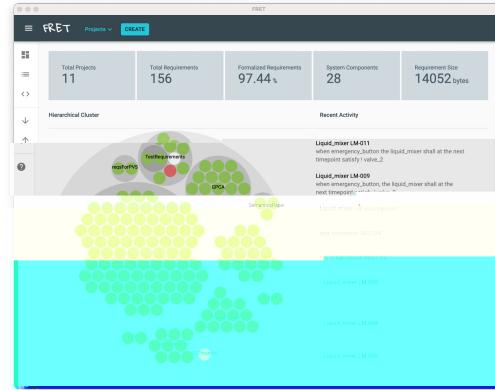


- We can now use automated regression tests but more work is needed
- ## *Testing Scenarios*

Testing Scenarios



- **Bugs cost less if they are caught and fixed early on.**
- **Most of our work up to now are for e2e tests. Today tutorial will be on writing e2e tests.**
- **Our focus should be more on e2e testing since FRET is a research rather than a commercial software.**
- **I am exploring and starting to add Jest Snapshot tests to do Integration and Unit testing.**

THE FOUR TYPES OF TESTS

End to End

A helper robot that behaves like a user to click around the app and verify that it functions correctly.

Sometimes called "functional testing" or e2e.

Integration

Verify that several units work together in harmony.

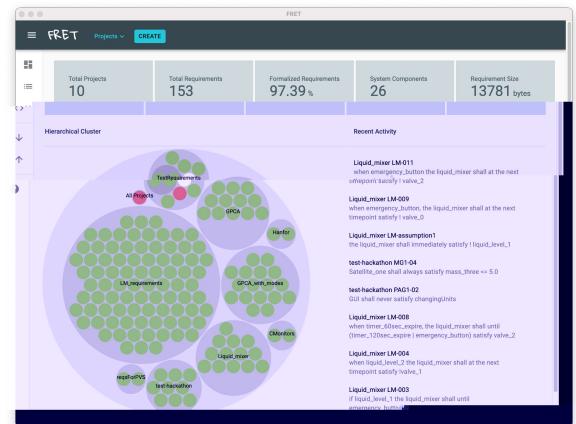
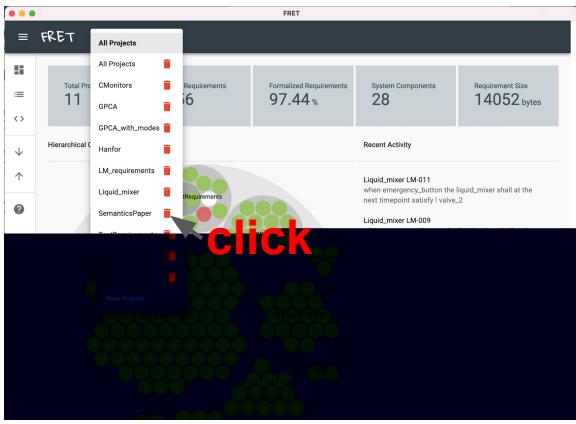
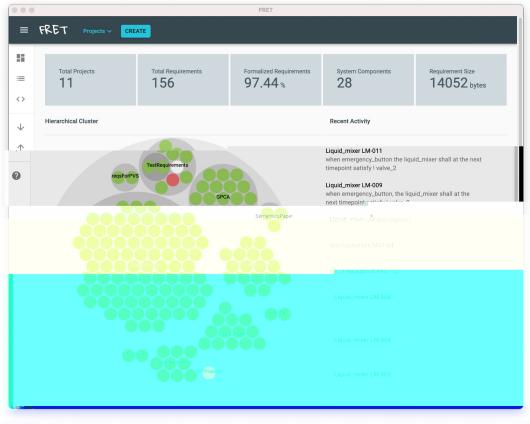
Unit

Verify that individual, isolated parts work as expected.

Static

Catch typos and type errors as you write the code.





