NumPy - Byte Swapping

We have seen that the data stored in the memory of a computer depends on which architecture the CPU uses. It may be little-endian (least significant is stored in the smallest address) or big-endian (most significant byte in the smallest address).

numpy.ndarray.byteswap()

The **numpy.ndarray.byteswap()** function toggles between the two representations: bigendian and little-endian.

Live Demo

```
import numpy as np

a = np.array([1, 256, 8755], dtype = np.int16)


print 'Our array is:'

print a


print 'Representation of data in memory in hexadecimal form:'

print map(hex,a)

# byteswap() function swaps in place by passing True parameter


print 'Applying byteswap() function:'

print a.byteswap(True)


print 'In hexadecimal form:'

print map(hex,a)

# We can see the bytes being swapped
```

It will produce the following output –

```
Our array is:
[1 256 8755]

Representation of data in memory in hexadecimal form:
['0x1', '0x100', '0x2233']

Applying byteswap() function:
[256 1 13090]

In hexadecimal form:
['0x100', '0x1', '0x3322']
```