CYCLE -2 LEAKYBUCKET

1. Write a program for congestion control using CRC- CCITT (16-bit).

	Bafna Gold —
	Liakuburkat
	write a present la
	write a program for congestion control eving beaky bucket algorithm.
	program: I bucket -cc
	# unchable < Stolio-h>
	# include < Stalib-h>
	# cinclude < unistables
	# define NOF_PACKETS 5
	/*
	eint mand (inta) {
1 1/2 (-10)	int on n = (nandom () % 10) % a;
CHE	neturn on == 0? 1: 91n;
	Property of the state of the st
n otto	*/
132	/*
	# sinclude < Stol lib. h >
	long int random (woid);
	*/
	aint main() {
49.47	int packet SZ[NOF-PACKETS], i, Clk, b Size, 0-91ate,
V	p_sz_91m =0, p_sz, p-time, op;
	for (a = 0; i < NOF_PACKETS; ++i)
	parket - SZ[i] = grandom () % 100;
	for (i=0; i < NOF-PACKETS; ++;)
	print f("In n packet E%d]: % d bytes \t", ii, packets
T ir	[i])
	print f (" In Enter the autput grate:");
	print (In Enter the cusping gate.),
	Scent ("% d", & o- nate);
	printf ("Enter the bruket Size:");
- 1 - 1	Scanf (9. d 7, & b - 8120);
10	fon (i=v; i < NOF-PACKETS; ++i)

The state of the s	
	{if (pocket_Sz[i] + p_82_91m) > b_8ize)
1133	1-1 (packet_82[i] > b_8ize) A.
•	1 Compare the packet size with bucker size *1
	print f ("In In Incoming packet size (1-d bytes) is
	Guilder than bucket aposity (1.dbyles) - PACKET
	REJECTED", packol_82[i], b_size);
	else:
	print ("In In Bucket Capacity exceeded - PACKETS
	REJECTEDII");
	elx {
	p_82 91 m += packed_82[i]; 11 to the land time
	printf ("In In Incoming packet Size: " d" packet 82[i]
	printf ("In Byles nemaining to townsmit: 1.d", p.82 on m);
	11 p-time = manelom () *10;
	11 print f(" In Time left for teransmission: 1.d units",
	p_lime);
	11 for (clk = 10; clk <= p_time; clk += 10)
	while (p_82_91m >0) Fine 1
	Sleep (1);
	if (p_3z_9nm) {
5 Fee	if (p. 82 sam <= 0 state) /* parket size siemaining
	Comparing with output note *1
	op = p - 82 - 91m; n 82 91m = 0:
THE STATE OF	che in in inchessor all in inchessor
	op = 0_state, p.32 sim= 0_state;
U 1.30	notable (1 to Di l 1 to l con or de la contra del contra de la contra del la
S. (m. J. H.)4 11	print (" in Packet of Size % d Transmitted", op);
	print + (" Bytes Remaining to Tesansmit: 1.d"
	p_32_9m);
	che f
	printf (" In No packets to tenansmit! 1"); } } } }
	and the state of t

	1	Gold -	Bafna
1	-	bada:	Date:
	_		4

autput: packet [D]: 83 by	det	2.6 193 de
packet [1]: 86 ky	165	ar also
packet[2]:77 by	Las	the state of
packet[3]:15 bu	ies	- Killing
packet [H] : 9 7 6	ytes succession	
Enter the orwput	rytes	for all the
enter the burket	size: 85	
and the quites	112e : 85	M. Charles
Interning nortal	P*no.com	1.707 1143-3-3-
Butes gramaining	Size: 83 to tonansmit: 83 30 Tonansmitted Byte	sendent out of
packet of Eng	10 191ansmit: 83	1 1 1 1 1 1
to tonansmit: 53	so Islansmitted Byte	J. Remaining
harket of oise	T	11 11 11 11 11 1
Inansmit: 23	SD Tepansmitted Byte	Remaining
nacket of 1:- in in	0.2.7. 41.1.	U
to delays I so	23 Tonansmitted Byt	es Remainin
12 12 Harrymit . 0	(n	The tree to be
In coming in 1.1	("m/z pane", part of	114
hukot masile (le Stagles) - packet Rojee	greater than
the state of the s	85 bytes) - packet Rejer	Teol.
1 1 1 1 1 1 1 1 1	ed lize: 77	para the state
no kat of or	g to teransmit: 77 30 teransmitted -> Byte	
to Toraninalis	30 191ansmitted -> Byte	& Remaining
maket of Oc-	A ALLEN OF THE RESERVE	india d
1 8176 3	so tenansmitted -> Bytes	Remaining to
packet of Size	17 tenansmitted -> Bute	Remaining.
packet of fire	17 tonamitted -> Byte	Remaining.
packet of size -Incoming packe	17 tonamitted -> Byte	Remaining
packet of size -Incoming packe Bytes nemainin	17 tonamitted -> Byte. 18 15 : 15	ist migu Tega
packet of size -Incoming packe Bytes nemainin	17 to	ist migu Tega

OUTPUT:

```
packet[0]:83 bytes
packet[2]:77 bytes
packet[3]:15 bytes
packet[4]:93 bytes
Enter the Output rate:30
Enter the Bucket Size:85

Incoming Packet size: 83
Bytes remaining to Transmit: 83
Packet of size 30 Transmitted----Bytes Remaining to Transmit: 23
Packet of size 23 Transmitted----Bytes Remaining to Transmit: 0

Incoming packet size: (86bytes) is Greater than bucket capacity (85bytes)-PACKET REJECTED

Incoming Packet size: 77
Bytes remaining to Transmitted----Bytes Remaining to Transmit: 47
Packet of size 30 Transmitted----Bytes Remaining to Transmit: 17
Packet of size 30 Transmitted----Bytes Remaining to Transmit: 17
Packet of size 30 Transmitted----Bytes Remaining to Transmit: 17
Packet of size 17 Transmitted----Bytes Remaining to Transmit: 17
Packet of size 17 Transmitted----Bytes Remaining to Transmit: 0

Incoming Packet size: 15
Bytes remaining to Transmit: 15
Packet of size 15 Transmitted----Bytes Remaining to Transmit: 0
```