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//Your Name:Erkin George
//Course:CSC 1230
//Date:10/4/15
//Assignment:Homework 1
//Description:A program that outputs various minimum and maximum numbers from C++

#include <iostream>
#include <climits>
#include <cfloat>
#include <cmath>
using namespace std;

int main()
{
    //First output whole number maxima.
    cout << "short maximum: " << SHRT_MAX << " in " << sizeof(short) << " bytes\n";
    cout << "int maximum: " << INT_MAX << " in " << sizeof(int) << " bytes\n";
    cout << "long maximum: " << LONG_MAX << " in " << sizeof(long) << " bytes\n\n";

    //Output float precision, range, minimum and maximum exponent
    cout << "float precision: " << FLT_DIG << " decimal digits\n";
    cout << "float maximum exponent: " << FLT_MAX_10_EXP << endl;

    //Last character is NOT "one"
    cout << "float minimum exponent: " << FLT_MIN_10_EXP << endl;
    cout << "maximum representable floating-point number: " << FLT_MAX << endl;
    cout << "float stored in: " << sizeof(float) << " bytes\n\n";

    //Output double precision, range, minimum and maximum exponent
    cout << "double precision: " << DBL_DIG << " decimal digits\n";
    cout << "double maximum exponent: " << DBL_MAX_10_EXP << endl;
    cout << "double minimum exponent: " << DBL_MIN_10_EXP << endl;
    cout << "maximum representable floating-point number: " << DBL_MAX << endl;
    cout << "double stored in: " << sizeof(double) << " bytes\n\n";

    //Output long double precision, range, minimum and maximum exponent
    cout << "long double precision: " << LDBL_DIG << " decimal digits\n";
    cout << "long double maximum exponent: " << LDBL_MAX_10_EXP << endl;
    cout << "long double minimum exponent: " << LDBL_MIN_10_EXP << endl;
    cout << "maximum representable floating-point number: " << LDBL_MAX << endl;
    cout << "long double stored in: " << sizeof(long double) << " bytes\n\n";
    return 0;
}
```