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import java.util.*;

public class Main {

    public static void main(String[] args) {

        Scanner sc = new Scanner(System.in);

        System.out.print("Enter number of queries: ");

        int q = sc.nextInt();

        System.out.print("Enter the bucket size: ");

        int b = sc.nextInt();

        System.out.print("Enter the input packet size: ");

        int in = sc.nextInt();

        System.out.print("Enter the output packet size: ");

        int out = sc.nextInt();

        int storage = 0;

        int totalLoss = 0;

        for (int i = 0; i < q; i++) {

            int sizeLeft = b - storage;

            int lostPackets = 0;

            if (in <= sizeLeft) {

                storage += in;

            } else {

                lostPackets = in - sizeLeft;

                storage = b;

            }

            System.out.println("Bucket Size " + storage + " out of bucket size " + b);

            if (lostPackets > 0) {

                System.out.println("Packets Lost: " + lostPackets);

            }

            totalLoss += lostPackets;

            storage = Math.max(0, storage - out);

        }

        System.out.println("Total Packets Lost: " + totalLoss);
    }
}

```

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        sc.close();  
    }  
}
```