

MTH 307: Programming and Data Structures

Homework IV

(Due 25/03)

Write C programs for the following:

1. Accepting two words and determining whether they are anagrams. (For example the words **balm** and **lamb** are anagrams.)
2. Accepting a sentence and determine whether it a palindrome. (For example, **A Toyota's a Toyota** is a palindrome.)
3. Accepting a message and printing its encryption in the Caesar cipher. That is, every letter in the message should be replaced that is p positions later in the alphabet, while leaving special characters untouched. (For example, when $p = 2$, **India** will be encrypted as **Kpfk**.)
4. Sorting a given collection of words in alphabetical order.
5. Computing the product of an $m \times n$ matrix with an $n \times p$ matrix.