## Homework 10

Optional in case of completion points will be added to the final exam score.

## Problem 1 (10 points max)

The prime number is the integer which is divisible only by 1 and itself. We exclude 1 from the prime numbers list.

Write a function "primes" according to the following specification

function PrimeNumbersList = primes(N)

which outputs a vector of all prime numbers starting from 2 till N (inclusive). N is guaranteed to be positive integer number, no checks for this are necessary.

Example: primes(7) as well as prime(8) will result:

PrimeNumbersList = [2, 3, 5, 7]

N will be a large number something like  $10^5$  or even more.

- If you do the function right you will get only 2 points.
- You will get 5 points if your algorithm is the fastest in the class.
- You will get 10 points if your algorithm is faster than instructor one.
- We will run the competition during the Friday class.