CN - lab

Cycle-2

Write a program to detect the error using CRC-CCIT (16-bits)

```
#include <iostream>
#include <string.h>
using namespace std;

int CRC(char *ip, char *op,
            char *poly, int mode)
{
    strcpy(op, ip);
    if(mode)
    {
        for(int i=1; i<strlen(poly); i++)
            strcat(op, "0");
    }
    for(int i=0; i<strlen(ip); i++)
    {
        if(op[i] == '1')
        {
            for(int j=0; j<strlen(poly); j++)
            {
                if(op[i+j] == poly[j])
                    op[i+j] = '0';
```

```
              else
                  op[i+j] = '1';
              }
          }
    }
    for (int i=0; i<strlen(op); i++)
    {
          if (op[i] == '1')
               return 0;
    }
    return 1;
}
int main()
{
    char ip[50], op[50], recv[50];
    char poly[] = "1000100000001000001";

    cout << "Enter input message in
                binary "<<endl;
    cin >> ip;
    crc (ip,op, poly, 1);
```

```cpp
cout << "The transmitted message
is:" << ip << op + strlen(ip) << endl;

cout << "Enter recieved message in
binary" << endl;
cin >> recv;
if (crc(recv, op, poly, 0))
        cout << "No error found in data" <<
                        endl;
else
    cout << "Error in data transmission"
                        << endl;

return 0;

}
```