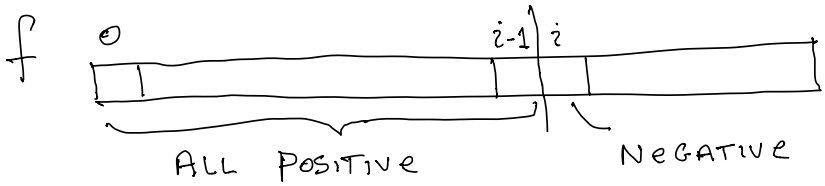
f[100] CONTAINS INTEGER VALUES.

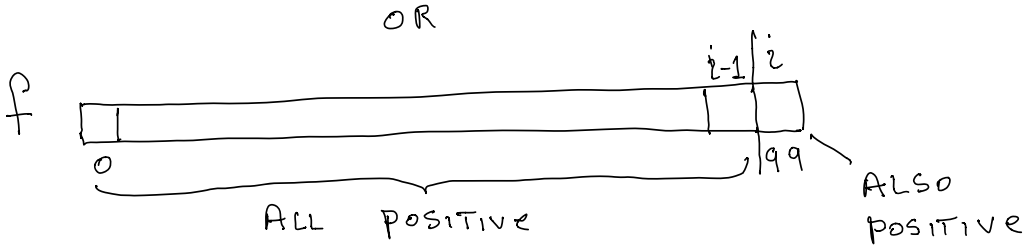
WRITE A PROGRAM TO DETERMINE IF THE VALUES ARE ALL POSITIVE.

— · —

AT THE END ONE OF THE FOLLOWING PICTURES IS TRUE



OR



WE CAN COMBINE THESE AND WRITE THIS

"FROM 0 UP TO i-1 ARE ALL POSITIVE" AND

$$(f[i] < 0) \;||\; ((i == 99) \;\&\&\; (0 <= f[i]))$$

WE CAN SIMPLIFY THIS TO

$$(f[i] < 0) \;||\; (i == 99)$$

Now we negate this to get the loop guard

$$(0 <= f[i]) \;\&\&\; (i != 99)$$

This gives us the program

```
i = 0;
while ((0 <= f[i]) && (i != 99))
    {
      i = i + 1;
    }
// f[i] < 0 || i == 99
if (f[i] < 0) { printf("Not all positive"); }
else          { printf("All positive"); }
```