

AIM:- Write a program for error detecting using CRC

```
#include <stdio.h>

void main()
{
    char input[100], key[30], temp[30], quot[100],
    rem[30], key1[30];
    printf("Enter data");
    gets(input);
    printf("Enter G(X)");
    gets(key);
    keylen = strlen(key);
    msglen = strlen(input);
    strcpy(key1, key);
    for(i=0; i < keylen-1; i++)
    {
        input[msglen+i] = '0';
    }
    for(i=0; i < keylen; i++)
        temp[i] = input[i];
    for(i=0; i < msglen; i++)
    {
        quot[i] = temp[0];
        if(quot[i] == '0')
            for(j=0; j < keylen; j++)
                key[j] = '0';
        else
            for(j=0; j < keylen; j++)
                key[j] = key1[j];
        for(j=keylen-1; j > 0; j--)
        {
            if(temp[j] == key[j])
                rem[j-1] = '0';
            else
                rem[j-1] = '1';
        }
    }
}
```

```

    rem[msglen-1] = input[1+keylen];
    strcpy(temp, rem);
}
strcpy(rem, temp);
printf("Quotient is ");
for(i=0; i<msglen; i++)
    printf("%c", quot[i]);
printf("\nRemainder");
for(i=0; i<keylen-1; i++)
    printf("%c", rem[i]);
printf("Modified data is ");
for(i=0; i<msglen; i++)
    printf("%c", input[i]);
for(i=0; i<keylen-1; i++)
    printf("%c", rem[i]);
getch();
}

```

Output :-

Enter data :- 1011010101

Enter g(x) :- 1010

Quotient is :- 1001000100

Remainder :- 000

Modified :- 1011010101000

Checking for error

Enter data :- 1011010101000

g(x) :- 1010

Remainder :- 000

Waw
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