



# File Explorer II Solution

React ▾



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Medium



20mins



294 done

We'll build on top of File Explorer's solution.

## FileExplorer component

- Add an `aria-label` to the `<div>`. It can be any descriptive text. VS Code uses `aria-label="Files Explorer"`.
- Add `role="tree"` to the `<ul>`.

## FileObject component

- `role`: Add `role="treeitem"` to the `<li>`.
- `aria-expanded`: The `aria-expanded` value can be determined by the value of the `expanded` state. Note that `aria-expanded` should only be added for directories.
- `aria-level`: Since the component already accept a `level` prop, it can be directly used as the `aria-level` value.
- `aria-setsize`: This value has to be passed in from the `FileList` component. It is the total number of items in the current directory level.
- `aria-posinset`: This value has to be passed in from the `FileList` component. It is a one-based index for the position in the current directory level.

Lastly, the `<li>` has to be labelled. You can either use `aria-label` with the item name as the value or use `aria-labelledby` associated with the `id` of the element containing the file name. Since there can be multiple `FileObject` component instances on the page and we cannot guarantee that the file/directory names will be globally unique, each `FileObject` instance needs to have a unique identifier.

The `useId` React hook can be used to generate unique ID for each `FileObject` instance. The `id` is added to the `<span>` around the object name.

## Test cases

- Inspect the rendered HTML to see that the right attributes were added to the DOM.
- You can go a step further by using accessibility testing tools like **axe** to validate the a11y of the elements.

The resulting DOM should be similar to:

```
<div aria-label="Files Explorer" role="tree">
  <ul role="group">
    <li
      aria-expanded="true"
      aria-labelledby="r1:"
      aria-level="1"
      aria-posinset="1"
      aria-setsize="3"
      role="treeitem">
      <button><span id="r1:">Documents</span> [-]</button>
      <ul role="group">
        <li
          aria-labelledby="rb:"
          aria-level="2"
          aria-posinset="1"
          aria-setsize="2"
          role="treeitem">
          <button>
            <span id="rb:">Powerpoint.ppt</span>
          </button>
        </li>
        <li
          aria-labelledby="rd:"
          aria-level="2"
          aria-posinset="2"
          aria-setsize="2"
          role="treeitem">
          <button>
            <span id="rd:">Word.doc</span>
          </button>
        </li>
      </ul>
    </li>
    <li
      aria-expanded="true"
      aria-labelledby="r3:"
      aria-level="1"
      aria-posinset="2"
      aria-setsize="3"
      role="treeitem">
      <button><span id="r3:">Downloads</span> [-]</button>
      <ul class="file-list" role="group">
        <li
```

```
aria-expanded="true"
aria-labelledby=":r7:"
aria-level="2"
aria-posinset="1"
aria-setsize="2"
role="treeitem">
<button><span id=":r7:">Misc</span> [-]</button>
<ul class="file-list" role="group">
  <li
    aria-labelledby=":rf:"
    aria-level="3"
    aria-posinset="1"
    aria-setsize="2"
    role="treeitem">
    <button>
      <span id=":rf:">bar.txt</span>
    </button>
  </li>
  <li
    aria-labelledby=":rh:"
    aria-level="3"
    aria-posinset="2"
    aria-setsize="2"
    role="treeitem">
    <button>
      <span id=":rh:">foo.txt</span>
    </button>
  </li>
</ul>
</li>
<li
  aria-labelledby=":r9:"
  aria-level="2"
  aria-posinset="2"
  aria-setsize="2"
  role="treeitem">
  <button>
    <span id=":r9:">unnamed.txt</span>
  </button>
</li>
</ul>
</li>
<li
  aria-labelledby=":r5:"
  aria-level="1"
  aria-posinset="3"
  aria-setsize="3"
  role="treeitem">
  <button>
```

```
      <span id=":r5:">README.md</span>
    </button>
  </li>
</ul>
</div>
```

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