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`Information Retrieval in High Dimensional Data`

`Lab #1`, 19.10.2017

NumPy Basics

Task 1. In this task, we will familiarize ourselves with some basic NumPy functionalities. Make sure that it is imported to your IPython shell.

a) Generate an arbitrary one-dimensional array `n` with `n.shape=(8,)` and display it

b) Create a new array `n_odd` which consists of the odd entries of `n`. Display it.

c) Create a new array `n_rev` which contains the entries of `n` in reverse order. Display it.

d) What would be the output of the following code?

```
import numpy as np
a = np.array([1, 2, 3, 4, 5])
b = a[1:4]
b[0] = 200
print(a[1])
```

e) Create a two-dimensional array called `m` with `m.shape=(3,4)` and display it

f) Create another array `m_revrowel` which contains the same elements as `m`, but with reversed rows. Display it.

g) Create yet another array `m_revall` which contains the same elements as `m`, but with reversed rows and columns. Display it.

h) Create an array `m_cut` which contains only the elements from the first and last rows and columns of `m`. Display it.

Helpful Numpy functions

Required packages: `numpy` (`np`)

`np.array(x)` turn `x` into a numpy array