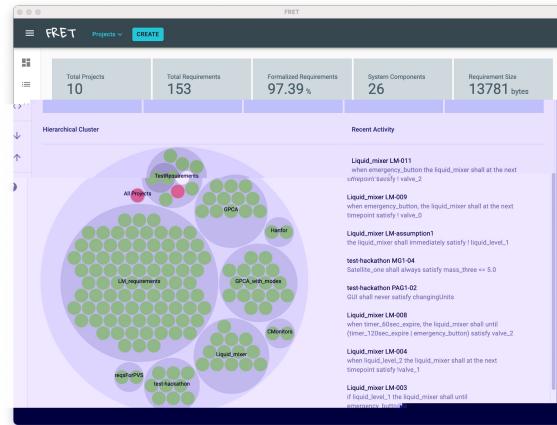
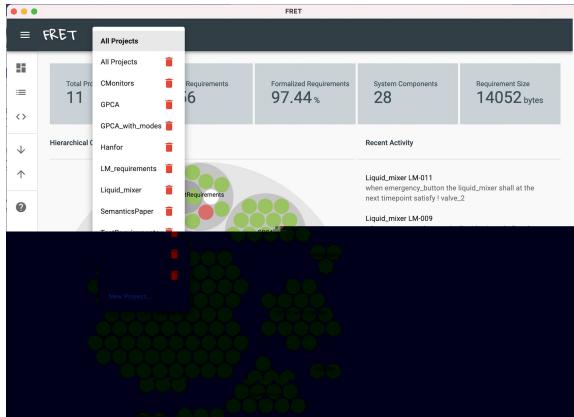
The screenshot shows the FRET software interface. At the top, there is a header bar with the FRET logo, a 'Projects' dropdown, and a 'CREATE' button. Below the header, there is a summary card with the following data:

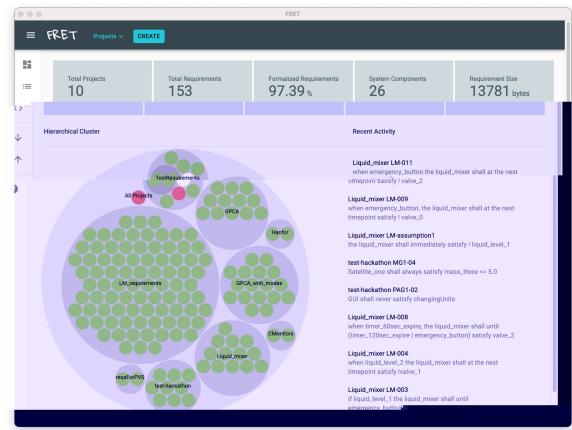
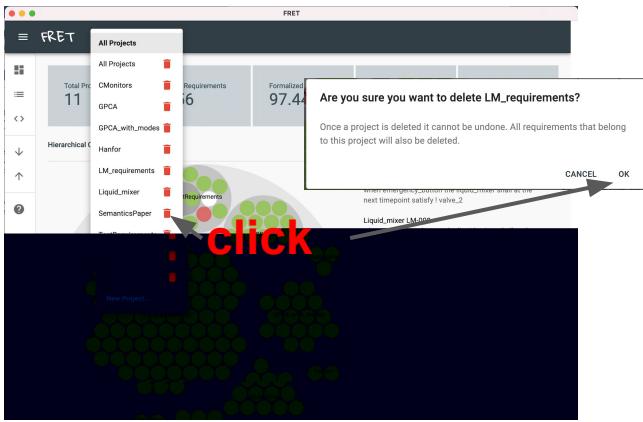
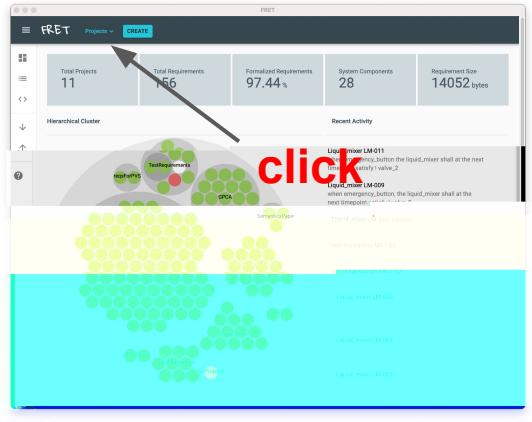
Total Projects	10
Total Requirements	153

