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★ Leaky Bucket ★

Aim:

Write a program for distance vector algorithm to find suitable path for transmission.

```
#include <bits/stdc++.h>
```

```
#include <unistd.h>
```

```
using namespace std;
```

```
#define bucketSize 500
```

```
void bucketInput (int a, int b)
```

```
{
```

```
    if (a > bucketSize)
```

```
        cout << "Initial Bucket overflow";
```

```
    else
```

```
    {
```

```
        sleep(10);
```

```
        while (a > b)
```

```
        {
```

```
            cout << "Initial" << b << " bytes output.";
```

```
            a -= b;
```

```
            sleep(10);
```

```
        }
```

```
    if (a > 0)
```

```
        cout << "Last" << a << " bytes sent";
```

```
        cout << "Bucket output successful";
```

```
    }
```

```

int main()
{
    int op, pktSize;

    cout << "Enter output rate: ";
    cin >> op;

    for (int i=1; i<=5; i++)
    {
        sleep( rand() % 10 );
        pktSize = rand() % 70;
        cout << " Packet no " << i << " Packet Size = " <<
            pktSize;

        bucketInput( pktSize, op );
    }

    cout << endl;

    return 0;
}

```

Enter output rate = 10

Packet no 1

Packet size = 186

50 bytes output.

50 bytes output

50 bytes output

last 36 bytes sent.

Packet output successful.

2
200 50

→ 50
300 50
50
50

→

Packet no 2

Packet size = 212

So bytes outputted,

So bytes outputted,

So bytes outputted,

Last 11 bytes sent.

Packet output successful.

Packet no 3

Packet size = 532

Packet overflow.

Packet no 4

Packet size = 492

So bytes outputted,

So bytes outputted,

So bytes outputted,

So bytes outputted,

So bytes outputted,

So bytes outputted,

So bytes outputted,

So bytes outputted,

So bytes outputted,

Last 92 bytes sent

Packet output successful.

Packet no 5

Packet size = 521

Packet overflow.

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Repeat again