

array-functions

May 23, 2024

#TASK - 2

##QUESTION-1

```
[14]: import numpy as np
```

```
[15]: # GENERATE A NUMPY ARRAY WITH RANDOM FUNCTION
from numpy import random
arr_1=random.random(10)
print(arr_1)
```

```
[0.11264355 0.72986671 0.45855566 0.70103755 0.92597008 0.35558491
0.00765349 0.66946506 0.49311121 0.9532242 ]
```

```
[16]: #ACCESS ELEMENT AT SECOND INDEX OF NUMPY ARRAY
print(arr_1[1])
```

```
0.729866705938607
```

```
[17]: #SLICE THE FIRST THREE ELEMENTS
print(arr_1[:3])
```

```
[0.11264355 0.72986671 0.45855566]
```

```
[18]: #CREATE A 2D ARRAY WITH RANDOM NUMBERS
arr_1=random.random(10)
arr_2=arr_1.reshape(2,5)
print(arr_2)
```

```
[[0.91691031 0.99736836 0.93908441 0.0130602 0.76478502]
 [0.47579042 0.9405569 0.60029577 0.22272053 0.05975064]]
```

```
[19]: #SLICE FIRST TWO ROWS AND COLUMNS OF ARRAY
print(arr_2[:2,:2])
```

```
[[0.91691031 0.99736836]
 [0.47579042 0.9405569 ]]
```

##QUESTION-2

```
[20]: #CREATE AN ARRAY WITH VALUES OF 1 TO 10 WITH STEP 2  
arr_1=np.arange(1,11,2)  
print(arr_1)
```

```
[1 3 5 7 9]
```

```
[21]: #CREATE A 2*3 ARRAY USING RESHAPE 1D ARRAY WITH VALUES 1 TO 6  
arr_2=np.arange(1,7).reshape(2,3)  
print(arr_2)
```

```
[[1 2 3]  
 [4 5 6]]
```

##QUESTION -3

```
[22]: #Create a array of five evenly spaced values between 0 and 1  
arr_1=np.linspace(0,1,5)  
print(arr_1)
```

```
[0.  0.25 0.5  0.75 1.  ]
```

```
[23]: #CREATE A 3*3 ARRAY FILLED WITH ONES  
arr_2=np.ones((3,3))  
print(arr_2)
```

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

```
[24]: #CREATE A 3*3 ARRAY FILLED WITH ONES ON DIAGONAL  
arr_3=np.eye(3)  
print(arr_3)
```

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

```
[26]: #CREATE A 3*3 ARRAY FILLED WITH ONES  
arr_4=np.zeros((3,3))  
print(arr_4)
```

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