## 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.

