

# Homework 09

This homework is **optional**. In case of completion the points will be added to the total of all homeworks.

General comments:

- Do not forget to run some test cases.

## 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 **row** 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. Make sure your function follows the specification above **exactly**.

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

```
>> primes(8);  
ans=[2, 3, 5, 7]
```

N will be a large number something like  $10^6$  or even more, in speed comparison test cases.

- 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 practice section.