

Advanced Programming

Lab 05



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# Introduction

The aim of this lab is to develop and test a Scala based application, using functional programming paradigm, to calculate prime numbers between 1 to a given large n, using the Sieve of Eratosthenes method.

# Approach

I used list to store numbers from 2 to the user input using List.range. Then a recursive function is called with base condition of [number > square root (input)]. This will return the list of all prime numbers. Else it will call the loop again sending it number+1 and filtered out list that only contains the non-multiples of the number (that is currently in the loop).

# How to Run

Run using Scala interpreter. If the tests pass successfully the program will ask for an integer. Enter the integer and click enter to display all prime numbers until the input.

