

Quiz time!

🕒 Quiz Ended!

```
a = np.array([0,1,2,3,4,5])  
mask = (a%2 == 0)  
a[mask] = -1
```

What'll be the value of a?

49 users have participated

A [0,1,2,3,4,5] 6%

B [-1,1,-1,1,-1,1] 33%

✓ C [-1,1,-1,3,-1,5] 45%

✗ D Error 16%

$[-1, 1, -1, 3, -1, 5]$
 $[0, 1, 2, 3, 4, 5]$
 $[\textcircled{T} \text{ f } \textcircled{T} \text{ f } \textcircled{T} \text{ f}]$

$a[\text{mask}] = -1$

Quiz time!

🕒 Quiz Ended!

```
a = np.array([0,2,3])  
b = np.array([1,3,5])  
What'll be the output of a >= b?
```

49 users have participated

A True

4%

B False

29%

C Error

4%

✓ D [False, False, False]

63%

↓ ↓ ↓
a = [0, 2, 3]
b = [1, 3, 5]

a >= b

[F F F]

np.any

F
F

Quiz time!

🕒 Quiz Ended!

```
a=[[1 2 3]
   [4 5 6]
   [7 8 9]]
print(np.max(a, axis=0))
```

Output?

48 users have participated



A

[7, 8, 9]

48%

B

[3, 6, 9]

42%

C

[12, 15, 18]

6%

D

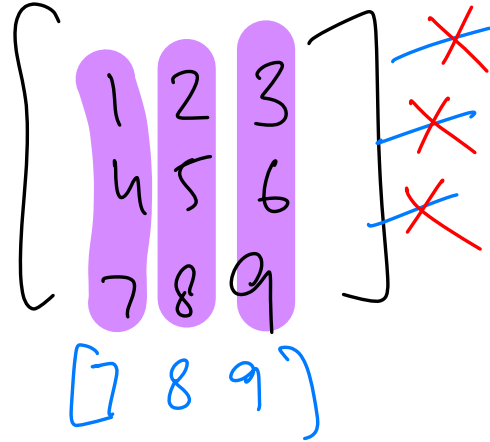
[6, 15, 24]

4%

2D

6

3



Quiz time!

🕒 Quiz Ended!

```
a = [1, 2, 3, 4, 5]
b = [8, 7, 6]
a[2:] = b[:-1]
```

Output of a?

35 users have participated

A Error

20%

B [1, 2, 6, 7, 8]

43%

C [1, 2, 8, 7, 6]

29%

D [1, 2, 3, 4, 5, 8, 7, 6]

9%

$a = [1, 2, 3, 4, 5]$

$b = [8, 7, 6]$

$a[2:] = [3, 4, 5]$

$b[::-1] = [6, 7, 8]$

$a[1, 2, 6, 7, 8]$

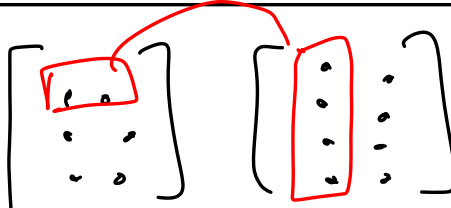
MATRIX MULTIPLICATION

$$\begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \end{bmatrix}^{(2,3)} \times \begin{bmatrix} 1 & 4 \\ 2 & 5 \\ 3 & 6 \end{bmatrix}^{(3,2)} =$$

(n, m) (a, b)
 $(m = a)$

$$\begin{bmatrix} 1 \times 1 + 2 \times 2 + 3 \times 3 & 1 \times 4 + 2 \times 5 + 3 \times 6 \\ 4 \times 1 + 5 \times 2 + 6 \times 3 & 4 \times 4 + 5 \times 5 + 6 \times 6 \end{bmatrix}^{(2,2)}$$

$(n \times b)$

① $(3, 2), (4, 2) \times$ 

② $(3, \textcircled{1})_A$ $(\textcircled{1}, 3)_B$ $\left[\begin{array}{ccc} \textcircled{1} & \textcircled{1} & \textcircled{1} \\ \textcircled{1} & \textcircled{1} & \textcircled{1} \\ \textcircled{1} & \textcircled{1} & \textcircled{1} \end{array} \right]$ $(3, 3)$

③ $(\textcircled{1}, 3)_B$ $(3, \textcircled{1})_A$ $\left[\begin{array}{ccc} \textcircled{1} & \textcircled{1} & \textcircled{1} \\ \textcircled{1} & \textcircled{1} & \textcircled{1} \\ \textcircled{1} & \textcircled{1} & \textcircled{1} \end{array} \right] \cdot \left[\begin{array}{c} \textcircled{1} \\ \textcircled{1} \\ \textcircled{1} \end{array} \right]_{(1 \times 1)}$

$A \text{ matrix } B \neq B \text{ matrix } A$

$\left[\begin{array}{ccc} \textcircled{1} & 2 & 3 \\ & \textcircled{1} & 3 \end{array} \right]$ $\left[\begin{array}{c} \textcircled{4} \\ 5 \\ 6 \\ \textcircled{3, 1} \end{array} \right]$

$[1 \times 4 + 2 \times 5 + 3 \times 1] = \left[\begin{array}{c} 32 \\ (1, 1) \end{array} \right]$

DOT PRODUCT

$$\hookrightarrow a = [1, 2, 3, 4] \quad \begin{matrix} \text{Vectors} \\ (10) \end{matrix}$$

$$b = [4, 5, 6, 7] \quad \begin{matrix} \text{Vectors} \\ (20) \end{matrix}$$

$$4 + 10 + 18 + 28 = (60)$$

- ① Scalar (5)
- ② Vector [1, 2, 3]
- ③ Matrix $\begin{bmatrix} 1, 2, 3 \\ 3, 4, 5 \\ 6, 7, 8 \end{bmatrix}$

np.dot

✓
✓
✓

np.matmul
X @

✓
✓

1D x 1D

✓

✓

2D x 2D

✓

✓

1D x 0D

✓

X

2D x 0D

✓

X

$(\bar{S}64, \bar{S}64, 3)$
d γ C

(R, G, B)

$(0, 255)$

channels

$(26, 255, 39) \rightarrow$ particular
color

