Project White Spectra 1004

# Introduction:

This document is a report for my project for 1004. I am intending to create a website to help people that struggle with navigation on the internet have a much easier time by allowing one website to be their main “hub” making the online experience safer by ensuring they are accessing the correct websites. My main users are the elderly population, people who struggle with tech in general and lastly children, however they will not have as much use out of it. A second aim is to simplify the web by providing everything they need in a day-to-day scenario in this main hub.

I aim to create a section dedicated to all the websites they will need as well as a password creator to help with creating a more secure password for people as it can be a weakness to their online security by having my generator take memorable user data and using it to create a password.

# Software Development Life Cycle

For a cyber security-based product this is a very important aspect as new threats and technologies are developed daily that can help or hinder the security of a person on the internet and keeping on top is very important. Therefore, I decided to follow an agile model as its best suited to this type of workflow as I see that I will amend multiple aspects of the website front end and especially the backend to improve the security when I learn new things. Furthermore, I will be undertaking the task it 1–2-week sprints to be able to do short burst and focus on certain parts in detail instead of many things at once leading to the project to me a mess. However, I see certain aspects of this project taking longer than others because I am learning new programming languages, skills, technologies and have not much prior knowledge of how to perform tasks efficiently.

I first started with about 2 weeks on planning, what the idea for this project is and some features for the website and seeing what could be possible.

# Project Goals

**Required:**

An index HTML page

JSON output to a flat file

JSON input from a flat file

A single page application showing some form of interactivity.

**CRITICAL:**

Clickable Website Icons

Password Generator

Readable Font for elders

Memorable password hint (read,write)

**BENEFICIAL:**

Easy to navigate UI

Multiple Encryption Levels to user taste

**EXTRA:**

E-Safety Section

Search Engine API (google?)

Weather API

JS encoded

# Background

The thoughts behind this project were my grandmother. This is because she struggles to do anything on the internet without assistance. No matter how many times I show her the same process she can’t memorise it. As a result, I have put short cuts to webpages on her home screen like app Icons.

I thought that my grandmother must not be the only person who has this issue. Therefore, I thought about implementing such idea into a much broader idea by having a website be that homepage. This allows others to use the website without the need for manually adding links to websites.

Lastly the idea for the Password creator came from watching many videos on YouTube about Scammers and Hackers and how many people have vulnerable passwords that are quite widlye used like “1111”. This led to the idea of me creating a system that takes in bits of data and makes it more secure for the user.

# Legal

I researched the legality of my

# AI

Ai is being used for password cracking because of this it’s more of a threat than ever to password integrity. During the project AI training has become more effective leading to smarter AI which can crack passwords more efficiently and the longevity of my solution may be at threat. With companies like AMD releasing consumer technology to train AI which can land in the hands of cyber criminals allowing them to achieve this for the fraction of the cost it did a few years ago.

# Issues

## Password

The password system does create a good password in some regards but is more memorable than the autogenerated ones that are very scrambled. However, it lacks the security.

## Security

Java Script File security is needed as that is what

ES6

# Evidence of appropriate implementation

## DRY

## YAGNI

## SOLID