



Lab 4: Prime Finder
Worth 60 points (60 lab)

Lab Objectives:

To gain a better understanding of MIPS you will do an exercise from the assembly textbook. There will be no lab report requirement as well.

Exercise 7.9.3

Write a program to find prime numbers from 3 to n in a loop by dividing the number n by all numbers from $2..n/2$ in an inner loop. Using the remainder (rem) operation, determine if n is divisible by any number. If n is divisible, leave the inner loop. If the limit of $n/2$ is reached and the inner loop has not been exited, the number is prime and you should output the number. So if the user were to enter 25, your program would print out "2, 3, 5, 7, 11, 13, 17, 19, 23".

Extra Credit

The exercise as given uses a brute force solution to find the primes. If you instead use a Sieve of Eratosthenes to determine the primes, and clearly indicate that you have done so in your README.txt, you will receive an extra 20% on this lab. This of course requires you to implement the sieve correctly.

Lab Requirements

2 files required in lab4 folder in repository with commit id submitted to the google form:

- Lab4.asm
- README.txt