

This is the document for "Backend Developer" only.

Please follow this document step-by-step to complete this exam.

1. Init the backend project using **Node.js, Typescript, Express.js, and PostgreSQL (pure or ORM)**.
2. Go to <https://codetest-pre-interview-frontend.pages.dev/>. This will be your front end. You can define the host and port on that site (localhost is acceptable).
3. This page contains the house list table that will be filled with your backend.
4. Start by inserting data into the database.
 1. The frontend will call the "post" method to "/home" with the payload below.
 - { "name": "house name", "desc": "house description", "price": "100.05", "post_code": "10200" }
5. Next, continue with getting the list of data and fitting it to the table.
 1. The frontend will call the "get" method to "/home" with 2 queries.
 - skip=0
 - take=5
 2. An expected result is payload array of homelist within the skip and take with the count

```
{
  "payload": [
    {
      "id": 11,
      "name": "teas",
      "desc": "dasdads",
      "price": "11.0",
      "post_code": "asdasd"
    },
    {
      "id": 10,
      "name": "teas",
      "desc": "dasdads",
      "price": "11.0",
      "post_code": "asdasd"
    }
  ],
  "count": 2
}
```

6. It is a dropdown to select the postcode.
 1. This component will call the "get" method to "/postCode".
 2. An expected result is the payload array of postcode with the count

```
{
  "payload": [
    {
      "post_code": "1234"
    },
    {
      "post_code": "12421"
    },
    {
      "post_code": "3241"
    },
    {
      "post_code": "4321"
    },
    {
      "post_code": "asdasd"
    }
  ],
  "count": 5
}
```

7. Display average and median each postcode
 1. After selecting the postcode this component will trigger the "get" method to "/postCode/:id"
 2. An expected result is the price average and median of all houses in this postcode

```
{
  "payload": {
    "average": "1000000.000000000000",
    "median": "1000000.0"
  }
}
```

8. After you complete all of the above you can choose to submit via github link or zip it within an email