

## Print the Region and Maybe a Gap

```
for (j = 0; u[i] - a > j; j++) {
    printf ("X");
}
if ((num - 1) > i && 0 != u[i]) {
    printf (".");
}
```

Region appears with a fewer X's.

Print a gap if this region is not the last non-zero (left) and this region is non-zero (right).

## After the Last Region, Print Extra Spaces

```
if (i == 3) {
    for (j = 0; a > j; j++) {
        printf(".");
    }
}
```

After end of last region, print a extra blanks (should be done unconditionally after the loop).

## See Any Bugs?

### Did you notice the bug(s)?

I saw one, but let's see if covering the code exposes something.

Let's walk through the code again and see what tests we need.

## Need a Test with at Least One Non-Zero Region

```
int i, j, a, num = 0;
int u[4];
u[0] = r1;
u[1] = r2;
u[2] = r3;
u[3] = r4;
for (i = 0; 4 > i; i++) {
    if (0 != u[i]) {
        num++;
    }
}
```

We need at least one non-zero region to execute this line (so any valid input suffices).