

TEST REPORT (CODE CONNECT)

This test report summarizes the testing activities performed on the Code Connect application, A full-stack web application for developers to connect and share knowledge.

TESTING METHODOLOGY:

Backend Testing: The backend was tested using curl commands to get API endpoints using the JWT secure key.

Frontend Testing: The frontend was tested using manual testing of UI components and user interactions.

Load Testing: Implemented the load testing using the npm load test package.

Database Testing: Manual testing using SQL in the terminal to check the updating of data in tables using basic SQL commands.

Test Cases:

- All the API endpoints were tested and all successfully passed the test
- All the Ui components performed exactly how they should
- The authentication system performed as expected, registering users with valid credentials and generating verified JWT token and validation.
- Tested error message when using wrong credentials.
- Verified channel creation with required fields.
- Verified message retrieval by channel
- Tested Like/dislike functionality
- Confirmed admin-only access for channel creation
- Tested messages with images and text
- Tested nested reply structure
- Tested Search across messages and users
- Verified sorting and filtering options
- Confirmed proper handling of no matches
- Tested input validation against SQL injection
- Verified file type restrictions
- Confirmed proper CORS implementation
- Tested token expiration handling

RESULTS:

The system successfully passed all of the tests and is functioning exceptionally well.

MAJOR CHALLENGES FOUND AND RESOLVE:

1. Unable to show image preview:
Solution: create a separate drive to store the uploaded images and add an image URL to every message.
2. Unable to see nested reply:
Solution: Implemented a tree-like structure for replies and implemented a proper SQL structure to store the nested replies using parent ID.
3. Unable to update post count in real-time:
Solution: Implemented a function to count the posts directly by counting the number of messages and replies from their respective tables and then returning it.
4. Unable to set up docker for node.js and bcrypt
Solution: Edited the docker to ignore the local system node modules to function properly.