AIM:-

To execute a C program for leaky bucket.

Program:-

```c
#include <stdio.h>
void main()
{
    int data[20], leak_size = 5;
    int n, i, counter = 0;
    printf("Enter the no. of data packets sent: ");
    scanf("%d", &n);
    printf("Enter the sizes of packets \n");
    for(int i=0; i<n; i++)
        scanf("%d", &data[i]);
    for(int i=0; i<n; i++)
    {
        while(data[i]>0)
        {
            if(data[i] >= leak_size)
                data[i] = data[i] - leak_size;
            else
            {
                r = leak_size - data[i];
                data[i] = 0;
                data[i+2] = data[i+1] - r;
            }
            counter++;
        }
        printf("The total time taken to transfer the data is %d seconds at
                the rate of %d mB/sec", counter, leak_size);
    }
}
```

Output:-

Enter the no. of data packets sent: 4

Enter the size of packets.

45
67
89
90
The total time taken to transfer the data is 59 seconds at the rate of 5 MB/sec.