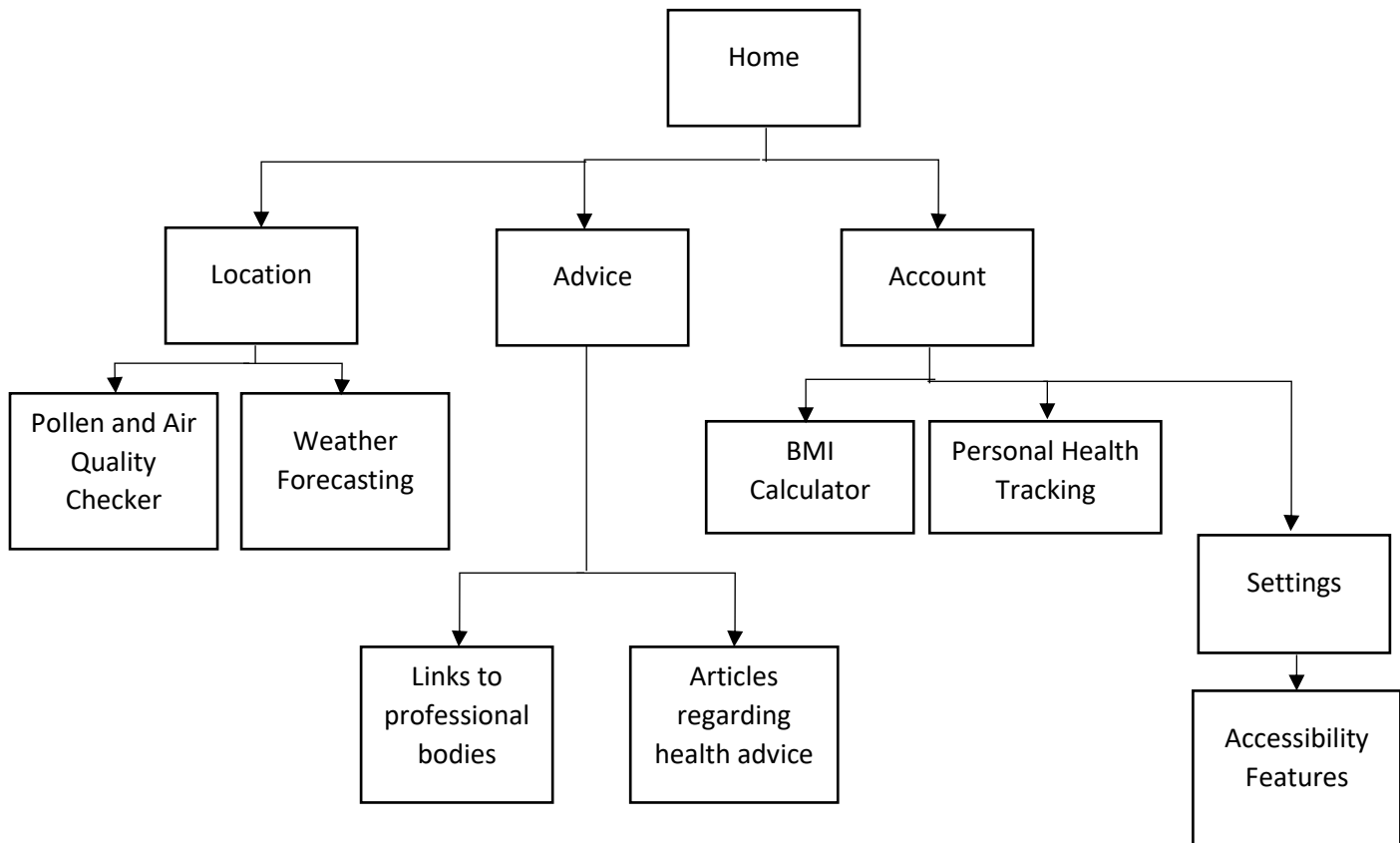


## Task 1 – Algorithm Design Document

### Sitemap

This sitemap or navigation map details the connectivity of the planned pages that will feature on the website. This aims to demonstrate how easy the website is to navigate and where users will expect to find key features, as well as appropriately categorising elements together so long as they are suited to one another.



Each of the pages will be interlinked using a single navbar that will feature on every page. The home page features at the top as it is the default page that a user will be directed to upon visiting the website, where they can then decide what services they wish to interact with. The features listed beneath each page are elaborated upon in the proposal, where how they function and operate is more closely detailed.

Certain features have been linked, such as Pollen/Air quality and weather forecasting as these both require the user to information based on their location. In addition, these features are closely related and keeping them on the same page means users do not have to navigate far to reach this service too.

