

Lab 6 - Exercise – All sections

Files

CS 262 – Spring 2022

The purpose of this activity is to practice reading/writing files in C and how to pass information by Command Line Arguments (CLA).

The `main()` function has the parameters `argc` and `argv` which get information from CLA.

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

`argc` the number of command line arguments
if no argument is supplied, `argc` will be 1

`argv` array of strings with the CLA
`argv[0]` name of the program
`argv[1]` first command line argument
`argv[2]` second command line argument ...

Description

Write a C program that via CLA sets a filename for reading and a filename for writing.

The program will read from an input file the percentage of tips left by customers according to their consumption and generates as output a file with the total tips earned in each consumption.

- The 1st line of the input file has an `int` that specifies the remaining number of rows to be read.
- After, each row has 3 columns:
`Order ID (int) Consumption (double) %tip (int)`
- The output file will contain the following information:
Total tips earned on <Order ID> = <tip with 2 decimal>

NOTE: Assume the input file contains valid types and ranges.

Requirements:

- Verify that the number of arguments in the CLA are at least 3, otherwise display an error message and exit the program.
- In case the `fopen()` function returns a `NULL` pointer, display an error message "The file could not be opened" and exit the program.

Sample run 1:

```
LE6 input.txt
```

```
Error! You need to specify input and output filename by CLA
```

Sample run 2:

```
LE6 input.txt output.txt
```

Content in input.txt:

```
2
16548      58.76      12
17863      256.86     10
```

Expected content in output.txt:

```
Total tips earned on 16548 = 7.05
Total tips earned on 17863 = 25.69
```