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/*
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    Course: CSCI-135
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    Assignment: E8.3
    Opens a file with a user inputted name and takes the
    average of the doubles in the file. If the user inputs an
    empty string, reprompt for a new file name.
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*/
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#include <iostream>
#include <fstream>
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using std::cin;
using std::cout;
using std::endl;
using std::ifstream;
using std::string;
```

```
double average(double total, int n);
```

```
int main() {
    ifstream file;
    string file_name, line;
    double total, avg;
    int n;

    // Reprompt
    while (file_name.empty()) {
        cout << "Enter a file name: ";
        getline(cin, file_name);
    }

    // Open file
    file.open(file_name.c_str());
    if (file.fail()) {
        cout << "No file found!\n";
        return -1;
    }

    // Add up numbers
    double num;
    while (getline(file, line)) {
        num = std::stod(line);
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        total += num;
        n++;
    }

    // Average
    avg = average(total, n);
    cout << "\nAverage: " << avg << endl << endl;

}

double average(double total, int n) {
    return total / n;
}
```