### Decomposition

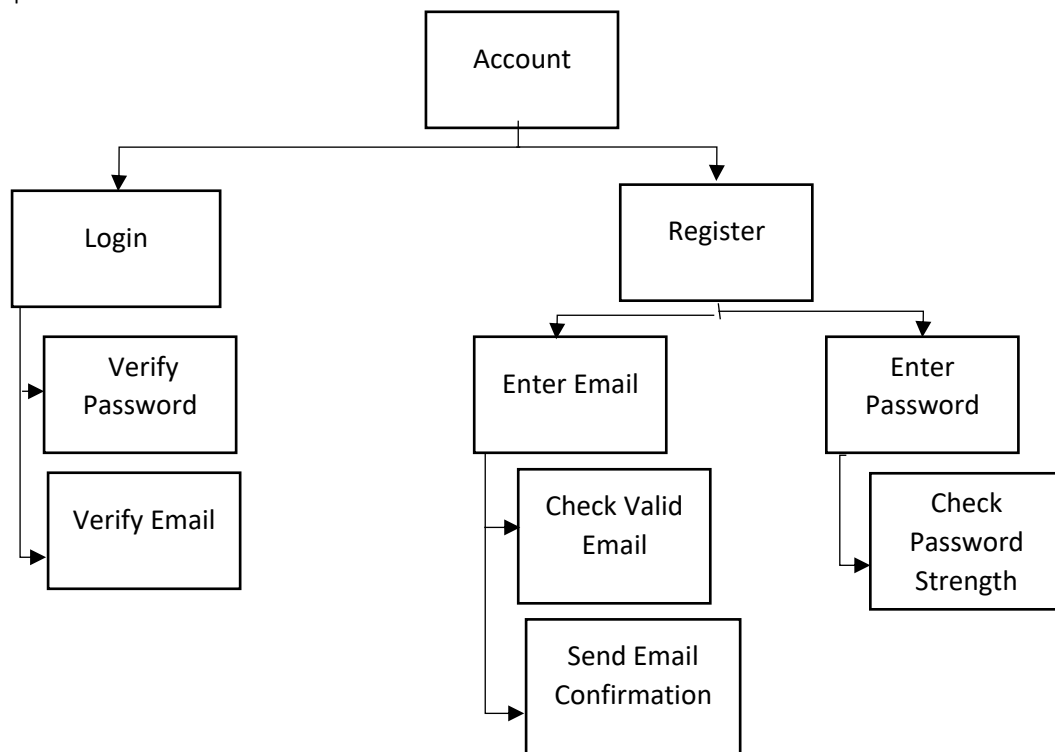
In this section, a number of processes have been selected where they will be broken down and expanded upon in the following ways:

- Decomposition Diagram
- Algorithm design (Flowchart)
- Data Flow Diagram (if necessary)

These three elements will accurately depict the key features, processes and transferral of data for specific problems.

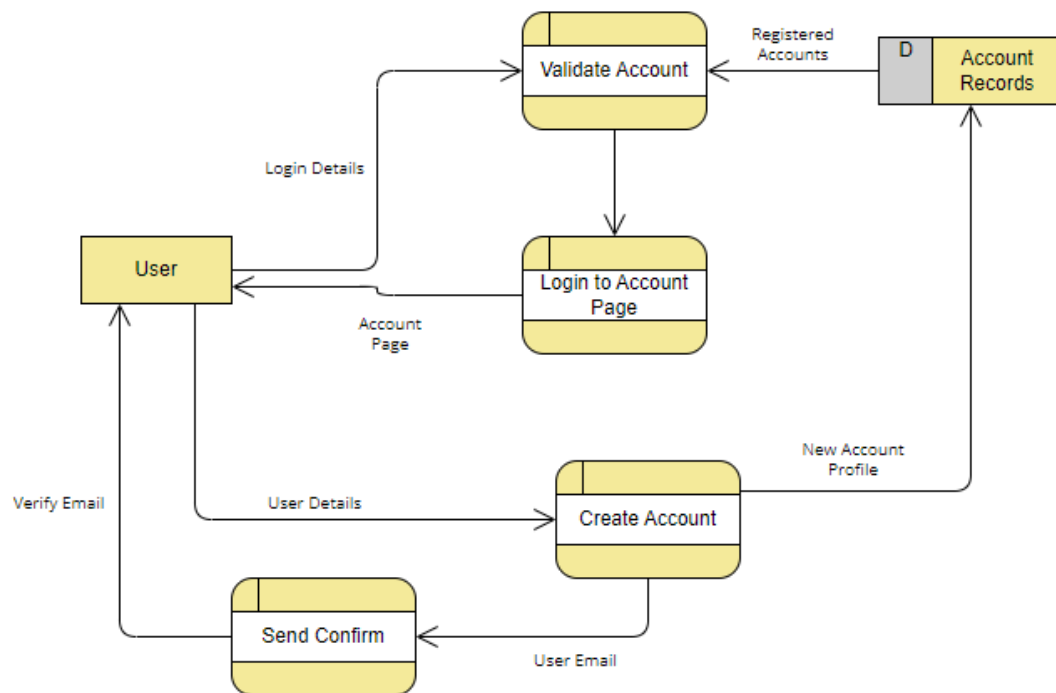
### Logging in/Creating an Account

Decomposition:



Here the process of logging in and creating an account are broken down into specific elements. The login page simply needs both the entered password and email to first be valid inputs and recognised from the database, and secondly correspond to one another. The register page requires slightly more processes, as it has to make sure that the password is strong enough and that the inputs are valid, before the inputs are accepted and the account is saved.

