In-Class Problem

1. Describe what the function byTagName is doing.
2. Describe what the function explore is doing.
3. What is the output for the following:

```
console.log(byTagName(document.body, "h1").length);
```

```
console.log(byTagName(document.body, "span").length);
```

```
let para = document.querySelector("p");
console.log(byTagName(para, "span").length);
```

```html
<h1>Heading with a <span>span</span> element.</h1>
<p>A paragraph with <span>one</span>, <span>two</span>
 spans.</p>

<script>
 function byTagName(node, tagName) {
   let found = [];
   tagName = tagName.toUpperCase();

   function explore(node) {
    for (let i = 0; i < node.childNodes.length; i++) {
     let child = node.childNodes[i];
     if (child.nodeType == document.ELEMENT_NODE) {
      if (child.nodeName == tagName) found.push(child);
      explore(child);
     }
    }
   }

   explore(node);
   return found;
 }
</script>
```