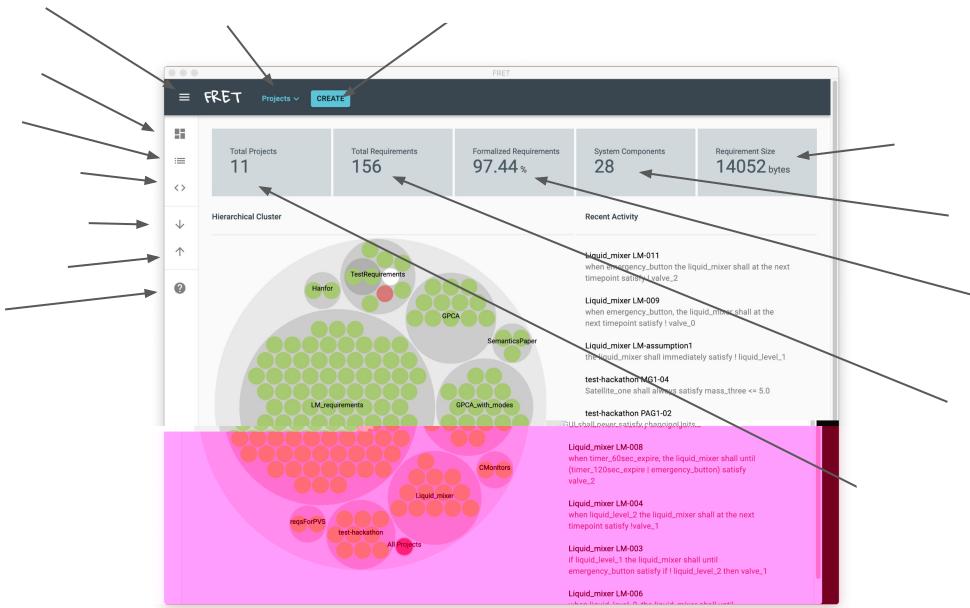
On the left side, there are navigation icons: a grid icon, a list icon, and a search icon. Below these are buttons for 'Requirement ID', 'Parent Requirement ID', and 'Project' dropdowns set to 'All Projects'. A red arrow points from the 'Requirement ID' button towards the bottom right of the screen.

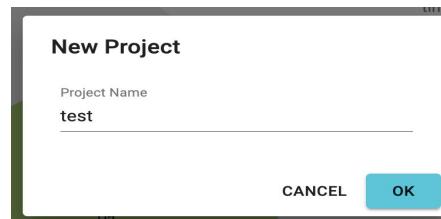
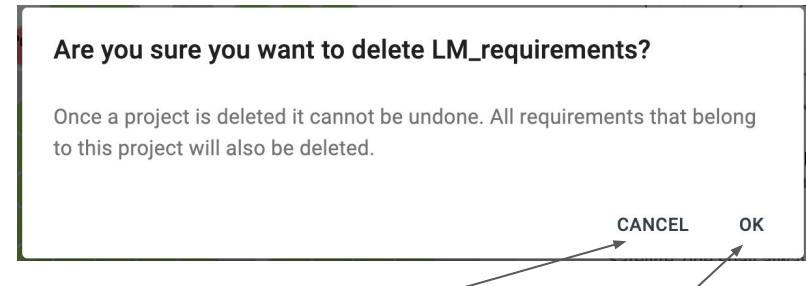
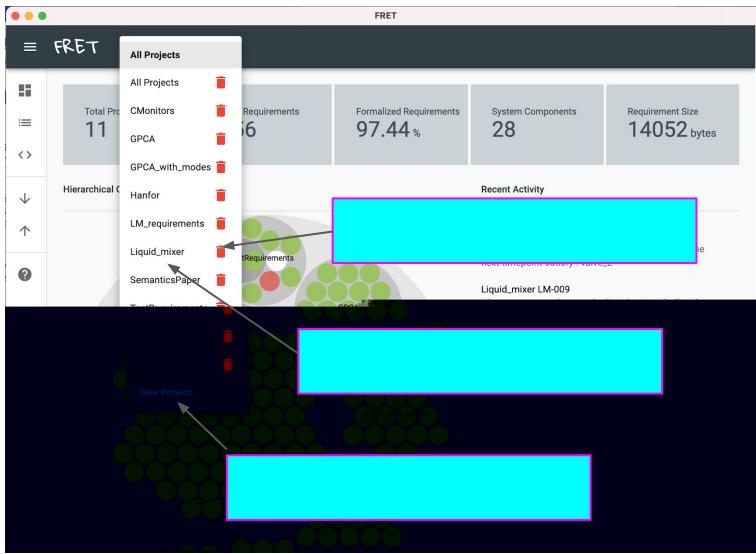
Below the summary card, there is a section titled 'Rationale and Comments' with a dropdown arrow icon. Further down, there is a 'Requirement Description' section with a detailed description and a help bubble. A red arrow points from the bottom right towards this section.

