#include "stdafx.h"

#include <iostream>

#include <string>

using namespace std;

int main() {

string str\_in;

cout << "Enter string: ";

cin >> str\_in;

string str\_out = str\_in;

int counter = 0;

int bit = 0;

for (int i = 1; i<str\_in.size(); i = i \* 2) {

counter = 0;

for (int j = i - 1; j<str\_in.size(); j = j + i \* 2)

for (int k = j; k<j + i && k<str\_in.size(); k++)

if (k != i - 1 && str\_in[k] == '1')

counter++;

if (counter % 2 == 0)

str\_in[i - 1] = '0';

else

str\_in[i - 1] = '1';

if (str\_out[i - 1] != str\_in[i - 1])

bit = bit + i;

}

if (bit != 0) {

str\_out[bit - 1] = (str\_out[bit - 1] + 1 - '0') % 2 + '0';

cout << "Output string: " << str\_out << endl;;

}

else

cout << "Hamming code is true.";

system("pause");

return 0;

}