

Integration Test

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Integration Tests

- Per page
 - for each **.jsx** in Frontend
 - create a **.int.test.jsx**
 - cover page behavior end to end inside React app boundary

Decision

- **Unit Tests** will be done in **client/src/components/_tests_**
 - tests will live in that folder
 - small
 - isolated
 - per component
- **Integration Tests** will be done in **client/src/templates/_tests_**
 - on the different pages
 - Login
 - MainTemplate
 - UseScale

Setup

Create setup file in root for TextEncoder/TextDecoder

`jest.setup.js` at root

```
1 import { TextEncoder, TextDecoder } from "util";
2 global.TextEncoder = TextEncoder;
3 global.TextDecoder = TextDecoder;
```

Update configuration file

`jest.config.js` at root

```
1 /** @type {import('jest').Config} */
2 module.exports = {
3   testEnvironment: "jest-environment-jsdom",
```

```
4
5 // for integration test text encoder / decoder
6 setupFiles: ["<rootDir>/jest.setup.js"],
7
8 // ...
9 // ...
10
11 };
12
```

Login.jsx

- **Check:**

- renders login from elements
- submits form and navigates to `/main` on successful login
- calls `onLogin` with correct user info when login succeeds
- otherwise, shows alert when login fails

- **Tests :**

- ① successful login navigates to `/main` and calls `onLogin`
- ② failed login shows alert

- **Code**

- `Login.int.test.jsx`

- **To Run:**

- 1 `npm test -- client/src/templates/_tests_/Login.int.test.jsx`

- **All Passed**

- ✓ successful login navigates to `/main` and calls `onLogin`
- ✓ failed login shows alert

```
PS C:\Users\Terra\Documents\Federico\UniMeib\Year 3\Sem2\AI_Use_Scale_APP\secondo\AI_Usescale_APP> npm test -- client/src/templates/_tests_/Login.int.test.jsx

> test
> jest client/src/templates/_tests_/Login.int.test.jsx

PASS  client/src/templates/_tests_/Login.int.test.jsx
  ✓ successful login navigates to /main and calls onLogin (156 ms)
  ✓ failed login shows alert (134 ms)

Test Suites: 1 passed, 1 total
Tests:       2 passed, 2 total
Snapshots:  0 total
Time:        1.881 s, estimated 3 s
Ran all test suites matching client/src/templates/_tests_/Login.int.test.jsx.
```

MainTemplate.jsx

• Check:

- renders main layout stably with **Sidebar** and **Dashboard** components
- successfully fetches and renders both **BaseTemplates** and **CustomTemplates**
- confirms each section correctly renders the fetched templates
- and, handles fetch failures (must still render layout)

• Tests :

- ① renders layout with Sidebar and Dashboard
- ② displays base and custom templates after fetch
- ③ handles fetch failure: still renders Sidebar and Dashboard

• Code

-  [MainTemplate.int.test.jsx](#)

• To Run:

-  `npm test -- client/src/templates/_tests_/MainTemplate.int.test.jsx`

• All Passed

- ✓ renders layout with Sidebar and Dashboard
- ✓ displays base and custom templates after fetch
- ✓ handles fetch failure: still renders Sidebar and Dashboard

```
PS C:\Users\ferra\Documents\Federico\UniMelb\Year 3\Sem2\AI_Use_Scale_APP\secondo\AI_Usescale_APP> npm test -- client/src/templates/_tests_/MainTemplate.int.test.jsx
> test
> jest client/src/templates/_tests_/MainTemplate.int.test.jsx
console.log
  Error: usescales not found
    at log (client/src/templates/MainTemplate.jsx:33:33)

PASS  client/src/templates/_tests_/MainTemplate.int.test.jsx
  ✓ renders layout with Sidebar and Dashboard (27 ms)
  ✓ displays base and custom templates after fetch (9 ms)
  ✓ handles fetch failure: still renders Sidebar and Dashboard (16 ms)

Test Suites: 1 passed, 1 total
Tests:       3 passed, 3 total
Snapshots:  0 total
Time:        1.435 s
Ran all test suites matching client/src/templates/_tests_/MainTemplate.int.test.jsx.
```

UseScalePage.jsx

• Check:

- renders full layout with **Sidebar**, **HorizontalSidebar**, and **TableSection** components
- successfully fetches and renders **rows** and **levels** from mocked endpoints

- fetched data are correctly rendered
 - handles fetch failures (still renders **Sidebar** and **TableSection**)

- Tests :

- ① renders layout and fetched data correctly
 - ② handles fetch failure: still renders Sidebar and TableSection accordingly

- Code

- UseScalePage.int.test.jsx

- To Run:

- 1 | npm test -- client/src/templates/_tests_/UseScalePage.int.test.jsx

- All Passed

- ✓ renders layout and fetched data correctly
 - ✓ handles fetch failure: still renders Sidebar and TableSection accordingly

```
PS C:\Users\Terra\Documents\Federico\UniMelb\Year 3\Sem2\AI_Used_Scale_APP\seconde\AI_usescale_APP> npm test -- client/src/templates/_tests/_UseScalePage.int.test.jsx

> test
> jest client/src/templates/_tests/_UseScalePage.int.test.jsx

PASS  client/src/templates/_tests/_UseScalePage.int.test.jsx
  ✓ renders layout and fetched data correctly (42 ms)
  ✓ handles fetch failure: still renders Sidebar and TableSection accordingly (5 ms)

Test Suites: 1 passed, 1 total
Tests:       2 passed, 2 total
Snapshots:  0 total
Time:        1.466 s
Ran all test suites matching client/src/templates/_tests/_UseScalePage.int.test.jsx.
```