# Object Oriented Programming

# 04 - Programming Exercises File Data Reading

Program each of the following tasks in your C++ compiler. Keep compiling and executing even after writing a single line of code.

### Task 1

Write a program to read data from a file named **students.txt**. The file contains records in the following format on each line: student roll number (an integer), a blank space, student name (a string), another blank space, and student's CGPA (a float).

The program reads the data from the file and displays it on the console. Make sure to handle any potential errors that might occur during the file reading process.

The content of <b>students.txt</b> might look like this	The program should display			
1 Ali Imran 3.5	Roll No.	Name	CGPA	
2 Naveed 2.9				
3 Asif Ali 3.8	1	Ali Imran	3.5	
	2	Naveed	2.9	
	3	Asif Ali	3.8	

### Task 02

Write a program to compute numeric grades for a course. The course records are in a file named **input.txt** that will serve as the input file. The input file is in exactly the following format: Each line contains a student's; roll number, then one space then ten quiz scores all on one line. The quiz scores are whole numbers and are separated by one space.

The program takes its input from this file **input.txt** and sends its output to the console. The data displayed on the console will be the same as the data in the input file except that there will be one additional number (of type int) at the end of each line. This number will be the highest score of the student ten quiz scores.

#### Sample input (from input.txt):

**101** 2 1 4 5 3 0 9 4 7 6 **104** 0 3 1 12 7 0 6 7 0 8 **103** 2 1 2 3 0 5 8 7 0 1

## Sample output:

**101** 2 1 4 5 3 0 9 4 7 6 **9 104** 0 3 1 12 7 0 6 7 0 8 **12 103** 2 1 2 3 0 5 8 7 0 1 **9** 

#### Task 03

Write a program to determine the best two quizzes' marks of a student, which are present in an input file and write the result on the console.

The input file **input.txt** contains several test inputs and is in exactly the following format: Each line contains a student's roll number, then one space then ten quiz scores all on one line. The quiz score are whole numbers and are separated by one space.

The program reads its input from this file and sends its output to the console. Each line in the output will contain the roll number of a student followed by the marks of his/her best two quizzes in increasing order.

#### Sample input (from input.txt):

**101** 2 1 4 5 3 0 6 4 7 9 **104** 0 3 1 8 7 0 6 7 0 12 **103** 2 1 2 3 0 5 8 7 0 9

## Sample output:

**101** 7 9 **104** 7 12 **103** 8 9