# 0x02. React props



🗘 Weight: 1

Projects(/projects/current)

苗 Project over - took place from Jul 25, 2024 6:00 AM to Jul 30, 2024 6:00 AM

QA Reviews I can make(/corrections/to\_review)



## >Resources/current)

#### Read or watch:



- React Official Website (/ritoken/XY-3QaRU8GcLgridCcoi3w)
- Getting started with React (/rltoken/ASa6F8XX2jbBmfw0Ka4DtQ)
- React Developer Tools (/rltoken/2vQpS-pQNQ474\_yClKpi2w) Video on demand(/dashboards/videos) Enzyme (/rltoken/qsgGsN2WTikhObfGDALAeA)
- H
- React Fragments (/rltoken/AnYmWGZ8hVMZ0sE8pjQoEg)

## Learning Objectives

At the end of this project, you are expected to be able to explain to anyone "Itoken/PQrFhntTL54XShx3kANO4A), without the help of Google: Discord(https://discord.com/app)

- How to create basic React components using functions
- How to reuse components
- How to pass properties to components
- How to define types for components
- How to use Fragments My Profile(/users/my profile) When to use a key to improve a loop's performance





## Requirements

) All your files will be interpreted/compiled on Ubuntu 18.04 LTS using node 12.x.x and npm



- Allowed editors: vi , vim , emacs , Visual Studio Code Home(/)
  All your files should end with a new line
- A README.md file, at the root of the folder of the project, is mandatory



My Planning(/planning/me)

Projects(/projects/current)

## Tasks

QA Reviews I can make(/corrections/to\_review)

0. Basic components

mandatory

### ?Start wit**Evæduatfidersoficoiznaetskédashbæækrols/kthe**g\_@cxondent<u>R</u>eexvatuatriotno\_qprizzjes):

Instead of creating new elements, we're going to create components to split the project. The App. is is going to become the main entry point, the shell, for every component in the app.

### reatecar Heade (/conponent curriculums)

Create a new folder Header:



- M&PPRESCOPPENES eader from the App.js to a new file Header.js
- Move the css code, related to the header, of the App.css to a new file named Header.css



Create an empty Header .test.js. We'll add tests for it later. Conference rooms(/dashboards/video\_rooms)

### Create a Footer component

## 🚅 reate asjęw folder Feptjer :

- Move the code of the footer from the App. js to a new file Footer. js
- Move the css code, related to the footer, of the App.css to a new file named Footer.css Sandboxes (ruser containers/current)
  - Create a Footer. test. is, we will add the tests later

## **Greate a Login component**Tools(/dashboards/my\_tools)

Create a new folder Login:



- Move the code of the login section from the App. js to a new file Login.js
- The code should be wrapped in a React Fragment
- Move the css code, related to the login, of the App.css to a new file named Login.css
- Create a Login.test.js, we will add the tests later

## \*Nodify Pere (sheri/peers)

In the index.js:



- Discord(https://discord.com/app) Remove the root-notifications
- Remove the Notifications import

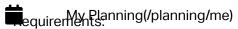
In the App. js:

- · Import Notifications, Login, Footer, and Header
- Addytheofied/Noemsdations of the ponent before the div. App element

- Wrap Notifications and the rest of the div.App within a React Fragment
- In the div.App, replace the header code by the new Header component
- \*/) In the div.App-body, replace the login code by the new Login component
- In the div.App-footer, replace the footer code by the new Footer component



• Most tests will fail, only keep the one testing that the component renders without crashing



At this point, reloading the App should display the exact same page as the last task

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• The ciects (pino jecuts browsen) should not show any error or warning

**Repo:** QA Reviews I can make(/corrections/to\_review)

- GitHub repository: alx-react
- ? Directory: 0x02-react props Evaluation quizzes(/dashbbards/my\_current\_evaluation\_quizzes)
  - File: task\_0/dashboard/dist/index.html, task\_0/dashboard/src/App/App.js,
    task\_0/dashboard/src/Footer/Footer.css, task\_0/dashboard/src/Footer/Footer.js,
    task\_0/dashboard/src/Footer/Footer.test.js,



tagk\_nocdnship@agkhocachespage\_cheadenchasp, task\_0/dashboard/src/Header/Header.js, task\_0/dashboard/src/Header/Header.test.js, task\_0/dashboard/src/Login/Login.css, task\_0/dashboard/src/Login/Login.js, task\_0/dashboard/src/Login/Login.test.js Concepts(/concepts)



