POO (08:00-09:00)

Write the class **CSVLoader** so that the following code

```
#include "CSVLoader.h"

int main()
{
    try {
        CSVReader csv("example.csv");

        std::cout << "Columns: " << csv.columnsCount() << std::endl;
        for (int i = 0; i < csv.columnsCount(); i++) {
            std::cout << "   * " << csv.columnName(i) << std::endl;
        }
        std::cout << "Items  : " << csv.rowCount() << std::endl;
        for (int i = 0; i < csv.rowCount(); ++i) {
            std::cout << csv.get(i, "Name") << " - " << csv.get(i, "Age") << "\n";
        }
        try {
            csv.get(100, "Name");
        }
        catch (const std::exception& e) {
            std::cout << e.what() << std::endl;
        }
        try {
            csv.get(1, "Surname");
        }
        catch (const std::exception& e) {
            std::cout << e.what() << std::endl;
        }
        try {
            std::cout << "Column 100 is " << csv.columnName(100);
        }
        catch (const std::exception& e) {
            std::cout << e.what() << std::endl;
        }
    }
    catch (const std::exception& e) {
        std::cout << e.what() << std::endl;
    }
}
```

compiles and upon execution prints the following to the screen:

```
Columns: 4
   * Name
   * City
   * Age
   * Grade
Items  : 3
Ionel - 20
Gigi - 22
Ana - 21
Invalid row index
Column not found
Invalid column index
```

Carefully read the main function to deduce what methods/operators should be included in CSVLoader class.

Observations:

- For the previous example, the “example.csv” is located in your archive
- Use STL to solve this problem

VERY IMPORTANT !!! All the variables in the class must be preceded by "gd_" prefix. For example instead of a variable named count, it should be named gd_count. This is VERY IMPORTANT and has to be done exactly like this.

Grading (informative):

G1	Organize your project in 3 files: **main.cpp**, **CSVLoader.h** and **CSVLoader.cpp**	2p
G2	Constructor that reads the csv file and organize it in rows and columns	10p
G3	Exception support in constructor	2p
G4	File is being open and read via std::ifstream	2p
G5	Method rowCount	2p
G6	Method columnCount	2p
G7	Method columnName	2p
G8	Exception for method columnName	2p
G9	Method get that returns the value of a item base on its row and column name	4p
G10	Exception for method get	2p