Instructions

Ask your TA lots of questions, and feel free to make lots of noise. You may work in groups, but you must contribute to your group’s solution in order to earn credit for this exercise.

You will answer questions about this method:

```java
public static void doSomething (int[] a, int[] answer) {
    int i = 0;
    while(a[i] != -1) {
        answer[a[i]] += 1;
        i++;
    }
}
```

Don’t let the part that says “answer[a[i]]” freak you it. Java simply finds the value of the inner part, a[i], and uses that as the index into array answer.

1. Suppose we call doSomething(), passing in the following arrays. Trace the call and show its effect on the arrays.

   a:

<table>
<thead>
<tr>
<th>5</th>
<th>5</th>
<th>3</th>
<th>5</th>
<th>8</th>
<th>13</th>
<th>9</th>
<th>-1</th>
<th>5</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>

   answer:

   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
   |---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
   | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
2. Write a comment explaining what the method accomplishes. Do not paraphrase the steps it takes (such as by saying “it checks the value of a[i] and if it is not equal to -1, then adds one to answer[a[i]]”). Instead, describe the final effect of the method once it is done.

3. What preconditions are necessary to ensure that the method doesn’t crash and does do what you just promised above?

4. Now that you understand the method better, come up with better names for the method and its two parameters.

```java
public int doSomething()
{
    int a;
    int answer;
}
```