

ICS 103 – Computer Programming in C
Summer Semester 2008 (073)
Lab # 6 (Text File)

Objective:

1. File pointer declaration
2. Opening files
3. `fscanf` and `fprintf` functions
4. Closing files.

Discussion:

The following problem will be discussed in the class in detail:

Write a program that reads a set of grades from a data file and generates a new data file that stores the ones that are 55 or higher.

Exercises #1:

1. Open a new file using a text editor and write the following data into it:
3 8 20
2. Save the file into your working directory as *input.dat*.
3. Write a program that reads those three integer numbers from *input.dat* file. The program then calculates the average and prints the result in *output.dat* file.

Exercise # 2:

1. Open a new file using any *text editor* and write the following data into it:

919999	30	26	32
928744	27	21	28
914628	21	9.5	38.5
918594	17.5	14	17
908736	29	22	27
928563	26	17	33
912534	18	22	35
912772	8	29.5	16
916352	22.5	16	29
906468	12	15	20.5

Note that columns 1, 2, 3, and 4 represent *students IDs*, *exam 1* scores, *exam 2* scores and *final exam* scores respectively.

2. Save the file as *student.txt*.

3. Write a C program that takes its input data from *student.txt* file and then calculates the total score for each student and the average of each exam and displays the following output:

```
=====
ID          Exam 1   Exam 2   Final   Total
=====
919999      30.0    26.0    32.0    88.0
928744      27.0    21.0    28.0    76.0
914628      21.0     9.5    38.5    69.0
918594      17.5    14.0    17.0    48.5
908736      29.0    22.0    27.0    78.0
928563      26.0    17.0    33.0    76.0
912534      18.0    22.0    35.0    75.0
912772       8.0    29.5    16.0    53.5
916352      22.5    16.0    29.0    67.5
906468      12.0    15.0    20.5    47.5
=====
Average     21.1    19.2    27.6    67.9
=====
```