

JavaScript Developer

Join the Team!

1 Introduction

The application procedure from tech11 has several steps. This test is one of it and gives us the opportunity to determine at which status you are regarding the necessary knowledge for this position.

Later on, if you succeed in this step, you will have the chance to present your solution within a personal interview (or remote via video chat). Here we will discuss your approach and have a deep dive into your solution/concept.

Please send your solution to jobs@tech11.com.

2 The Task

2.1 Address Component

The task describes a fictive story that you should implement in **JavaScript** with ES6 and Web Components. Your solution should run on Chrome and Firefox. Furthermore, your solution should have **no dependencies to any JavaScript library** (only Standard JavaScript / ES6; #useThePlatform).

But of course, as usual when defining rules, there are exceptions 😊: the library `lit-html` should be used.

User Story:

As application designer, I want a reusable address component with data completion so that I can put this address component on different forms.

UI mock-up:

The mock-up shows a form titled "Adresse". It has four main input areas: "PLZ" with the value "97074", "Stadt" with the value "Würzburg", "Straße" with the value "Gn" and a dropdown arrow, and "Hausnummer" which is empty. Below the "Straße" field, a dropdown menu for "Land" is open, showing a list of street names: "Agnes-Sapper-Str.", "Gneisenaustr.", and "Richard-Wagner-Str.". The "Straße" and "Hausnummer" fields have red borders, while the others have green borders.

Acceptance Criteria:

Business requirements (function):

- The address widget must have the following fields:
 - zip
 - city
 - street
 - houseNumber
 - country (is fix: "de" - Deutschland)
- After entering the zip code, the city should be prefilled
- Based on the zip/city also the streets should be selectable
Only streets from the chosen city should be selectable.
- In the bottom of the widget there should be a button "info". By clicking the button, a message box should be displayed where all data of the widget are formatted as JSON.

Technical requirements (non-functional):

- For city lookup, please reverse engineer the service from <https://www.postdirekt.de/plzserver/>
Select "Ort" (city) and enter for example "97070" as zip code.
Please analyze how to query the data and reuse the JSON REST interface.
(<https://www.postdirekt.de/plzserver/PlzAjaxServlet>)
Because of CORS, please use: <https://cors-anywhere.herokuapp.com/https://www.postdirekt.de/plzserver/PlzAjaxServlet>
- The component must be an ES6 Web Component (see MDN) and should be reusable
- Provide a test page that contains two time the widget on the same page

2.2 Component Interaction

There are many options how components can communicate. This test relates on the need to share data between components.

Starting position:

Data Model: please find below the given starting structure

```
{
  "contract": {
    "administrativeData": {
      "validFrom": "2021-01-01",
    },
    "contractModules": {
      "HOUSEHOLD": {
        "key": "HOUSEHOLD",
        "name": "Household Contents",
        "comments": "The flat of the policy holder is 100 square meters"
      },
      "BICYCLE": {
        "key": "BICYCLE",
        "name": "Bicycle",
        "comments": "The policyholder is happy to insure his new E-Bike also within the contract"
      }
    }
  }
}
```

There is a page that has 4 sections:

- Administrative Data
 - o Input field for the “valid from” date; changes will update the data model
- Contract Module “HOUSEHOLD”
 - o For contract modules there should be a dedicated component that can be used for “HOUSEHOLD” and “BICYCLE”
 - o Text area for “comments”; changes will update the data model
- Contract Module “BICYCLE”
 - o Same as “HOUSEHOLD”
- Debug
 - o Show the data model as formatted JSON
 - o The view should be updated for each change

Please implement a small application based on the given requirements.

Acceptance criteria:

- The initial data model is rendered when opening the page
- For rendering *lit-html* is used
- When changing input data (*validFrom*, *comments*), the debug section is updated automatically

Please send the full project as zipped file to jobs@tech11.com.