Calculate delivery fee project

Overview

This is a delivery fee calculator web application using React and TypeScript, in which covers the following:

- Form validation
- Function to calculate delivery based on input values such as cart value, number of items, distance of delivery, time delivery (date and time). Final delivery fee is sum of 3 fees below:
    - Calculate surcharge by cart value
    - Calculate surcharge by number of items
    - Calculate delivery fee by distance
- Unit test for calculate delivery fee
- UI test for Form

How to run the application

Before running this application, make sure to have Node installed on your local machine.

There are 2 ways to run the application.

- Website: https://calculate-delivery-fee.netlify.app/
- Run on your local machine
    - Open the terminal, change directory to the root folder of application
    - Install dependencies, run the command: *npm install*
    - Run the command: *npm run start*

Testing

There are 2 types of testing apply for this application including unit testing for functions to calculate the delivery fee, and UI testing for form.

To run the test, run the command: *npm run cypress* then select Component testing -> select Chrome -> choose App or solution.ts

Unit test:

Unit test is written in *cypress/component/solution.cy.tsx*, testing for calculate the delivery fee including testing for the functions to calculate surcharge based on cart value and number of items, delivery fee based on the delivery distance and final delivery fee that combines surcharge and distance fee.

Test surcharge:

- Surcharge when cart value is less than 10€
- Surcharge when cart value is equal or greater than 10€

Test distance fee:

- Distance < 1km
- Distance equals to 1499 meter
- Distance equals to 1500 meter
- Distance equals to 1501 meter

Test delivery fee:

- The delivery is free (0€) when the cart value is equal or more than 100€
- From UTC 3pm-7pm Friday, delivery fee will be multiple by 1.2x but still < 15€
- From UTC 3pm-7pm Friday, delivery fee will be over 15€

UI test:

UI test is written in *cypress/component/App.cy.tsx*, test the render of form and behavior when interacting with the form such as inserting invalid input like text and negative value.

Improvement

It does not cover the E2E testing in this application and some of UI testing could be including more test case.