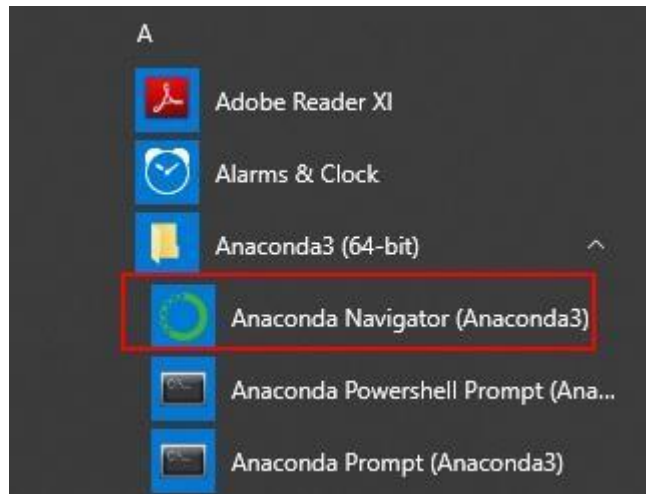


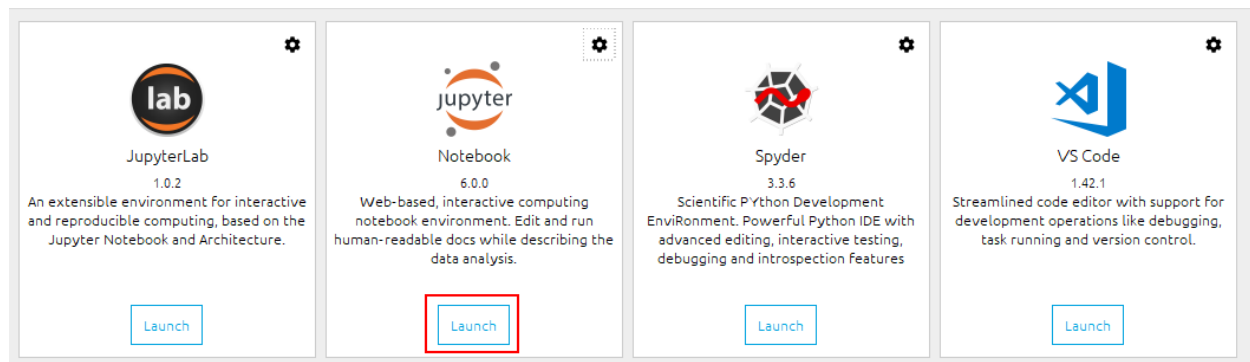
Module 4: Hands-On: 2

Numpy Operations

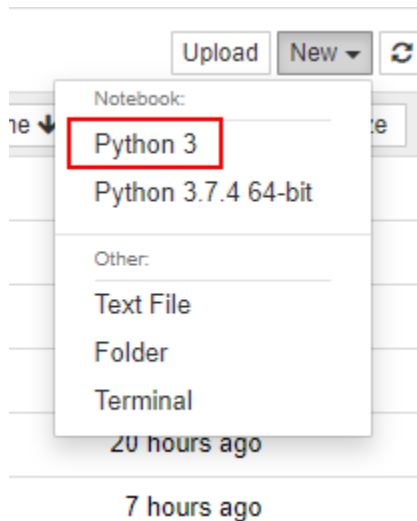
Step 1: Open Anaconda Navigator



Step 2: Click on Launch button under Jupyter notebooks.



Step 3: After the notebook opens click on new and Python 3.



Step 4: Import numpy by typing the following code in the notebook and run it by pressing shift + enter

```
In [1]: import numpy as np
```

Step 5: Create np array of zeroes of size (2, 3) run the following code.

```
In [4]: # Create np array of zeroes of size (2, 3)
np.zeros((2, 3))
```

```
Out[4]: array([[0., 0., 0.],
               [0., 0., 0.]])
```

Step 6: Flatten 2D np Array to 1d np array.

```
In [5]: # Flatten 2D np Array to 1d np array from a python list
arr = np.array([[1, 2, 3], [4, 5, 6]])
arr.ravel()
```

```
Out[5]: array([1, 2, 3, 4, 5, 6])
```

Step 7: Convert 1D np Array to 2d np array from a python list:

```
In [6]: # Convert 1D np Array to 2d np array from a python list  
arr = np.array([1, 2, 3, 4, 5, 6])  
arr.reshape((2, 3))
```

```
Out[6]: array([[1, 2, 3],  
               [4, 5, 6]])
```

Step 8: Create np array and sort sort

```
In [7]: # Create np array and sort sort  
arr = np.array([1, 3, 2, 6, 5, 4])  
arr.sort()  
arr
```

```
Out[7]: array([1, 2, 3, 4, 5, 6])
```

Step 9: Slice an np array to create another array without the first two elements of the original array

```
In [8]: # Slice an np array to create another array without the first two elements of the original array  
arr[2:]
```

```
Out[8]: array([3, 4, 5, 6])
```