At the very bottom, there is a large, empty rectangular box, likely a placeholder for a requirement text or diagram, with a red arrow pointing towards it.









Create Requirement

Requirement ID Parent Requirement ID Project Demo-FSM

Rationale and Comments

Rationale

Comments

Requirement Description

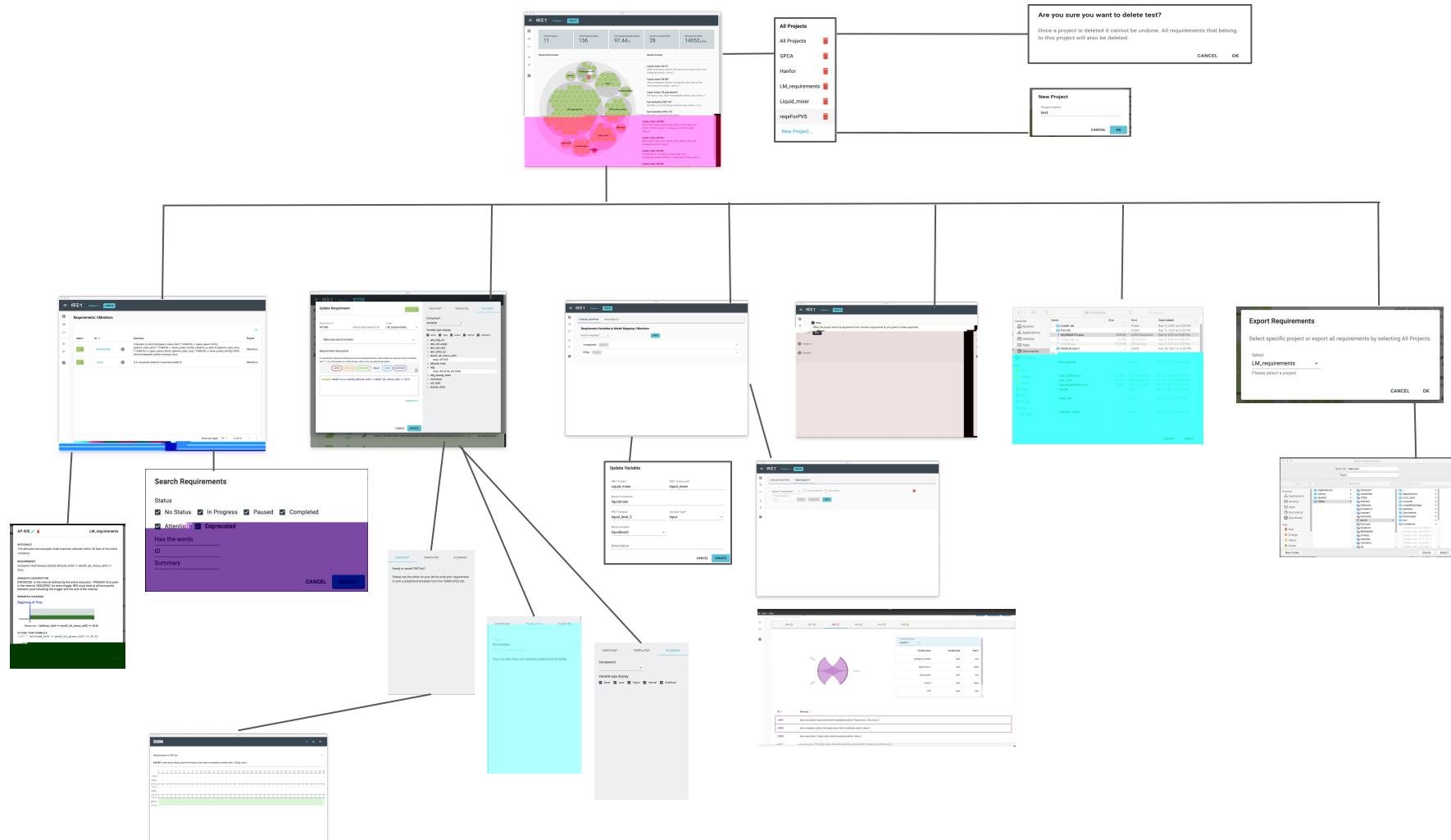
A requirement follows the sentence structure displayed below, where fields are optional unless indicated with "*". For information on a field format, click on its corresponding bubble.

