Leaky bucket algorithm

```c
#include <stdio.h>

#include <stdlib.h> // Include this for the rand() function

int main()

{

int buckets, outlets, k = 1, num, remaining;

printf("Enter Bucket size and outstream size\n");

scanf("%d %d", &buckets, &outlets);

remaining = buckets;

while (k)

{

num = rand() % 1000; // Generate a random number between 0 and 999if

if(num < remaining)

{

remaining = remaining - num;

printf("Packet of %d bytes accepted\n", num); // Added missing variable

}

else

{

printf("Packet of %d bytes is discarded\n", num);

}

if (buckets - remaining > outlets)

{

remaining += outlets; // Fixed the calculation

}

else

remaining = buckets;

printf("Remaining bytes: %d \n", remaining);

printf("If you want to stop input, press 0, otherwise, press 1\n");

scanf("%d", &k);

}
```

```c
while (remaining < buckets) // Fixed the condition

{ if (buckets - remaining > outlets)

{

remaining += outlets; // Fixed the calculation

}

else

remaining = buckets;

printf("Remaining bytes: %d \n", remaining);

}

return 0; // Added a return statement to indicate successful completion

}
```

Output

```
Enter Bucket size and outstream size
2000
100
Packet of 383 bytes accepted
Remaining bytes: 1717
If you want to stop input, press 0, otherwise, press 1
1
Packet of 886 bytes accepted
Remaining bytes: 931
If you want to stop input, press 0, otherwise, press 1
1
Packet of 777 bytes accepted
Remaining bytes: 254
If you want to stop input, press 0, otherwise, press 1
1
Packet of 915 bytes is discarded
Remaining bytes: 354
If you want to stop input, press 0, otherwise, press 1
0
```

```
Remaining bytes: 454
Remaining bytes: 554
Remaining bytes: 654
Remaining bytes: 754
Remaining bytes: 854
Remaining bytes: 954
Remaining bytes: 1054
Remaining bytes: 1154
Remaining bytes: 1254
Remaining bytes: 1354
Remaining bytes: 1454
Remaining bytes: 1554
Remaining bytes: 1654
Remaining bytes: 1754
Remaining bytes: 1854
Remaining bytes: 1954
Remaining bytes: 2000
```