

**Case:**

The topmost priority of the North Carolina Department of Health and Human Services (the Department) is the health and well-being of the individuals they serve. Your team is assigned to work on usability testing of a SAAS application targeted for healthcare systems to be used by the served population. Think through the target audience, discuss and present the test plan for ensuring better usability of the mobile and web app.

**SAAS**

- Application Template for phone apps
- HTML website template for desktop and mobile that scales properly
  - Can utilize software such as Bootstrap to make the website have usability across multiple devices without needing custom coding; ensures proper HTML/CSS
- Must be sure to comply with federal and state level regulations regarding data/software
  - Complies with HIPAA (Health Data), COPPA (Child Data) and FTC Act.
- We fix bugs rather than healthcare company
  - Software is managed by out of house software engineers and developers opposed to in-house staff, allowing for healthcare company to stay focused on medical work instead of developmental work/cycles

**Testing:**

- White box and Black box testing as a part of Component testing
- Functional testing to rigorously check whether the application is working as per the requirements
- Integration testing is performed to check the integration of the SaaS system with others
- Perform exploratory testing on new test cases
- Test the network security, security threats, integrity and accessibility as a part of infrastructure and security testing

- Ensure the quality of the SaaS connectivity as well as testing the user interface with respect to portability and compatibility
- Any upgradation, release and data migration in an application requires proper Regression testing
- Reliability testing is performed to reduce the risk of failure at real time deployment
- Every possible test is performed to ensure the security of the network
  - Creation of a private server that will be used only for deployment of new software, testing for quality assurance before product is deployed live to users.
- Because SaaS applications are expected to have a heavy load, performance and scalability testing are required to verify the behavior of the application at peak loads, in multiple environments
- Compatibility of the application when accessed on different browsers by different people, needs to be tested
- Whenever new features are added or old features are updated, continuous upgrade testing is required for SaaS applications
- API testing is performed to ensure functionality, security, completeness, and performance of documentation
- Customer queries, payment, and billing are taken care of as a part of Operational testing
- **Stress test** the application for high traffic based on theory of how much traffic it should receive.

### **Usability:**

- Application is created with scalability in mind, allowing for software to adapt to current healthcare traffic needs.
- Software is ensured to be cross-platform compatible against different configurations: forms, images and websites load regardless of if the user is on Windows, MacOS, iOS, Android, Linux or other kernels. Post-testing of the software, the usability makes sure that the software does not have excessive use

of hardware components (i.e: no high ram usage or load, making website slower).

- Is website design acceptable for everyday users? Are users able to find the information that they're looking for with ease? Index of site should be easy to find, along with a navigation bar for users to find data that they need section by section. Recruit users **outside of the software developers** to test the application. Software can be understood by the creator but not by the user.
  - <https://userpilot.com/blog/usability-testing-methods-saas/>
- Document testing results from user tests, sent back to testing for changes before deploying another prototype that will be re-tested by users before deployed fully.
- Implement a third-party solution for collecting usability issues so they can be sent back to be tested, fixed, and reimplemented ([marker.io blog: saas testing](#)).