

# Project Specification

## The Cancellation Test App

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**Team Leader:** Tom Auriemma

Github: <https://github.com/SlickRick518/ScatterTestApp>

### Individual Githubs:

Richard Gonzalez: <https://github.com/SlickRick518/SeniorProjectIndividual.git>

Tom Auriemma: <https://github.com/KartoffelMann/SeniorProj>

Rostyslav Hnatyshyn: <https://github.com/rostyhn/seniorproject>

Michael Zacierka: <https://github.com/mzacierka/SeniorProj>

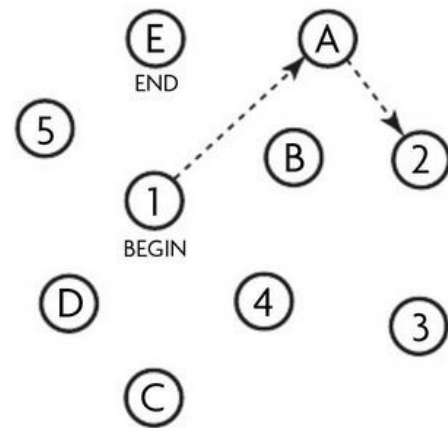
Tom Lentz: <https://github.com/tlentz98/Senior-Project>

Hiral Shah: [https://github.com/hiralshah5172/senior\\_project](https://github.com/hiralshah5172/senior_project)

Slack: <https://seniorproject-ktz7840.slack.com>

## Project Summary

The purpose of our app is to provide doctors with digital tests that will facilitate the early detection of neurodegenerative diseases; i.e dementia and Alzheimer's. In this app, we will be replicating a paper test on a tablet equipped with a stylus. For these tests, the app will track the timing of inputs, the pattern in which the patient makes their inputs (whether they are systematic or disorganized), and the distance between each symbol. We are hoping to give this data to doctors that are researching early-detection methods for the above mentioned neurodegenerative diseases to further their research. Similar to the picture included, patients are tasked to circle each instance of a specific symbol within a given time-frame. We intend for the app to be easy to use for patients; on the other hand, we hope to provide doctors with reliable and effective data for research.



## Project Goals

1. Design an app to mirror a test used by doctors to detect early signs of neurodegenerative diseases
2. The app will be designed in a way to facilitate the process of incorporating new tests in the future
3. Track timing of inputs, patterns, and other important data points
4. Provide doctors with a companion web app to view patient data

## Product Features

1. **App:** The app is responsible for replicating the paper test and tracking patient data throughout the test, then sending it to the database.
2. **Companion Web App:** This will act as the central hub for doctors to view their patients' results.
3. **Database / Backend:** Our database is responsible for storing all the data from tests on the app. For now, the results will be anonymous in order to maintain compliance with medical privacy laws.

## Limitations

The test we are designing requires a tablet with a fairly large screen. Patients will typically be at least fifty years old as neurodegenerative diseases tend to show symptoms around this age. As a consequence, the test needs to be designed with an older generation of users in mind in order to minimize confusion during the test - we don't want the tablet to be interfering with any of the test results.

## Stretch Goals

- Implement data visualizations on the companion website using d3.js
- Collect data for Dr. Libon to use in his research
- Possibly build a framework for adding tests to make the app modular for new teams

## Addendum:

We give permission to Dr. Libon and Dr. Baliga to use, copy and / or modify the project for future use. Dr. Libon will retain ownership of the code developed during the project. The following signatures confirm that we agree to our code being used in the future under the MIT license.

Rosty H:



Tom Auriemma:



Tom Lentz



Hiral Shah



Richard Gonzalez:



Michael Zacierka:

