

# **C++: stringstream applications**

**slides de apoio à aula Prática 8**

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A stringstream associates a string object with a stream allowing you to read from the string as if it were a stream (like cin)

Basic methods:

- `clear()`: to clear the stream
- `str()`: to get and set string object whose content is present in stream
- operator `<<`: add a string to the stringstream object
- operator `>>`: read something from the stringstream object

include file: `#include <sstream>`

# Using stringstream to count words

```
#include <sstream> // std::stringstream

int main () {

    std::stringstream ss("vamos contar as palavras");
    ss << ' ' << 200;
    cout << ss.str() << endl;

    string word;
    int count = 0;
    while (s >> word)
        count++;
    cout << count << endl;
    return 0;
}
```

# Read numbers from file

```
#include <sstream> // std::stringstream
#include <fstream> // std::ifstream

int main () {
    std::string file("matrix.txt");
    std::ifstream f(file.c_str());

    std::string line;
    std::stringstream ss;
    while (!f.eof()) {
        std::string line;
        std::getline(f, line);
        std::cout << line << std::endl;

        ss << line;
        std::cout << ss.str() << std::endl;
    }
}
```

# Read numbers from file, make matrix

stringstream needs to be cleared in loop!

```
vector< vector<double> > vm;
while (!f.eof()) {
    (...)
    ss.clear();
    ss << line;
    std::cout << ss.str() << std::endl;

    // get numbers from stream and make matrix
    double d;
    vector<double> vrow;
    while (ss>>d) {
        vrow.push_back(d);
    }
    vm.push_back(vrow);
}
}
```