Cycle 2 13)Write a program for error detecting code using CRCCCITT (16-bits).

	Cycle 2
1.	write a program for error detecting code using
	CRC-CCITI
	Herman A. California
	#include <stdio.h></stdio.h>
	#include < string.h>
	world bijerw YOR ( ) was the court of a x 3
	void binary XOR (char + result, const char +ate,
	for (int i=0; i < 16; i++) {  result[i] = (a[i] = = b[i]) ? '0':'1';
	3
	10 705 WL [16] = 1\0' : 1000 1 3 May 10
	3
	"he'll muchissionsonic mis
	void CRC (const char +data, int length,
	char tchecksum)
	char crc[17].
1.	for (int 1=0; 1< length ; 1++) {
4	( a creli] = 10 ( ) al letton
	3
Ž.	g([16] = 10'; while 4 hours
	for (int i=0, i < length; i++) {
	100 (int j =0 ; j < 8; j++) f
-	char msb = crc[o];
	for (int k = 0; k < 16; k++) f
	crc[k] = crc[k+1];
	I to a got to 3 Leath is grame in the color
	incorection = 01; the habanets has
	if (msb = = 11) f
	char temp[17];
	binary XOR (temp, CTC,
	"100010000000 [0001")
	shopy (croitemp); 2

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	3 crc[is] = [data[i] = = 1 . 9 . 1 . 0 .	
	cretis) = ldata (1)==	
	3	1
	stropy (check sum, cre)	1
	3	_
	void main() {	
	char data[100];	3
	print ("Enter data in binary:");	
	scant ("105", data);	3
	2.7 + 2.1 11 2 1 2 1	3
	int datalength = strlen(data);	1
	char checksum [17);	100
	calculate CR ( data, datalength, checksun);	28
	1.	21
	char received Checksum (17)	THE STATE OF
	prints ("Foter received CRC: ")	13 1st
	scanf ("0/05", received (hecksum),	(2)
	fortage rade	19
	if (stremp (received check sum, checksum) = =0)}	29
	printf ("Data is error-free \n");	1
	yelge d	-
	print+ ("Data contains errors. \n");	
	3 1 1 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	
	return o'	
	4 Testand See April	
	Allend Strain to Hilling Strain	
	Output:	
	Enter data in binary: 11001010111001001	
	Calculated (PC: 1110100101110001	
	Entered 2000iced 000	
	Entered received CRC: 1110100101110001	-
	Data is error free.	-
	a respectful some of the	-
	O May a A many	-

## Output:

```
F:\CN\cycle2\CRC.exe

Enter data in binary: 1100101011100101

Calculated CRC: 11101001011110001

Enter received CRC: 1110100101110001

Data is error-free.

Process returned 0 (0x0) execution time: 31.727 s

Press any key to continue.
```

14)Write a program for congestion control using Leaky bucket algorithm.

Classmate Date Date
write a program for congestion control using caky bucket algorithm
#indude <stdiv.h></stdiv.h>
void main() {  int psize, bsize, outgoing, emptySpace, choice;  print-f ("Enter the bucket size: ");  Scan-f ("%od", bbsize);  empty Space = bize);  print-f ("Enter the outgoing rate: ");  scan-f ("%od", bout going);  while (1) \$  print-f ("In Enter the packet size: ");  Scan-f ("%od", b psize);  if (psize < bsize && psize <= emptySpace)  \$  empty Space = emptySpace - psize;  print-f ("The packet of size %oder  added and in the bucket In", psize);
empty space + = outgoing;  alse {  printf ("the packet of size the use dropped due to lack of space in the bucket \n"); }  printf ("\n Enter 1 to continue or o to stop: ");  (cant ("old", 6 choice);  5] (choice = = 0)  break;

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	A rade
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	Dulput:
	Enler the bucket size = 5000
	Enter the outgoing rate: 200
	2002
	The packet of size 2000 is added and in the buller
	The packet of size 80 00 to access with the built
	Enter 1 to continue or 0 to stop: 1
	Ind was in the
	Enter the packet size: 2000
	The packet of size 2000 is added and in the bucket
	Enter, 1 to continue or o to stop: 1
	Macron and Is November 1
-	Enter the packet size = 1500
	The packet of size 15000 is decored due to lad at one
	in the backet
	Contin 1 to continue
- A	tenter 1 to continue or 0 to stop: 1
	Enter the packet size: 100
	The packet of size 100 is added and in the bucket
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## Output:

```
Enter the Bucket size = 5000
Enter the outgoing rate = 200

Enter the packet size = 3000
The Packet of size 3000 is added and in the bucket

Enter 1 to Continue or 0 to Stop: 1

Enter the packet size = 2000
The Packet of size 2000 is added and in the bucket

Enter 1 to Continue or 0 to Stop: 1

Enter the packet size = 2000
The Packet of size 2000 is added and in the bucket

Enter 1 to Continue or 0 to Stop: 1

Enter the packet size = 1500
The Packet of size 1500 is dropped due to lack of space in the bucket

Enter 1 to Continue or 0 to Stop: 1

Enter the packet size = 100
The Packet of size 100 is added and in the bucket

Enter 1 to Continue or 0 to Stop: 1
```