SCOPE CONDITIONS COMPONENT* SHALL* TIMING RESPONSES*

SEMANTICS

CANCEL CREATE

The diagram illustrates the 'Create Requirement' interface. It features a header with 'Create Requirement', 'Requirement ID', 'Parent Requirement ID', and a dropdown for 'Project' set to 'Demo-FSM'. Below this is a section titled 'Rationale and Comments' containing 'Rationale' and 'Comments' fields. The 'Requirement Description' section contains a detailed sentence structure with terms like 'SCOPE', 'CONDITIONS', 'COMPONENT*', 'SHALL*', 'TIMING', and 'RESPONSES*'. A 'SEMANTICS' button is located at the bottom right of this section. At the very bottom are 'CANCEL' and 'CREATE' buttons.




```
it.only('RCE - 1', async () => {
    console.log('starting test: RCE - 1');
    await startWithJsonFileImport('FSM-Demo.json');
    // verify that the number of requirements is 13 after the import
    const requirementField = await app.client.$('#qa_db_ili_requirements');
    await app.client.pause(1000);
    var reqText = await requirementField.getText();
    expect(reqText).toContain('Total Requirements');
    expect(reqText).toContain('13');

    // click on the create button to add a requirement
    const crtBtn = await app.client.$('#qa_db_btn_create');
    await crtBtn.click();

    // add a new requirement with the id 'a_new_req': 'if x> 0 component shall satisfy p'
    const reqId = await app.client.$('#qa_crt_tf_reqid');
    await reqId.setValue('a_new_req');

    const slateEditable = await app.client.$('#qa_crt_edt_slateEditor');
    await slateEditable.click();
    await app.client.pause(1000);
    await slateEditable.keys('if x> 0 component shall satisfy p');

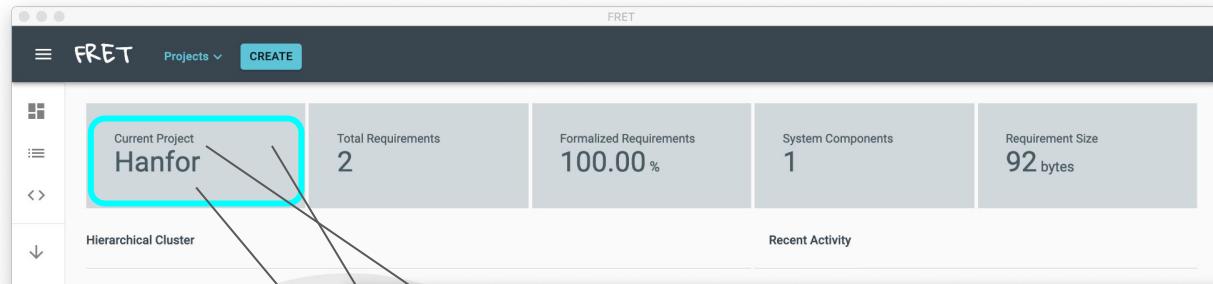
    const semanticsBtn = await app.client.$('#qa_crt_btn_semantics');
    await semanticsBtn.click();

    const createRq = await app.client.$('#qa_crt_btn_create');
    await createRq.click();

    //await app.client.pause(1000);

    //

    reqText = await requirementField.getText();
    expect(reqText).toContain('Total Requirements');
    expect(reqText).toContain('14');
```

