## **Testing**

At their core, tests make sure your application is doing what you intend it to do. They are an automated script to execute your code and check that it did what you expected.

**End-to-End Tests** simulate user behavior – testing from the user's perspective. In a web application, they will start the server, fire up a browser, click around, and assert that certain things happening in the browser give us confidence our feature is working.

Cypress End-To-End Testinghttps://www.youtube.com/watch?v=7N63cMKosIE&ab\_channel=Fireship

**Unit Tests** exercise units of code according to their public API. These tests involve creating an instance of a class and calling methods on it with specific inputs. You assert that the methods you called had the desired effect (typically that they returned expected outputs). These tests are fast, stable, and are not tightly coupled to many other parts of the system. They do not, however, give you confidence the overall system is working—just that the unit of code under test is working.

Java Unit Testing with JUnit - Tutorial - How to Create And Use Unit Tests - <a href="https://www.youtube.com/watch?v=vZm0lHciFsQ&ab\_channel=CodingwithJohn">https://www.youtube.com/watch?v=vZm0lHciFsQ&ab\_channel=CodingwithJohn</a>

**Acceptance Tests** involve testing that the app meets the requirements and expectations of the stakeholders.

**Load Tests** involve testing how the app handles heavy traffic and high loads, to identify the bottlenecks and areas of the app that may be slowing down the user experience.

**Security Tests** involve testing the app for vulnerabilities such as SQL injection, cross-site scripting (XSS) attacks, and other security threats.

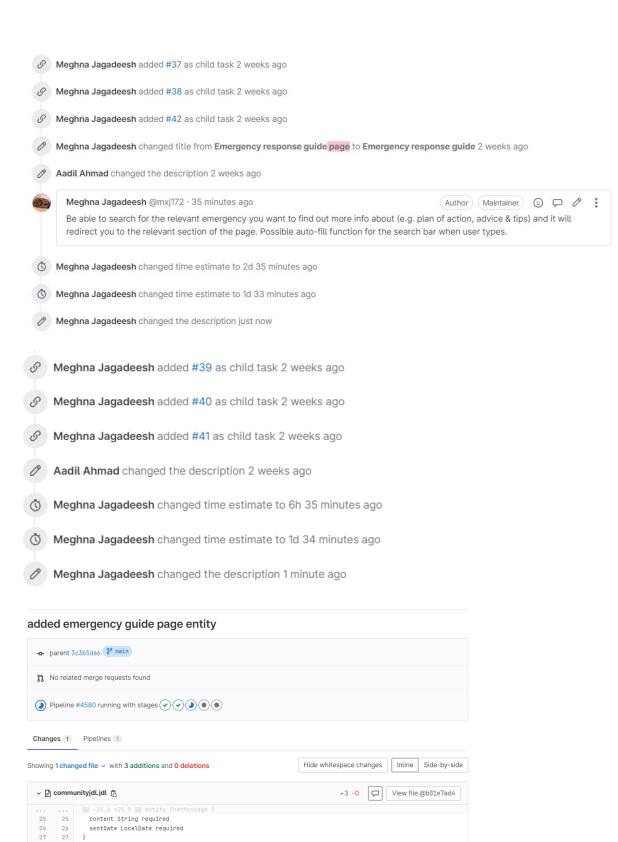
Simple Penetration Testing Tutorial for Beginners! - <a href="https://www.youtube.com/watch?v=B7tTQ272OHE&ab\_channel=LoiLiangYang">https://www.youtube.com/watch?v=B7tTQ272OHE&ab\_channel=LoiLiangYang</a>

**Usability Tests** involve testing the app from the user's perspective to ensure that it is user-friendly and provides a positive user experience.

**Accessibility Tests** involve testing the app to ensure that it is accessible to users with disabilities and meets accessibility standards.

How I do an accessibility check -- A11ycasts #11 https://www.youtube.com/watch?v=cOmehxAU 4s&ab channel=GoogleChromeDevelopers

Your software is in service to some user, so it's that user who should drive your work. It is not recommended to use tests to design a user experience, so figure out how the user will use the software before writing tests (either by experimental coding or working with a designer).



emergencyType String required
}
relationship OneToMany {

ChatRoom{messages} to ChatMessage{room}