
 [ 3  7  3]
 [ 4  9  9]]]
```

```
[[ 7  8  5]
 [ 4  7  7]
 [ 7  1  9]
 [ 5  4 10]]]
```

1f.py

1g.py

2d.py

2e.py

2f.py

X

3e.py

2f.py > ...

```
1  import numpy as np
2  arr = np.array([
3      [[7,8,5], [4,7,7], [7,1,9], [5,4,10]],
4      [[2,1,2], [9,8,5], [3,7,3], [4,9,9]],
5      [[2,9,3], [2,4,8], [1,6,6], [8,1,3]]
6  ])
7  print("array awal")
8  print(arr)
9  print("array 2D 6x6")
10 x = arr.reshape(6,6)
11 print(x)
12
```

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PROBLEMS

DEBUG CONSOLE

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\$ C:/Users/ZephZ/AppData/Local/Programs/Python/Python38-32/python.exe d:/Coding/kelas/datmin/2f.py

array awal

```
[[[ 7  8  5]
   [ 4  7  7]
   [ 7  1  9]
   [ 5  4 10]]
```

```
[[ 2  1  2]
 [ 9  8  5]
 [ 3  7  3]
 [ 4  9  9]]
```

```
[[ 2  9  3]
 [ 2  4  8]
 [ 1  6  6]
 [ 8  1  3]]]
```

array 2D 6x6

```
[[ 7  8  5  4  7  7]
 [ 7  1  9  5  4 10]
 [ 2  1  2  9  8  5]
 [ 3  7  3  4  9  9]
 [ 2  9  3  2  4  8]
 [ 1  6  6  8  1  3]]]
```

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\$

1f.py 1g.py 2d.py 2e.py 2f.py 3e.py X

3e.py > ...

```
1 import numpy as np
2 arr = np.array([
3     [5, 10, 10, 7],
4     [7, 8, 4, 10],
5     [9, 10, 2, 5],
6     [1, 8, 9, 3],
7     [6, 10, 5, 2],
8     [4, 6, 9, 4]
9 ])
10 print("array awal")
11 print(arr)
12 arrsplit = np.array_split(arr, 2, axis = 1)
13 split1 = np.vsplit(arrsplit[0],[3])
14 split2 = np.vsplit(arrsplit[1],[3])
15 a = split1[0]
16 b = split1[1]
17 c = split2[0]
18 d = split2[1]
19 conct1 = np.concatenate((d, c), axis = 0)
20 conct2 = np.concatenate((b, a), axis = 0)
21 newarr = np.concatenate((conct1, conct2), axis = 1)
22 print("hasil perubahan")
23 print(newarr)
```

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```
$ C:/Users/ZephZ/AppData/Local/Programs/Python/Python38-32/python.exe d:/Coding/kelas/datmin/3e.py
array awal
[[ 5 10 10  7]
 [ 7  8  4 10]
 [ 9 10  2  5]
 [ 1  8  9  3]
 [ 6 10  5  2]
 [ 4  6  9  4]]
hasil perubahan
[[ 9  3  1  8]
 [ 5  2  6 10]
 [ 9  4  4  6]
 [10  7  5 10]
 [ 4 10  7  8]
 [ 2  5  9 10]]
```