Developer Tools - file:///Users/ktrinn/fret/hanfor-electron/app/app.html

Elements Console Sources Network Performance Memory Application Security Audits Devtron Redux Components Profiler

Styles Computed >

margin - border - padding 2 2 250.391 x 120 2 - -

Filter Show all

box-sizing border...
display list-i...
flex-shrink 0
font-family Roboto...
height 124px
list-style-img... none
list-style-posi... outside
list-style-type none
padding-bottom 2px
padding-left 2px
padding-right 2px
padding-top 2px
text-align left
width 254.39...

Developer Tools interface showing the DOM tree and style inspector for the 'Hanfor' project section. The 'Elements' tab is selected. The DOM tree highlights the 'DashboardWidget-statistics-168' element, which contains the 'Current Project' and 'Hanfor' text. The style inspector on the right shows the computed styles for this element, including a width of 124px and a height of 124px. A blue oval highlights the 'Hanfor' text in the DOM tree.

```
<head>...</head>
<body style="background-color: #f0f0f0; font-family: Roboto, sans-serif; margin: 0; padding: 0;">
  <div id="root">
    <div>
      <div>
        <div class="MainView-root-1">
          <div class="MainView-appFrame-2">
            <header class="MuiPaper-root MuiAppBar-root MuiAppBar-positionFixed MuiAppBar-colorPrimary MainView-appBar-3 mui-fixed MuiPaper-elevation4" style="z-index: 1000; position: fixed; top: 0; width: 100%;">
              <div class="MuiDrawer-root MuiDrawer-docked">...</div>
            <main class="MainView-content-11">
              <div class="Dashboard-root-164">
                <ul class="MuiImageList-root" style="margin: -2px; padding: 0; list-style-type: none; width: 100%;">
                  <li class="MuiImageList-item" id="qa_db_ili_projects" style="width: 20%; height: 124px; padding: 2px; border: 1px solid #ccc; border-radius: 4px; margin: 2px; position: relative; transition: all 0.2s ease-in-out; z-index: 1; background-color: #fff; display: flex; align-items: center; justify-content: center; font-size: 14px; font-weight: bold; color: #333; text-decoration: none; text-align: center; white-space: nowrap; overflow: hidden; text-overflow: ellipsis; word-break: break-all; ">
                    <div class="MuiImageList-item-item">
                      <div class="DashboardWidget-root-166">
                        <div class="DashboardWidget-title-167">Current Project</div>
                        <div class="DashboardWidget-statistics-168" style="background-color: #fff; border: 1px solid #ccc; border-radius: 4px; padding: 2px; margin: 2px; display: flex; align-items: center; justify-content: space-between; font-size: 12px; font-weight: bold; color: #333; text-decoration: none; text-align: center; white-space: nowrap; overflow: hidden; text-overflow: ellipsis; word-break: break-all; ">
                          "Hanfor"
                          <span class="DashboardWidget-subtitle-169"></span>
                        </div>
                      </div>
                    </div>
                  </li>
                <li class="MuiImageList-item" id="qa_db_ili_requirements" style="width: 20%; height: 124px; padding: 2px; border: 1px solid #ccc; border-radius: 4px; margin: 2px; position: relative; transition: all 0.2s ease-in-out; z-index: 1; background-color: #fff; display: flex; align-items: center; justify-content: center; font-size: 14px; font-weight: bold; color: #333; text-decoration: none; text-align: center; white-space: nowrap; overflow: hidden; text-overflow: ellipsis; word-break: break-all; ">
                  <div class="DashboardWidget-root-166">
                    <div class="DashboardWidget-title-167">Requirements</div>
                    <div class="DashboardWidget-statistics-168" style="background-color: #fff; border: 1px solid #ccc; border-radius: 4px; padding: 2px; margin: 2px; display: flex; align-items: center; justify-content: space-between; font-size: 12px; font-weight: bold; color: #333; text-decoration: none; text-align: center; white-space: nowrap; overflow: hidden; text-overflow: ellipsis; word-break: break-all; ">
                      2
                      <span class="DashboardWidget-subtitle-169"></span>
                    </div>