Write Chrechests for making composition rooms)

mandatory

develop your tests faster, you can watch them. The test suite will run for every change you make:
Servers(/servers)

- Add the following script to task\_1/package.json: "test-watch": "jest --watch"
- Run your suite using npm run test-watch Sandboxes(/user\_containers/current)

### **Header.test.js**

Import your new Header component within the test, and write two checks: Tools(/dashboards/my tools)

- Shallow render the Header component to verify it renders without crashing
- Verify that the components render img and h1 tags Video on demand(/dashboards/videos)

#### Login.test.js

import your new Login component within the test, and write two checks:



- Shallow render, the Login component to verify it renders without crashing Peers (Juse's / peers)
- Verify that the components renders 2 input tags and 2 label tags

## Discord(https://discord.com/app)

Import your new Footer component within the test, and write two checks:

- Shallow render the Footer component to verify it renders without crashing
- Verify that the components at the very least render the text "Copyright"

## App.test is Profile(/users/my\_profile)

Modify the App. test. js file, and add four checks:



- It should contain the Notifications component
- It should contain the Header component
- It should contain the Login component



• It stone /contain the Footer component

#### Requirements:



• At this point, running the test suites, should show:

Test Suites: 6 passed, 6 total Tests. Projects/projects/current)



QA Reviews I can make(/corrections/to review)

#### Repo:



GitHub repository: alx-react Evaluation quizzes(/dashboards/my\_current\_evaluation\_quizzes) Directory: 0x02-react\_props

File: task\_1/package.json, task\_1/dashboard/src/Header/Header.test.js,

task\_1/dashboard/src/Footer/Footer.test.js,



task 1/dashboard/src/Login/Login.test.js, task\_1/dashboard/src/App/App.test.js Curriculums(dashboards/my curriculums)



Concepts//concepts/ Split the Notifications component

mandatory



21. Create a Notification lemijs (video\_rooms)

The Notifications component is repeating the same tags a lot. It will be hard to maintain and reuse. Let's eate a **Servepon(Ametrice iss.)** pport the ligeneration.

Create a new component named NotificationItem:

- - it Sandboxes(/user\_containers/current)
    - the component accept three properties (type, html, and value)



- type should be rendered with the data-notification-type attribute 1001s (dashboards) my tools
- value should be rendered within the tag
- html should be rendered with the dangerouslySetInnerHTML attribute

Video on demand(/dashboards/videos)
Create a NotificationItem.test.js

Every component should be tested. Create a new NotificationItem.test.js file, and add the following checks:



- Peers(/users/peers)
   Verify that the basic rendering of the component works without crashing
- Verify that by passing dummy type and value props, it renders the correct html (for example:



type="default" and value="test")pp)

Verify that by passing a dummy html prop, it renders the correct html (for example: html={{

\_\_html: '<u>test</u>' }})



## Modify Notifications.js

Import the new NotificationItem component in the Notifications.js file and replace the My Profile(/users/my\_profile) tags with Not1f1cat1onItem\_components.

#### Modify Notifications.test.js

odify the Notifications.test.js file to change one of the check:
(/)

Instead of testing if the component renders li, check that the component renders



NotificationItem elements

Home(/)
Add a test to verify that the first NotificationItem element renders the right html (note: this is
usually not the best way to write tests, but sometimes necessary when you don't control the child



compenent) (/planning/me)

#### Requirements:



- Atphisopein releading the App should display the exact same page as the last task
- The console in your browser should not show any error or warning
- Running the test suites, should show:



QA Reviews I can make(/corrections/to\_review)

Test Suites: 7 passed, 7 total Tests: 22 passed, 22 total

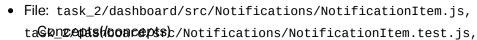


Evaluation quizzes(/dashboards/my\_current\_evaluation\_quizzes)

#### Repo:



- GitHub repository: alx-react Curriculumsi/dashboards/mv curriculums)
- Directory: 0x02-react\_props



task\_2/dashboard/src/Notifications/Notifications.js,



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task\_2/dashboard/src/Notifications/Notifications.test.js Conference rooms(/dashboards/video\_rooms)

## . Checkfing the application using the React extension

mandatory

Lising the React extension in Chrome: Containers/current)

