

Program 15

Write a program for congestion control using Leaky bucket algorithm.

Code and Output:

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14) Write a program for congestion control using Leaky Bucket algorithm

```
#include <stdio.h>
#include <stdlib.h>
#include <unistd.h>
#define NOF_PACKETS 5

int rand(int a) {
    int rn = (random() % 100) / 100;
    return rn == 0 ? 1 : rn;
}

int main() {
    int packet_sz[NOF_PACKETS]; int b = 50, o = 100,
    p_sz = 0, p = 0, p - 100, op;
    for (i = 0; i < NOF_PACKETS; i++)
        packet_sz[i] = random() % 100;
    for (i = 0; i < NOF_PACKETS; i++)
        printf("In packet [%d] %d bytes\n", i, packet_sz[i]);
    printf("Enter the output rate\n");
    scanf("%d", &a_rate);
    printf("Enter the Bucket size\n");
    scanf("%d", &b_size);
    for (i = 0; i < NOF_PACKETS; i++) {
        if (packet_sz[i] > b_size)
            printf("Incoming packet size (%d bytes) is greater than bucket capacity\n");
    }
}
```



```

else
    printf("\n\n Bucket capacity exceeds
           d-packets (RESET=0b)");
else {
    p = rsy - lmt = packet_size;
    printf("\n\n Increasing packet size", packet_size);
    while (p - sy - rm > 0) {
        sleep(1);
        if (p - sy - rm) {
            if (p - sy - rm <= 0 - rate)
                op = p - sy - rm, p - sy = rm = 0;
            else
                op = 0 - rate, p - sy - rm = 0 - rate;
            printf("\n\n Packet of size %d transmitted
                   %d",
                   packet_size,
                   op - sy - rm);
        }
    }
    else {
        printf("\n\n No packets to transmit");
    }
}
}
}
}
}

```