NumPy Exercises in Python

NumPy is a Python package providing fast, flexible, and expressive data structures designed to make working with 'relational' or 'labeled' data both easy and intuitive. It aims to be the fundamental high-level building block for doing practical, real world data analysis in Python.

The best way we learn anything is by practice and exercise questions. Here you have the opportunity to practice the NumPy concepts by solving the exercises starting from basic to more complex exercises. A sample solution is provided for each exercise. It is recommended to do these exercises by yourself first before checking the solution.

Hope, these exercises help you to improve your NumPy coding skills. Currently, following sections are available, we are working hard to add more exercises .... Happy Coding!

Exercises

Kindly attempt all exercises before looking at the solutions at the solutions section.

Exercise 1: Write a NumPy program to create an array of 10 zeros, 10 ones, 10 fives.

Hint:

array_1 = np.zeros()

print (array)

Exercise 2: Write a NumPy program to create an array of the integers from 30 to 70.

Hint:

Recall/Research the .arange() method in NumPy

Exercise 3: Write a NumPy program to create an array of all the even integers from 30 to 70.

Hint:

Recall/Research the .arange() method in NumPy

Exercise 4: Write a NumPy program to create a 3x3 identity matrix**.**

Hint:

Recall/Research the .identity() method in NumPy

Exercise 5: Write a NumPy program to create a 3x4 matrix filled with values from 10 to 21**.**

Hint:

Recall/Research the .arange() and .reshape() methods in NumPy

Solutions

Exercise 1

```
import numpy as np
array=np.zeros(10)
print("An array of 10 zeros:")
print(array)
array=np.ones(10)
print("An array of 10 ones:")
print(array)
array=np.ones(10)*5
print("An array of 10 fives:")
print(array)
```

Exercise 2

```
import numpy as np
array=np.arange(30,71)
print("Array of the integers from 30 to70")
print(array)
```

Exercise 3

```
import numpy as np
array=np.arange(30,71,2)
print("Array of all the even integers from 30 to 70")
print(array)
```

Exercise 4

```
import numpy as np
array_2D=np.identity(3)
print('3x3 matrix:')
print(array_2D)
```

Exercise 5

```
import numpy as np
m= np.arange(10,22).reshape((3, 4))
print(m)
```