PAGE NO : DATE: PART-B Wilte a program for error detecting code using CRC - CCIT (16 bits) # Include <iostream> # Include cotting. ht using namespace std; int are (char ip, char op, char poly, int mode) & strepy (op, ip) if (mode) 5 for (int i=1; icstrencpoly); it) street (op. "o"). for cint i=0; is streen (ip); ittl s if (optil == 11) \$ for (int j=0; j < strlen (poly); j+1) f if (op[itj] == poly[j]) op[itj] == 'o'; op[i+j] == '1'; for (int 1=0; is strlen cop); itt) } + if Cop(i) == 11) int main () f cher ip [50], op [50], recv [50] cher poly []: "10001000000100001". contex "Exter input mag in binary" < end! cin >> ip;

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	1 97 AU	PAGE NO: 35
	arc (lp, pp, poly, 1);	Comments of the Comments of th
	contex "Transmitted mag is: " scips	coptstrenciple
	coutec "Enter received msg in bloom	y" << endl;
	cin >> recv;	V
	if (crc (recv, op, poly, o))	odine -
	cont << " No error in date "exend	1;
	else	on her
	cont << "Error has occurred" exe	rdl;
	return 0;	173 103/0 2
	3	1 1 1 1 2 2
	and the state of t	call Health
	Output:	111 120
	Enter input msg in binary	12 1 1 1
	WILLOT	
	Transmitted mag &: 11111011010111100	111016
To tack	Enter received mag in binary	
I let a	unot	
	No error in data	at la
		to using leaky
02	Write a program for congestion con	0
	bucket algorithm.	Pida /
		er d
	# include clostream>	
Clasida.	# include somagin	4.142
4114	Having namespace state	
	# radude < stdio.hz	laned
to the	+1 include < stdlib b>	Nach .
	# include (unistd.h)	
	# define no of packets 10	1
Tel	1 Cotol 1	
	Int ma (mandom () 4.10) 4. d;	
-	return m: 0°1:rn;	

int man () } Ent packets Julio of packets], 1, alk b size Otate for (i=0; ic no of packets; itti) \$ packet_sz[i]=rond(6)+10; for (i=0; i < no-of-packets; 4+i) print(" In procket [1.d): Yed bytes (t", i, packet sz [i]) print (" In Enter output rate:); sconf (" "d", fo rate); print("Enter bucket size: "): soco) (" /d" 46 size); for (i=0; i< no. of - packets; ++i)f if ((packet szli) + p-sz rm) > b size) ? if (packet_sz[i] > b_size) print ("1010 Ancoming pocket size (Yd bytes) is greater than bucket capacity (Xd bytes). Packet Rejected", packet szlij, b. size); else print ("In In Bucket capacity exceeded - Rejected") else f P-sz rm + : packet sz [i]; print ("tolo Ancoming peaker size : Id" peaket szli) print ("In Bytes remaining to transmit; yid", p. sz. rm p time = rand (4) 10 print ("In Time left for transmission: 1d unit" pto for (alk=10; alk <= p time; alk +=10) { sleep(1); 1 (p-82 m) { 1 (p_sz-rm = 0_rate) print ("In Packet of size vid transmitted", op);

printf (" Bytes remaining to transmit vid, else f printf ("In Time left for transmission: vid e printf ("In Time left for transmission: vid e printf ("In Time left for transmission: vid e printf ("In Time left for transmit"), printf ("In Time left for transmit is go printf ("In Time left for transmission: 20 units Packet (2): 10 bytes printf ("In Time left for transmission: 20 units Packet of size 30 transmitted Bytes remaining to transmit is go Time left for transmission: 0 units No packets to transmission: 0 units No packets to transmission: 0 units No packets to transmission: 0 units Processed to transmission: 0 units No packets to transmission: 0 units Processed to transmission: 0 units No packets to transmission: 0 units	PAGE NO: 37	
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	coming packet size: 10	
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Time left for transmission: 30		

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	Time left for transmission 10 units	
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	Ancoming proted size: 50	
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	4 nophing pecket size 30	Deleter to a land
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03	Using TOP/IP sockets, write a clien	t-senier program to
	more dient sending the file name	and the server to
	send back the content of the tog	mested file if present
	Clint at la	
	# include < unistd. b>	
	int main() {	
HATTO IN		

int spc, n; char huffer[1024], frame[50]; struct sockaddr inoddr; SOC = SOCKET (PF_ INFI , SOCK stream of addr sin family = AF INET; addr. sin port = htons (7891); add sin_oddr. s_addr = inet_addr ("127.0.0.1"); while (connect (soc, (struct sork addr +) feddr, size of (odd) printf ("In client is connected to server"); print ("In Enter file name."); sconf ("1.5", frame); send (soc, frame, size of (frame), 01; print("In Received response (n); pobile ((n = recv (soc, buffer, size of (buffer), 0)) >0) PHAT ("Y.S", Suffers: return 0! Server side # include catalinina # include < arpa / ihet. h> # malude < fentl. h> # include curistal b> int mail () f int welcome, new soc, fd. n: char huffer [10247, frame[50]; Strict spakeaddr - in addr Welcome = socket (PF. INFT, sock streom, 0) addr sin family = AF INCT; addr sin port = htors (7891); addr. sin-addre addr: het addr ("127.00.0"). bind (nielcome, (struct rockeder) foddr, size of (addr))

	THE COLUMN TO SERVICE STATE OF	PAGE NO : DATE :
	print (" In Server is online"); listen (welcome, 5);	
	rear(new soc, frame, 50,0);	4);
	print ("In Requesting for file: Y.s.l") td: open (frome, D-RDONLY);	', frame!;
	Send (new_soc "In File not found else	h", 15,0).
	send (new-soc, buffer, size of (puffer)))>0)
-0	printf ("In Request gent (n");	
	return 0)	
4.	Using UDP sockets, write a client-cen make client sending the file name and	of the server to
	send back contents of the requested file	if present.
	# include < stdio. h> # include < strings h>	Marine W
	# include says (-types h> # include says (socket-h>	And the second
	# includes netinet/in.h=	
	int main() { Char fuller [100]	Alba I
11.44.4	char buffer [100]; char "message = "Hello Client";	Na N

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int listened, len: struct sockadde inserveradde, cliadde; bzero (& servaddr, she of (servaddr)); listentd = socket (AF-INET, SOCK DGRAM, 0); servaddr. sih addr. s. addr = htool (INADDR-ANE); serreddr sin port : htons (port). servador sin family: AFINET: blind (listenfol, (struct rockoddr +) & corroddr, sice of (ser addr) len = size of (diedd-) int n = recriptom (listerfd, buffer, size of (buffer), a) (Struct contaddr) & clinder glen); buffor [1]=1101; puts (baffer): send+of listentd, message, MAT live, o, Cotruct sockaddr+) & clieddr, size of (clieddr)); Client Driver Program # include astdio. h # include < strings.h> # include < sys /types. h> # include <arp </ihet. h> # include < sys/spoket. h> # include < netinet/in.h> # include cunistal h> # include < stallib. hz # define PORT SOED # define MAKLINE 1000 Ent mark () } char buffer[100]; char + message = "Hello Server"; int sockfd, D;

