

## Objective of this Test Case

The main objective of this test case is to gain an understanding of your approach to a relevant software development problem. The test case should take approximately 2-3 hours, but you will be given one day to complete the test case. The test case may serve as a discussion point as we proceed through the interviewing process.

## Test Case Description

Write a web application to sort data.

### INPUT:

The application should receive as an input a string of values separated by comma (the values could be strings or numbers)

### OUTPUT:

The application shows to the user all the sorting steps

### PROCESS:

1. Write the client web page to receive user's input (**React**)

The diagram shows a web form with a large rectangular border. Inside, there are three elements: a rectangular box labeled 'Input type – dropdown' at the top, a wider rectangular box labeled 'Input string of data separated by commas' in the middle, and a rounded rectangular button labeled 'submit' at the bottom center.

2. Send a request to server (**NodeJS**)
3. Server stores the request in local SQLite database
4. Server should **sort the array** (you may use any sorting algorithm as you see fit) and **record all step of sorting**.
5. Update the database with the sorting steps (demonstrate an understanding of one to many relations)
6. Send a response to the client with **sorting steps**.
7. Client shows steps of sorting from the server

Input type – dropdown

Input string of data separated by commas

submit

Output: sorting steps

LIMITS:

Input size is 1 to 100 values.

Numeric values are integer size.

String values are up to 10 characters long.

ASSESSMENT CRITERIA:

Your answer will be evaluated by:

1. Code organization/file structure
2. Algorithm implementation
3. Present strong knowledge of JavaScript
4. Present strong knowledge of NodeJS (server-side coding)
5. Correctness of values displayed in view/UI
6. Clarity of View/ UI
7. Responsive UI is an asset
8. Code clarity (e.g., layout, comments, coding structure)

Good Luck!