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//Answer to question #39042, Programming, C++

#include <iostream>
#include <string>
using namespace std;

int main()
{
    string numStr;// for user entered number
    bool isNegative = false;

    // names for use in output
    string onesName[] = { "one", "two", "three", "four", "five", "six", "seven",
    "eight", "nine" };
    string teensName[] = { "ten", "eleven", "twelve", "thirteen", "fourteen",
    "fifteen", "sixteen", "seventeen", "eighteen", "nineteen" };
    string tensName[] = { "twenty", "thirty", "forty", "fifty", "sixty", "seventy",
    "eighty", "ninety" };
    string illion_preName[] = { "m", "b", "tr", "quadr", "quint", "sext", "sept",
    "oct", "non", "dec" };
    string decillion_preName[] = { "un", "duo", "tre", "quattuor", "quin", "sex",
    "septen", "octo", "novem" };

    char repeat = 'n';

    do// as long as user wishes to enter number for naming
    {
        cout << "Number = "; cin >> numStr;

        // check for '-' as 1st character
        if (numStr[0] == '-')
        {
            isNegative = true;
            numStr.erase(0, 1);
        }
        else
            isNegative = false;

        // validate entry: check that all characters are digits
        bool isValid = true;
        for (unsigned int i = 0; i < numStr.size(); ++i)
        if (numStr[i] < '0' || numStr[i] > '9')
        {
            isValid = false;
            break;
        }
        if (!isValid)
        {
            cout << "Your entry contains invalid characters." << endl;
            goto repeat;// evil but effective
        }

        // check that number of digits is not too high.
        cout << "power = " << numStr.size() - 1 << endl;
        if (numStr.size() > 66)
        {
            cout << "The number's too damn big! Try again." << endl;
            goto repeat;
        }
    }
}

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        } // validation complete

        // process the validated entry
        while (numStr.size() % 3 != 0)
            numStr = '0' + numStr; // pad the string with leading '0' until size
= multiple of 3

        // print if number is negative
        if (isNegative) cout << "negative ";

        // for each group of 3 digits from most to least significant
        for (unsigned int i = 0; i < numStr.size(); i += 3)
        {
            // skip if all 3 digits == '0'
            if (numStr[i] == '0' && numStr[i + 1] == '0' && numStr[i + 2] ==
'0')
                continue;

            if (numStr[i + 0] > '0') // treat the hundreds place
                cout << onesName[numStr[i + 0] - '0' - 1] << " hundred ";

            if (numStr[i + 1] == '0' || numStr[i + 1] > '1') // treat tens and
ones digits for non-teens case
            {
                if (numStr[i + 1] > '1') cout << tensName[numStr[i + 1] - '0'
- 2] << " ";
                if (numStr[i + 2] > '0') cout << onesName[numStr[i + 2] - '0'
- 1] << " ";
            }
            else // special teens case
                cout << teensName[numStr[i + 2] - '0'] << " ";

            // naming each factor of 1,000
            unsigned int j = (numStr.size() - i) / 3;
            if (j == 2) cout << "thousand ";
            else if (j > 2)
            {

                if (j <= 12) cout << illion_preName[j - 3]; // 'xx' before
"illion" cases
                else if (j <= 21) cout << decillion_preName[j - 13] <<
"dec"; // 'xx' before "dec" + "illion" cases
                else if (j == 22) cout << "vigint"; // special 'xx' before
"vigint" + "illion" case

                cout << "illion "; // the "illion" suffix
            }
        }

repeat:
    cout << endl << "Repeat? (y/n): ";
    cin >> repeat;
} while (repeat == 'y');

cout << endl;
return 0;
}

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