Module 5 – File Processing

Tutorial Questions

The aim of this tutorial is to familiarize yourself with the standard C library file streams interface. We will explore a variety of essential functions from the `stdio.h` header that operate on streams and cover practical examples of their usage. This will be a shorter tutorial than usual as there are associated lab questions to do (see the canvas page for this week).

Activities

1. Write a program that accepts a file name as a command line argument. This file is assumed to contain a comma delimited series of integers – up to ten. You will open this file for reading and read these integers into an array. Your program will then add the numbers together and write out these numbers back to the file in the same format but the last value will be the sum of the numbers that were read in.

   Command line arguments are accessed via the following parameters to *main*:

   ```
   int main(int argc, char *argv[])
   ```

   Parameter *argc* stores the number of command line arguments. This count is always at least 1 since the first argument is the name of the executable itself.

   Parameter *argv[]* is the argument vector – each element of which points to a string.

   For example, if the user ran the executable *myprog* from the command line, passing the argument *myFile* as follows:

   ```
   ./myprog myFile
   ```

   Then *argc* would be 2, *argv[0]* would point to the string "./myprog" and *argv[1]* would point to "myFile".