#include<iostream>

#include<string>

using namespace std ;

//nesting of member funcations

class binary

{

string s ;

public:

void read() ;

void chk\_bin(void) ;

void ones\_compliment(void);

void display(void);

};

void binary :: read(void){

cout<<"Enter a binary number"<<endl;

cin>>s ;

}

void binary :: chk\_bin(void){

for (int i = 0; i < s.length(); i++)

{

if (s.at(i)!='0' && s.at(i) !='1')

{

cout<<"Incorrect binary format"<<endl ;

exit(0) ;

}

}

}

void binary ::ones\_compliment(void){

for (int i = 0; i < s.length(); i++)

{

if (s.at(i)=='0')

{

s.at(i) ='1';

}

else

{

s.at(i) = '0' ;

}

}

}

void binary ::display(void){

cout<<"Displying binary number"<<endl ;

for (int i = 0; i < s.length(); i++)

{

cout<<s.at(i);

}

cout<<endl ;

}

int main()

{

binary b ;

b.read() ;

b.chk\_bin();

b.display();

b.ones\_compliment();

b.display();

return 0;

}