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| CODE |

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\*File : p7.cpp

\*Description : Write a program for error detecting code using CRC-CCITT (16- bits).

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\*Tools : Ubuntu 13.04, gcc 4.7.3 compiler, Code::Blocks

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#include<iostream>

#include<stdio.h>

#include<string.h>

using namespace std;

int crc(char \*input,char \*output,const char \*gp,int mode)

{

int j,k;

strcpy(output,input);

if(mode)

{

for(j=1; j<strlen(gp); j++)

strcat(output,"0");

}

for(j=0; j<strlen(input); j++)

if(\*(output+j) == '1')

for(k=0; k<strlen(gp); k++)

{

if (((\*(output+j+k) =='0') && (gp[k] == '0') || (\*(output+j+k) == '1') && (gp[k] == '1')))

\*(output+j+k)='0';

else

\*(output+j+k)='1';

}

for(j=0; j<strlen(output); j++)

if(output[j] == '1')

return 1;

return 0;

}

int main()

{

char input[50],output[50],recv[50];

const char gp[18]="10001000000100001";

cout<<"\nEnter the input message in binary\n";

cin>>input;

crc(input,output,gp,1);

cout<<"\nThe transmitted message is: "<<input<<output+strlen(input)<<"\n";

cout<<"\n\nEnter the recevied message in binary \n";

cin>>recv;

if(!crc(recv,output,gp,0))

cout<<"\nNo error in data\n";

else

cout<<"\nError in data transmission has occurred\n";

return 0;

}

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| **OUTPUT** |

