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#include <bits/stdc++.h>
#include <unistd.h>
using namespace std;
#define bucketSize 500

void bucketInput(int a, int b)
{
    if (a > bucketSize)
        cout << "\n\t\t\t Bucket overflow";
    else {
        sleep(5);
        while (a > b) {
            cout << "\n\t\t\t" << b << " bytes outputted.";
            a -= b;
            sleep(5);
        }
        if (a > 0)
            cout << "\n\t\t\t Last " << a << " bytes sent\t\t";
        cout << "\n\t\t\t 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() % 700;
        cout << "In Packet no " << i << " It Packet  
size = " << pktSize;
        bucketInput(pktSize, op);
    }
}
```

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    }
    cout << endl;
    return 0;
}

```

Output

Enter output rate: 100

packet no 1 Packet size = 186
 100 bytes outputted
 Last 86 bytes sent
 Bucket output successful

Packet no 3 Packet size = 535
 Bucket overflow

Packet no 4 packet size = 492
 100 bytes outputted
 100 bytes outputted
 100 bytes outputted
 100 bytes outputted

packet no 5 Packet size = 521
 Bucket overflow

WAV
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