

COMP 4959: Lab 1

For this lab, use only one source file for each program. Name the two files `words.rs` and `primes.rs`. Submit a zip file containing the two source files. Maximum score: 14

1. Write a Rust program that reads words from standard input (until end-of-file) and prints the word(s) with the highest frequency of occurrence. Note that there may be multiple words with the same highest frequency.

Sample input:

```
hello world
cruel
Hello hi
```

We regard words that differ by case (upper/lower case) as the same word. (We assume input words consist of ASCII characters only.) In the output, words are in all lowercase. Use a `HashMap` in your implementation. Test your program using I/O redirection.

2. Write a Rust program to find the size of the largest set of 6-digit primes that are permutations of one another.

Your implementation must have a function

```
fn primes(m: usize, n: usize) -> Vec<usize>
```

that returns a vector containing primes p , in ascending order, satisfying $m \leq p < n$.