                  </div>
                </li>
                <li class="MuiImageList-item" id="qa_db_ili_formalized" style="width: 20%; height: 124px; padding: 2px; border: 1px solid #ccc; border-radius: 4px; margin: 2px; position: relative; transition: all 0.2s ease-in-out; z-index: 1; background-color: #fff; display: flex; align-items: center; justify-content: center; font-size: 14px; font-weight: bold; color: #333; text-decoration: none; text-align: center; white-space: nowrap; overflow: hidden; text-overflow: ellipsis; word-break: break-all; ">
                  <div class="DashboardWidget-root-166">
                    <div class="DashboardWidget-title-167">Formalized Requirements</div>
                    <div class="DashboardWidget-statistics-168" style="background-color: #fff; border: 1px solid #ccc; border-radius: 4px; padding: 2px; margin: 2px; display: flex; align-items: center; justify-content: space-between; font-size: 12px; font-weight: bold; color: #333; text-decoration: none; text-align: center; white-space: nowrap; overflow: hidden; text-overflow: ellipsis; word-break: break-all; ">
                      100.00 %
                      <span class="DashboardWidget-subtitle-169"></span>
                    </div>
                  </div>
                </li>
                <li class="MuiImageList-item" id="qa_db_ili_sysComps" style="width: 20%; height: 124px; padding: 2px; border: 1px solid #ccc; border-radius: 4px; margin: 2px; position: relative; transition: all 0.2s ease-in-out; z-index: 1; background-color: #fff; display: flex; align-items: center; justify-content: center; font-size: 14px; font-weight: bold; color: #333; text-decoration: none; text-align: center; white-space: nowrap; overflow: hidden; text-overflow: ellipsis; word-break: break-all; ">
                  <div class="DashboardWidget-root-166">
                    <div class="DashboardWidget-title-167">System Components</div>
                    <div class="DashboardWidget-statistics-168" style="background-color: #fff; border: 1px solid #ccc; border-radius: 4px; padding: 2px; margin: 2px; display: flex; align-items: center; justify-content: space-between; font-size: 12px; font-weight: bold; color: #333; text-decoration: none; text-align: center; white-space: nowrap; overflow: hidden; text-overflow: ellipsis; word-break: break-all; ">
                      1
                      <span class="DashboardWidget-subtitle-169"></span>
                    </div>
                  </div>
                </li>
                <li class="MuiImageList-item" id="qa_db_ili_size" style="width: 20%; height: 124px; padding: 2px; border: 1px solid #ccc; border-radius: 4px; margin: 2px; position: relative; transition: all 0.2s ease-in-out; z-index: 1; background-color: #fff; display: flex; align-items: center; justify-content: center; font-size: 14px; font-weight: bold; color: #333; text-decoration: none; text-align: center; white-space: nowrap; overflow: hidden; text-overflow: ellipsis; word-break: break-all; ">
                  <div class="DashboardWidget-root-166">
                    <div class="DashboardWidget-title-167">Requirement Size</div>
                    <div class="DashboardWidget-statistics-168" style="background-color: #fff; border: 1px solid #ccc; border-radius: 4px; padding: 2px; margin: 2px; display: flex; align-items: center; justify-content: space-between; font-size: 12px; font-weight: bold; color: #333; text-decoration: none; text-align: center; white-space: nowrap; overflow: hidden; text-overflow: ellipsis; word-break: break-all; ">
                      92 bytes
                      <span class="DashboardWidget-subtitle-169"></span>
                    </div>
                  </div>
                </li>
              </ul>
            </div>
          </main>
        </div>
      </div>
    </div>
  </body>

```




☞ S Spectron

 CI failing | code style standard | david no longer available | license mit
npm v15.0.0 | downloads 137k/month

 On February 1, 2022, Spectron will be officially deprecated by the Electron team. Please read about more about [our planned deprecation here](#).



VerteDinde commented on Nov 2, 2021 • edited ▾

Collaborator

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