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/* filecopy.cpp, копирование файлов*/
#include <fstream>
#include <iostream>
#include <string>
using namespace std;

int main(int argc, char * argv[])
{
{
    ifstream input (argv[1]);
    ofstream output("1.res");
    char c;
    while (input.get(c))
        output.put(c);
}

{
    ifstream input (argv[1]);
    ofstream output("2.res");
    char buffer[200];
    while (input && output)
    {
        input.getline(buffer, sizeof(buffer));
        output<< buffer << endl;
    }
}

{
    ifstream input (argv[1]);
    ofstream output("3.res");
    string buffer;
    while (getline(input,buffer),input && output)
    {
        output<< buffer << endl;
    }
}

{
    ifstream input (argv[1], ios::binary);
    ofstream output("4.res", ios::binary);
    char buffer[512];
    while (input && output)
    {
        input.read(buffer, sizeof(buffer));
        output.write(buffer,input.gcount());
    }
}

{
    ifstream input (argv[1], ios::binary);
    ofstream output1("5a.res", ios::binary);
    ofstream output2("5b.res", ios::binary);

    output1 << input.rdbuf();

    input.seekg(0);
    input.clear();

    input >> output2.rdbuf();
}
}

```

```

//: C04:istring.cpp
// Input string streams.
#include <cassert>
#include <cmath> // For fabs()
#include <iostream>
#include <limits> // For epsilon()
#include <sstream>
#include <string>
using namespace std;

int main() {
    istringstream s("47 1.414 This is a test");
    int i;
    double f;
    s >> i >> f; // Whitespace-delimited input
    assert(i == 47);
    double relerr = (fabs(f) - 1.414) / 1.414;
    assert(relerr <=
numeric_limits<double>::epsilon());
    string buf2;
    s >> buf2;
    assert(buf2 == "This");
    cout << s.rdbuf(); // " is a test"
}

-----

is a test

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//: C04:ostream.cpp {RunByHand}
// Illustrates ostreamstream.
#include <iostream>
#include <sstream>
#include <string>
using namespace std;

int main() {
    cout << "type an int, a float and a string:
";
    int i;
    float f;
    cin >> i >> f;
    cin >> ws; // Throw away white space
    string stuff;
    getline(cin, stuff); // Get rest of the line
    ostreamstream os;
    os << "integer = " << i << endl;
    os << "float = " << f << endl;
    os << "string = " << stuff << endl;
    string result = os.str();
    cout << result << endl;
}

-----

type an int, a float and a string: 10 3.5
YOU'RE FIRED!
integer = 10
float = 3.5
string = YOU'RE FIRED!

```

```

//: C04:stringseeking.cpp
// Reads and writes a string stream.
#include <cassert>
#include <sstream>
#include <string>
using namespace std;

int main() {
    string text = "We will hook no fish";
    stringstream ss(text);
    ss.seekp(0, ios::end);
    ss << " before its time.";
    assert(ss.str() ==
        "We will hook no fish before its time.");
    // Change "hook" to "ship"
    ss.seekg(8, ios::beg);
    string word;
    ss >> word;
    assert(word == "hook");
    ss.seekp(8, ios::beg);
    ss << "ship";
    // Change "fish" to "code"
    ss.seekg(16, ios::beg);
    ss >> word;
    assert(word == "fish");
    ss.seekp(16, ios::beg);
    ss << "code";
    assert(ss.str() ==
        "We will ship no code before its time.");
    ss.str("A horse of a different color.");
    assert(ss.str() == "A horse of a different
color.");
}

```

```

#include <iostream>
#include <fstream>
int main()
{
    int ivalue;
    try {
        std::ifstream in("in.txt");
        in.exceptions(std::ifstream::failbit);
        in >> ivalue;
    } catch (std::ios_base::failure &fail) {
        // handle exception here
    }
}

```