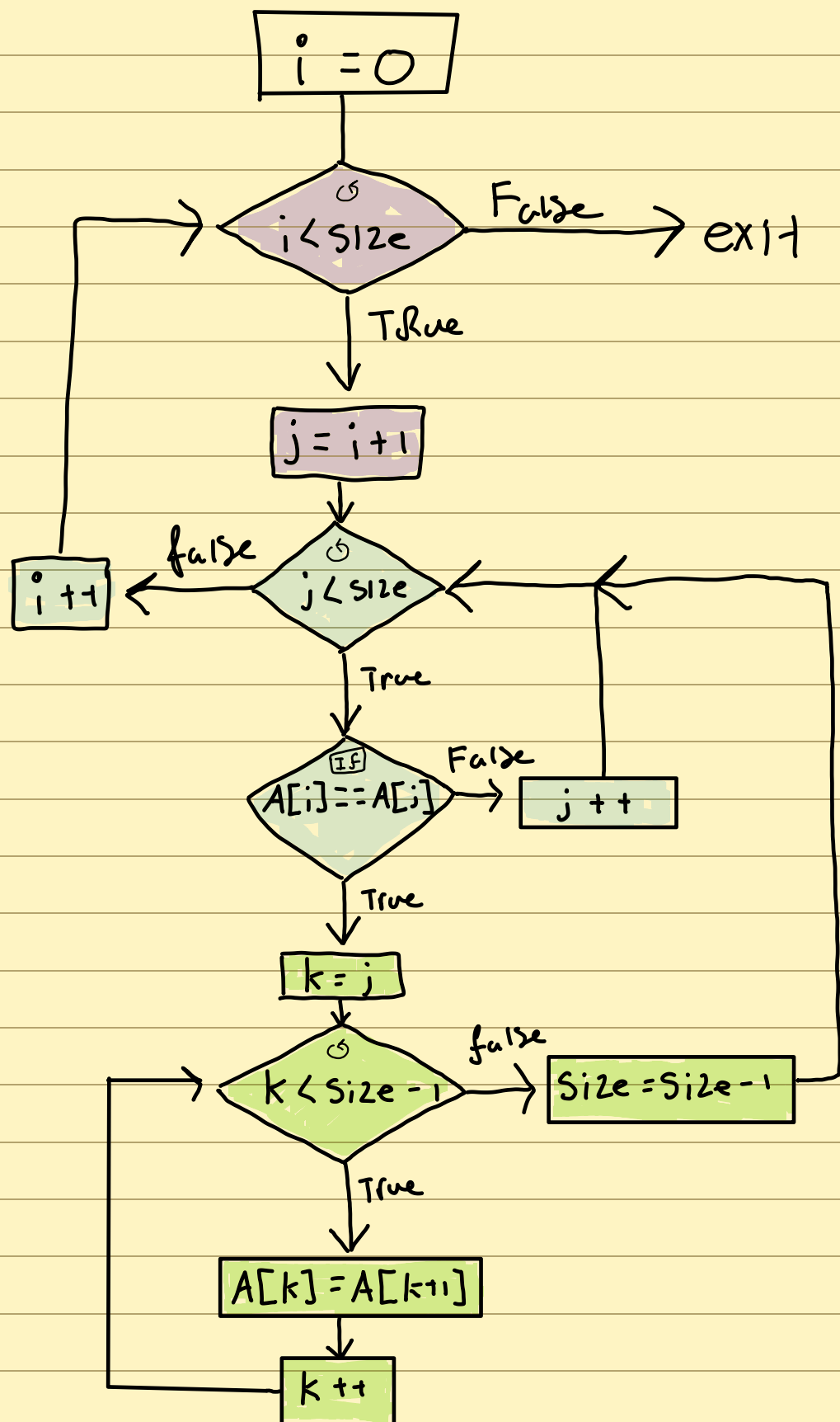


```

6
7 // Remove elements equal to val
8 i = 0;
9 while (i < size) {
10     j = i + 1;
11     while(j < size) {
12         if(Array[i] == Array[j]){
13             // Shift elements if element is less than value
14             for (k = j; k < size-1; k++) {
15                 Array[k] = Array[k+1];
16             }
17             // if element deleted, length of array decreases
18             size = size - 1;
19         }
20         else
21             j ++;
22     }
23     i++;
24 }

```

Outer loop  
Inner loop  
for loop



| Registers        | Data | Variable |
|------------------|------|----------|
| \$S <sub>0</sub> | X    | A[0]     |
| \$S <sub>1</sub> | Y    | Size     |
| \$S <sub>2</sub> | 0    | i        |
| \$S <sub>3</sub> | i+1  | j        |
| \$S <sub>4</sub> | j    | k        |
| \$S <sub>5</sub> |      |          |
| \$S <sub>6</sub> |      |          |
| \$S <sub>7</sub> |      |          |

- a Pointer, to A[0]
- the Size of the array

} Int, used in loops

| Registers        | Data / use   |
|------------------|--|
| \$t <sub>0</sub> | 1:0  |
| \$t <sub>1</sub> | $i \times 4 \} A[i] \quad   \quad k \cdot 4 \} A[k]$       |
| \$t <sub>2</sub> | $j \times 4 \} A[j] \quad   \quad (k+1) \cdot 4 \} A[k+1]$ |
| \$t <sub>3</sub> | Size - 1   |
| \$t <sub>4</sub> |  |
| \$t <sub>5</sub> |  |
| \$t <sub>6</sub> |  |
| \$t <sub>7</sub> |  |
| \$t <sub>8</sub> |  |
| \$t <sub>9</sub> |  |

- Holds T/F, values for all branch calls
- } used for calculating offset and array location in memory

- used during the for-loop, and it's reusable, when exiting

Size = Size - 1

\$S<sub>1</sub> = \$t<sub>3</sub>