**Aim:** To Implement Hamming Code Using C or C++

**Program:**

#include<iostream>

using namespace std;

int main(){

int a[10], b[10], c1,c2,c3;

cout<<"\nEnter the 4 bits: ";

cin>>a[3];

cin>>a[5];

cin>>a[6];

cin>>a[7];

a[1] = a[3]^a[5]^a[7];

a[2] = a[3]^a[6]^a[7];

a[4] = a[5]^a[6]^a[7];

cout<<"The generated hamming code is: ";

for(int i=1; i<8;i++){

cout<<"\t"<<a[i];

}

cout<<"\nEnter the 7 bits: ";

for(int i=1;i<8;i++){

cin>>b[i];

}

c1 = b[1]^b[3]^b[5]^b[7];

c2 = b[2]^b[3]^b[6]^b[7];

c3 = b[4]^b[5]^b[6]^b[7];

int p = c1\*1+c2\*2+c3\*4;

if(p==0){

cout<<"\nThere is no error in the data sent";

}else{

cout<<"\nThere is error in the position "<<p<<endl<<"The corrected message is: ";

if(b[p]==0){

b[p]=1;

}else{

b[p]=0;

}

for(int i=1;i<8;i++){

cout<<"\t"<<b[i];

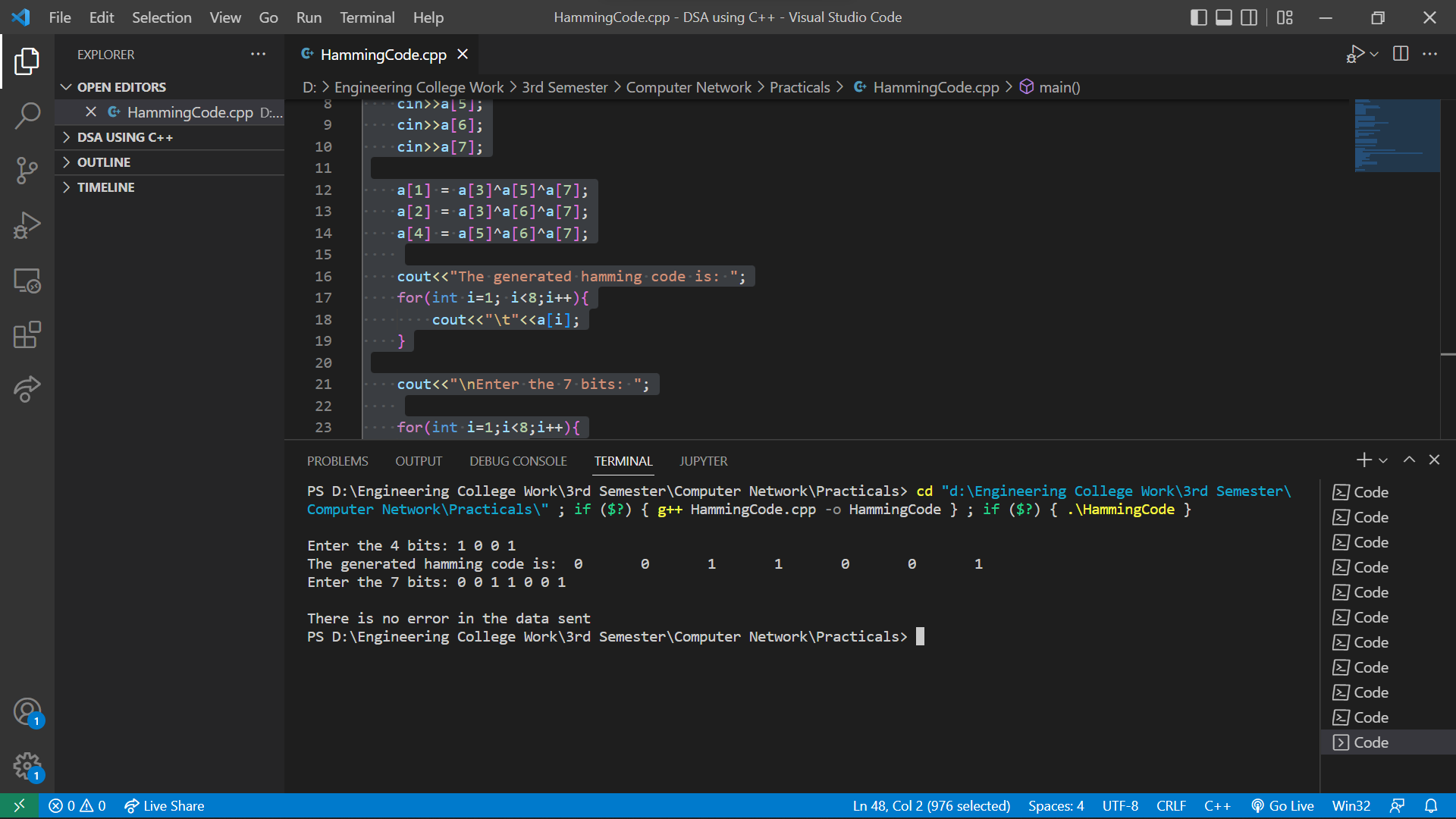
}

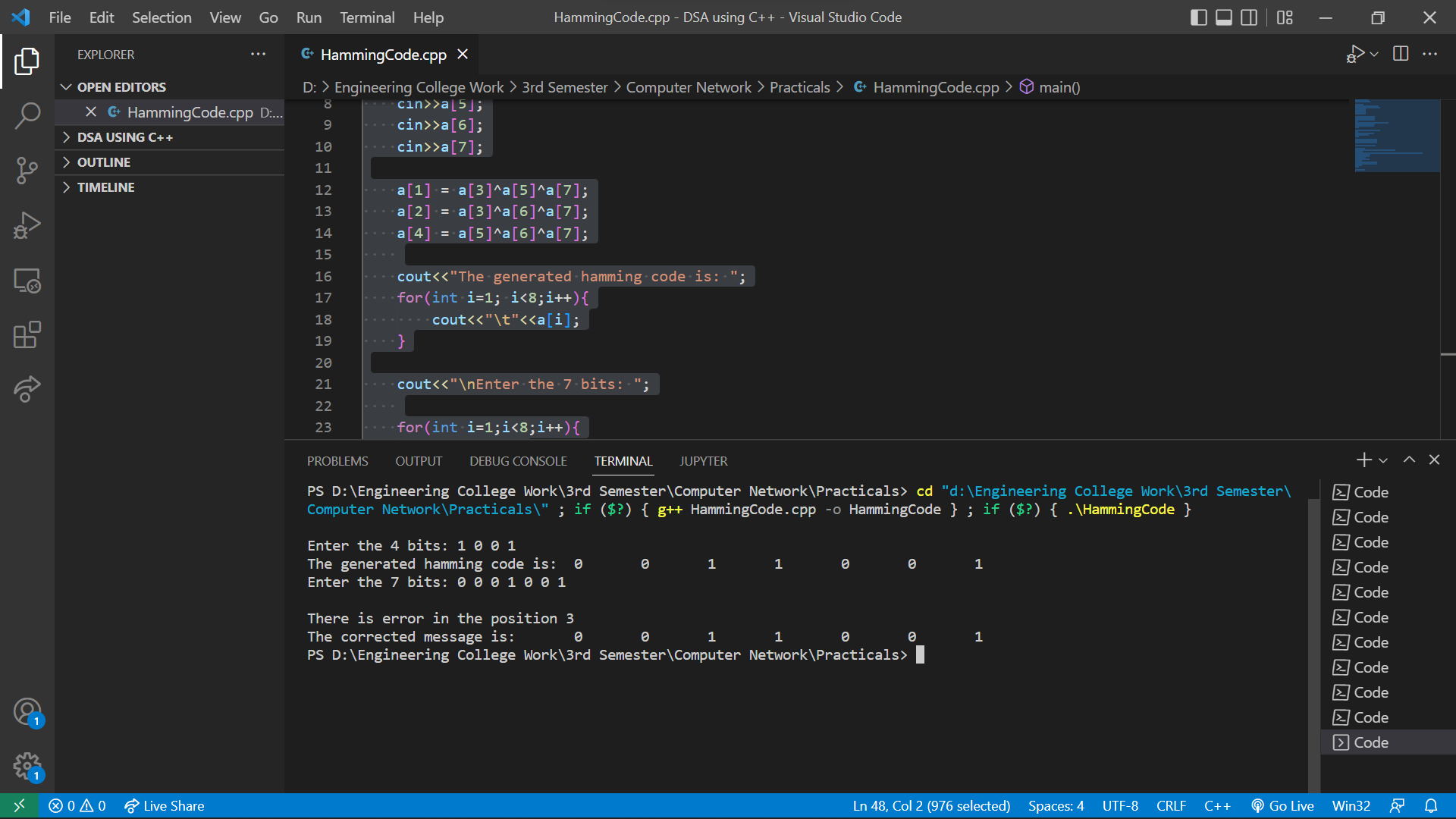
}

return 0;

}

**Output:**

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