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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>
using namespace std;

int main()
{
    // enumeration type for the bits
    // - each bit represents a color
    enum Color { red, yellow, green, blue, white, black, //...,
                numColors };

    // create bitset for all bits/colors
    bitset<numColors> usedColors;

    // set bits for two colors
    usedColors.set(red);
    usedColors.set(blue);

    // print some bitset data
    cout << "bitfield of used colors: " << usedColors << endl;
    cout << "number of used colors: " << usedColors.count() << endl;
    cout << "bitfield of unused colors: " << ~usedColors << endl;

    // if any color is used
    if (usedColors.any()) {
        // loop over all colors
        for (int c = 0; c < numColors; ++c) {
            // if the actual color is used
            if (usedColors[(Color)c]) {
                //...
            }
        }
    }
}

```