

Write a program for ~~error~~ congestion control using leaky bucket algorithms

```
#include <stdio.h>
```

```
int main()
```

```
{
```

```
int incoming, outgoing, buck_size, n, store=0;
```

```
printf("Enter the bucket size");
```

```
scanf("%d", &buck_size);
```

```
printf("Enter outgoing rate:");
```

```
scanf("%d", &outgoing);
```

```
printf("Enter the no. of inputs:");
```

```
scanf("%d", &n);
```

```
while (n!=0) {
```

```
printf("Enter the incoming packet size:");
```

```
scanf("%d", &incoming);
```

```
if (incoming <= (buck_size - store)) {
```

```
store += incoming;
```

```
printf("Bucket buffer size %d out of %d\n", store, buck_size);
```

```
}
```

```
else
```

```
{
```

```
printf("Dropped %d no. of packets\n", incoming - (buck_size - store));
```

```
printf("Bucket buffer size %d out of %d\n", store, buck_size);
```

```
store = buck_size;
```

```
}
```

```
store = store - outgoing;
```

```
printf("After outgoing %d packets left out of %d in buffer\n", store, buck_size);
```

```
n--;
```

```
}
```

```
}
```


Output

Enter no. of queries, buffer size, input and output packet size

4

7

4

1

Packet is accepted

rem. space = 3

packet is accepted

* rem. space = 0

Packet not accepted.

Rem space 1

* Packet not accepted

rem. space = 2


```
PS D:\VS Code> cd "d:\VS Code\OS\" ; if ($?) { gcc bucket.c -o bucket } ; if ($?) { .\bucket }
Enter Bucket size and outstream size
2000
100
Packet of 41 bytes accepted
Remaining bytes: 2000
If you want to stop input, press 0, otherwise, press 1
1
Packet of 467 bytes accepted
Remaining bytes: 1633
If you want to stop input, press 0, otherwise, press 1
1
Packet of 334 bytes accepted
Remaining bytes: 1399
If you want to stop input, press 0, otherwise, press 1
1
Packet of 500 bytes accepted
Remaining bytes: 999
If you want to stop input, press 0, otherwise, press 1
1
Packet of 169 bytes accepted
Remaining bytes: 930
If you want to stop input, press 0, otherwise, press 1
1
Packet of 724 bytes accepted
Remaining bytes: 306
If you want to stop input, press 0, otherwise, press 1
1
Packet of 478 bytes is discarded
Remaining bytes: 406
If you want to stop input, press 0, otherwise, press 1
1
Packet of 358 bytes accepted
Remaining bytes: 148
If you want to stop input, press 0, otherwise, press 1
1
Packet of 962 bytes is discarded
Remaining bytes: 248
If you want to stop input, press 0, otherwise, press 1
0
Remaining bytes: 348
Remaining bytes: 448
Remaining bytes: 548
Remaining bytes: 648
Remaining bytes: 748
```


Remaining bytes: 348
Remaining bytes: 448
Remaining bytes: 548
Remaining bytes: 648
Remaining bytes: 748
Remaining bytes: 848
Remaining bytes: 948
Remaining bytes: 1048
Remaining bytes: 1148
Remaining bytes: 1248
Remaining bytes: 1348
Remaining bytes: 1448
Remaining bytes: 1548
Remaining bytes: 1648
Remaining bytes: 1748
Remaining bytes: 1848
Remaining bytes: 1948
Remaining bytes: 2000
PS D:\VS Code\OS> □