A) Programming Test

Total time spent to complete Programming Test is about 3 hours+

- There is 3 files

Files available:

Below is where the code logic/return results is fully in PHP using postman to test.

- 'backend-frontend.php' where filter logic and frontend returned response data is handled as well.

Files available:

Below is a split of backend/frontend to achieve same code logic/return result.

Node.js (Backend)

- **File name (backend-node.js)**

ReactJS (Frontend)

- **File name (frontend-react.js)**

B) SQL Improvement Logic Test

Total time spent to complete SQL Test is about 2 hours+

- There is 3 files to achive the following:

1) Create all tables, insert in dummy data and Rewrite select SQL query.

Files available:

create-required-tables.sql **(Create Tables required)**

insert-dummy-data-into-required-tables.sql **(Insert Dummy data into tables)**

optimize-sql-query.sql **(Select query Optimized code)**

3. Remarks :

b) Written explanation of the logical improvement

- **Reduced 'SELECT' Statement (**This reduces the amount of data retrieved from the database, which can improve query performance.)

- **Optimized 'WHERE' Clause (**Usage of a single 'WHERE' clause with 'OR' conditions are simplified and more efficient compared to the multiple OR conditions**)**

- **ORDER BY Clause**: Usage of this is to sort the results based on the 'sort_order' and 'id' columns. This can help in efficiently fetching the desired results with the specified sorting order.