 Modify the type of the first NotificationItem to change from "default" to "urgent". The first notification should change color to red, take a screenshot



Profile the load of the application and note which Component is the longest to render after App, take a screenshot



Video on demand(/dashboards/videos)

#### Repo:

GitHub repository: alx-react



Directory: 0x02-react\_props

File: task\_3/change\_property.png, task\_3/profiler.png

Discord(https://discord.com/app)



#### 4. Props types & Default props & Shapes

mandatory

#### Create a CourseListRow component

 $\overline{oldsymbol{\Xi}}$ reate a new folder CourseList and a new component with the name CourseListRow . The component accepts three props:



- isHeader (bool, default: false)
- Home(/) textFirstCell (string, required)
- textSecondCell (string, default: null)



if isHeader is true



Projects (projects/projects/current) null, it returns a th element containing textFirstCell with a colSpan = 2



if textSecondCell is not null, it returns two th elements containing textFirstCell and QA Reviews I can make(/corrections/to\_review) textSecondCell

- if isHeader is false
- Evalitation quizzes (reas in manta reportaining the value to the condition of the condition

Create a CourseListRow.test.js file:

• When isHeader is true



Carraddarsheshbastharoompoontrisnders one cell with colspan = 2 when textSecondCell does not exist



Add a check to test the component renders two cells when textSecondCell is present

- WGencents/gengents/lse
  - Add a check to test the component renders correctly two td elements within a tr



element Conference rooms(/dashboards/video\_rooms)

### Create a CourseList component

the folder CourseList, create a new component named CourseList:

it returns a table element with an id CourseList



it contains a thead element
Sandboxes(/user\_containers/current)
o it includes a CourseListRow with the props textFirstCell="Available courses" and isHeader=true



Tooliti/idashbasand6muysebolstRow with the props textFirstCell="Course name", textSecondCell="Credit", and isHeader=true



it contains a tbody element

Video on demand/dashboards/videos) it includes a courseListRow With the props textFirstCell="ES6",

textSecondCell="60", and isHeader=false

it includes a CourseListRow with the props textFirstCell="Webpack",



textSecondCell="20", and isHeader=false
Peers(/users/peers)
 itincludes a CourseListRow with the props textFirstCell="React",

textSecondCell="40", and isHeader=false

eate and import a file courseList.css where you will be able to add the styling for the component

Create a CourseList.test.js with two checks:

- Check that it renders CourseList component without crashing
- Check that it renders the 5 different rows

Modify the App component

Modify the App component to display either the Login, or the CourseList component:



- Import Proptypes
  - arphi Create a property <code>isLoggedIn</code> . It should be false by default
  - When isLoggedIn is false, display the Login screen

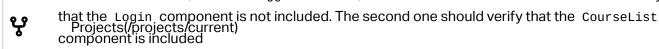


• WhenderLoggedIn is true, display the CourseList screen

Modify the App test suite:

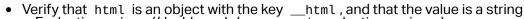


- Addya Pleaning Melan than / con relist is not displayed
- Describe a new case, when isLoggedIn is true, and add two checks. The first one should verify



### Modify the NotificationItem component

QA Reviews I can make(/corrections/to\_review)
Define the prop types for the NotificationItem component:



- Evaluation quizzes(/dashboards/my current evaluation quizzes)

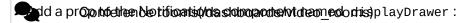
   Require type to be a defined prop and a string. It should default to default if type is not passed by the parent component
- Verify that value is a string

### Modifycthe Matifications componentms)

Add a new div element with the class menuItem:



- it contampts (GOORENTS) r notifications
- it should be display right before div. Notifications



- it should be a boolean
- by-default it should be false

Modify the div. Notifications tag:

• it Standbords (besets ibtentalinears of supremption awar is true

Modify the Notifications.test.js:



- Tools(/dashboards/my\_tools)
   Add a check that the menu item is being displayed when displayDrawer is false
- Add a check that the div. Notifications is not being displayed when displayDrawer is

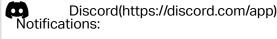


- ਿਊਮੀਰੈ€o on demand(/dashboards/videos)
- Add a check that the menu item is being displayed when displayDrawer is true
- Add a check that the div.Notifications is being displayed when displayDrawer is true

#### Update the UI

Peers(/users/peers)

