

Testing Policy

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Testing Tools

- Jest
 - Used in the testing of multiple functions and classes that were made.

```
PS C:\Users\tsheg\OneDrive\Documents\GitHub\Grid-Watch-2\Grid-Watch> nx run-many --target=test --all=true

✓ nx run api-profiles-public-api-shared-api-profiles-public-api-dto:test [existing outputs match the cache, left as is]
✓ nx run api-profiles-admin-api-shared-api-profiles-admin-api-dto:test [existing outputs match the cache, left as is]
✓ nx run api-ai-ticket-api-shared-api-ai-ticket-api-dto:test [existing outputs match the cache, left as is]
✓ nx run api-profiles-tech-team-api-shared-techteamdto:test [existing outputs match the cache, left as is]
✓ nx run api-ticket-api-shared-ticket-picture-dto:test [existing outputs match the cache, left as is]
✓ nx run api-profiles-tech-team-repository:test [existing outputs match the cache, left as is]
✓ nx run api-ticket-api-shared-ticketdto:test [existing outputs match the cache, left as is]
✓ nx run api-profiles-public-repository:test [existing outputs match the cache, left as is]
✓ nx run api-profiles-tech-team-service:test [existing outputs match the cache, left as is]
✓ nx run api-profiles-admin-repository:test [existing outputs match the cache, left as is]
✓ nx run api-profiles-public-service:test [existing outputs match the cache, left as is]
✓ nx run api-profiles-admin-service:test [existing outputs match the cache, left as is]
✓ nx run api-profiles-tech-team-api:test [existing outputs match the cache, left as is]
✓ nx run api-profiles-public-api:test [existing outputs match the cache, left as is]
✓ nx run api-ai-ticket-repository:test [existing outputs match the cache, left as is]
✓ nx run api-profiles-admin-api:test [existing outputs match the cache, left as is]
✓ nx run api-ticket-repository:test [existing outputs match the cache, left as is]
✓ nx run api-ai-ticket-service:test [existing outputs match the cache, left as is]
✓ nx run admin-app-tech-team:test [existing outputs match the cache, left as is]
✓ nx run tech-team-general-ui:test [existing outputs match the cache, left as is]
✓ nx run admin-app-dashboard:test [existing outputs match the cache, left as is]
✓ nx run public-user-profile:test [existing outputs match the cache, left as is]
✓ nx run tech-team-dashboard:test [existing outputs match the cache, left as is]
✓ nx run api-authentication:test [existing outputs match the cache, left as is]
✓ nx run api-ticket-service:test [existing outputs match the cache, left as is]
✓ nx run admin-app-profile:test [existing outputs match the cache, left as is]
✓ nx run api-ai-ticket-api:test [existing outputs match the cache, left as is]
✓ nx run tech-team-profile:test [existing outputs match the cache, left as is]
✓ nx run admin-app-ticket:test [existing outputs match the cache, left as is]
✓ nx run public-home-page:test [existing outputs match the cache, left as is]
✓ nx run api-ticket-api:test [existing outputs match the cache, left as is]
✓ nx run tech-team-ticket:test [existing outputs match the cache, left as is]
✓ nx run public-ticket:test [existing outputs match the cache, left as is]
✓ nx run shared-assets:test [existing outputs match the cache, left as is]
✓ nx run shared-ui:test [existing outputs match the cache, left as is]
✓ nx run tech-team:test [existing outputs match the cache, left as is]
✓ nx run public:test [existing outputs match the cache, left as is]
✓ nx run admin:test [existing outputs match the cache, left as is]
✓ nx run api:test [existing outputs match the cache, left as is]

> NX Successfully ran target test for 39 projects (312ms)

NX read the output from the cache instead of running the command for 39 out of 39 tasks.

See Nx Cloud run details at https://cloud.nx.app/runs/XC88Ppk5ohy
```

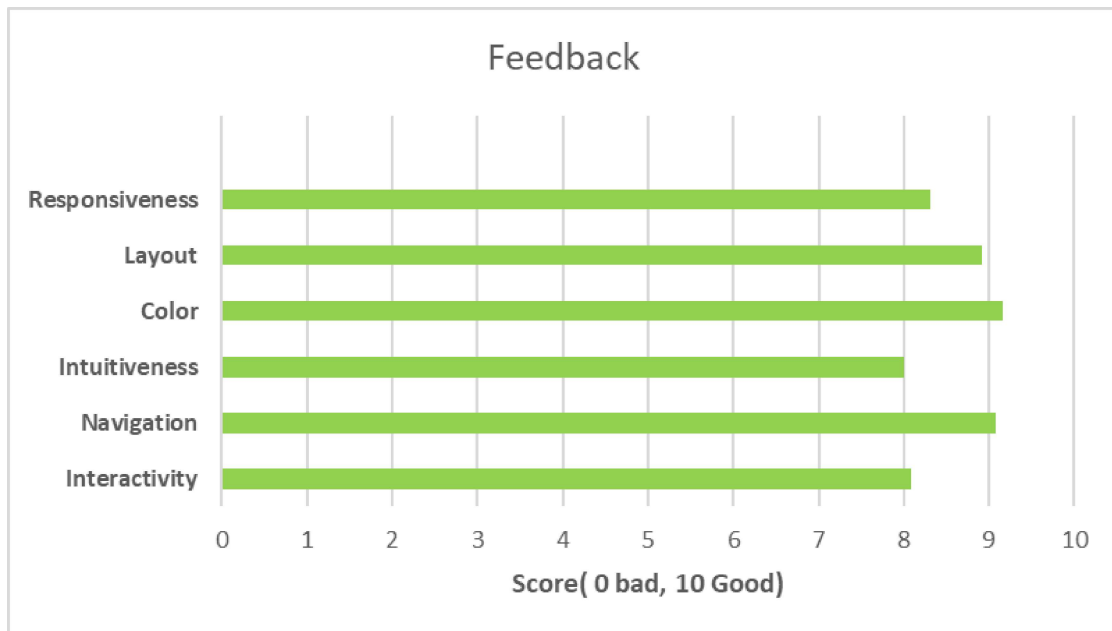
- Cypress
 - Used in the testing of our end-to-end functions.

Testing Strategy

- Automated linting, jest and end-to-end testing are performed automatically upon a pull request on the repository.

Non-functional Requirement Testing

- Usability
 - We performed usability testing, as per the following link - <https://forms.gle/VoeJDZdMs9qmuDT6A>, with the following results:



- Security, Maintainability and Availability
 - This testing is ensured through SonarCloud with the following results:



- Please note that the above security review issues are being induced by our testing which creates mock users in a mock environment but is being detected as a hard coded credential.
- Further on Availability
 - We have an estimated 99.9% uptime with Microsoft Azure hosting.
- Scalability
 - Scalability testing from first principles, we have created scripts to test the system until failure with our current best results being 40 000 tickets created before site failure and 100 000 tickets being created before storage application failure. These tickets were created as a batch and the system should be able to function normally with additional tickets.