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/* The following code example is taken from the book
 * "The C++ Standard Library – A Tutorial and Reference, 2nd Edition"
 * by Nicolai M. Josuttis, Addison-Wesley, 2012
 *
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 */
#include <bitset>
#include <iostream>
#include <string>
#include <limits>
using namespace std;

int main()
{
    // print some numbers in binary representation
    cout << "267 as binary short: "
         << bitset<numeric_limits<unsigned short>::digits>(267)
         << endl;

    cout << "267 as binary long: "
         << bitset<numeric_limits<unsigned long>::digits>(267)
         << endl;

    cout << "10,000,000 with 24 bits: "
         << bitset<24>(1e7) << endl;

    // write binary representation into string
    string s = bitset<42>(12345678).to_string();
    cout << "12,345,678 with 42 bits: " << s << endl;

    // transform binary representation into integral number
    cout << "\"1000101011\" as number: "
         << bitset<100>("1000101011").to_ullong() << endl;
}

```