You can use the React extension in Chrome, to toggle the two booleans displayDrawer and isLoggedIn



• Modify the CSS to make the UI looks like the image below when displayDrawer is true



• Modify the CSS to make the UI looks like the image below when displayDrawer is false My Profile (users/my profile)



Modify the CSS to make the UHooks like the image below when isLoggedIn is false



Home(/)

Modify the CSS to make the UI looks like the image below when isLoggedIn is true



My Planning(/planning/me)

#### Requirements:



- Yourgingto define to defraght broperty for every property is not required
- The console in your browser should not show any error or warning
- Running the test suites, should show:

QA Reviews I can make(/corrections/to review)

Test Suites: 5 passed, 5 total Tests: 24 passed, 24 total

Evaluation quizzes(/dashboards/my current evaluation quizzes)

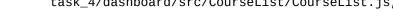
#### Repo:



- **Gittlutatepposit(Advisatio**ardes/Aty\_curriculums)
  - Directory: 0x02-react\_props



File: task\_4/dashboard/src/CourseList/CourseListRow.js, Concepts/(concepts) task\_4/dashboard/src/CourseList/CourseListRow.test.js, task\_4/dashboard/src/CourseList/CourseList.js,





tack af dashboard stress to course list.css, task\_4/dashboard/src/CourseList/CourseList.test.js,

task\_4/dashboard/src/App/App.js, task\_4/dashboard/src/App/App.test.js,

taSR\_VP/64/S966/896/Src/Notifications/NotificationItem.js,

task\_4/dashboard/src/Notifications/Notifications.js,

task\_4/dashboard/src/Notifications/Notifications.test.js Sandboxes(/user\_containers/current)

## 5. Shapes, Loops, and keystools)

mandatory

## 

Create a new Shape named CourseShape containing:



- id (number, required)
- n Recrettle ar storered)
- credit (number, required)

## odify Discord(https://discord.com/app)

Add a propType listCourses that will take an array of the shape you created



- Make sure that if listCourses is not passed by the parent component the propType defaults to an empty array
- When listCourses is empty, display a row showing No course available yet My Profile(/users/my profile)

 When listCourses contains at least one element, display a row for each element showing the name of the course and the number of credits

Make sure to add a key to help React optimize rendering

Modify CourseListRow.js:



Make sure the property textSecondCell can accept either a string or number

Modify the App.js to create a new array named listCourses. It should contains three elements:



- My Planning(/planning/me) id: 1, name: 'ES6', credit: 60
- id: 2, name: 'Webpack', credit: 20



• id: Balemer/Beact's steplit: 49

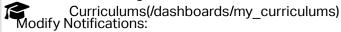
Add a listCourses property to the CourseList component in App

#### **Create** TANGE MENTIFICATION (AND TANGE (AND TANGE (AND TANGE ))

Inside the Notifications directory, create a new Shape named NotificationItemShape containing:



- an Evaluation quizzes (/dashboards/my\_current\_evaluation\_quizzes)
- a html (object of { \\_\\_html : string })
- a type (string, required)
- a value (string)





- Add a proptype listNotifications that will take an array of the shape you just created
- When listNotlfications is empty, display a row showing No new notification for now
  - When listNotifications contains at least one element, display a NotificationItem for each



element of the arrays (/dashboards/video\_rooms)

Modify the App to create a new array named listNotifications. It should contains all the previous elements we used to have in Notifications elements. Add an id for each element. Servers(/servers)

Add the property listNotifications to the Notifications component in App

## >Update the testeser containers/current)

Modify Notifications.test.js:



 Action also leaders to the relation to the relation of the relati you don't pass the listNotifications property



- Add a new test to verify that when you pass a list of notifications, the component renders it correctly and with the right number of NotificationItem
- Add a new test to verify that when listNotifications is empty the message Here is the list of notifications is not displayed, but No new notification for now is

## \_\_\_odify Powrs(/usets/powtrs)is:

 Add a new test to verify that CourseList renders correctly if you pass an empty array or if you don't pasanthes! Hais Courses mapperty

Add a new test to verify that when you pass a list of courses, the component renders it correctly

#### Requirements:

- When writing your tests, look into using\_describe\_and\_beforeEach\_for each scenario (e.g. With CourseList Empty, With CourseList containing elements)
- My Profile(/users/my\_profile)
   You should define a default property for every prop that is not required