Data Flow Diagram (DFD):

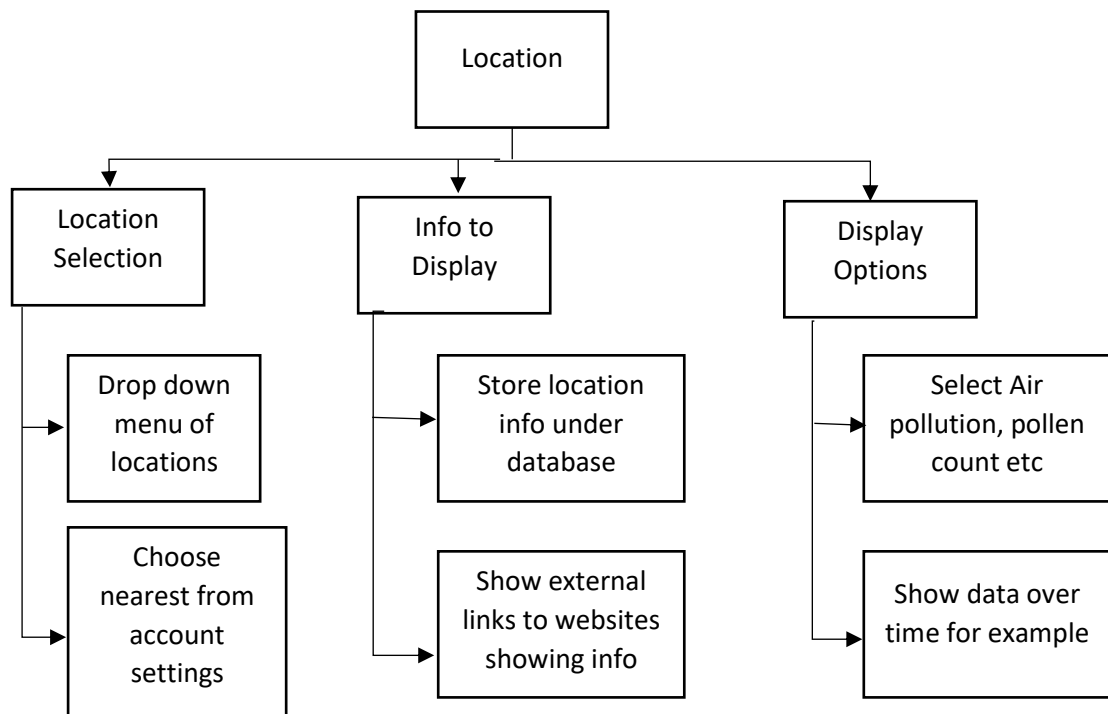


Flowchart:



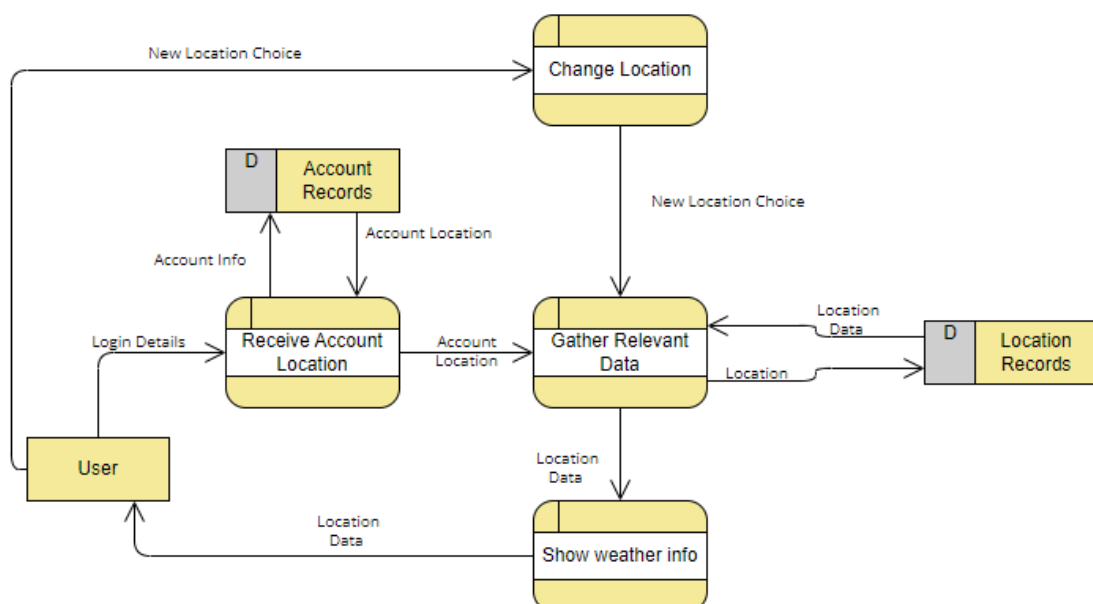
## Location Based Information

Decomposition:



Here, the decomposition diagram shows how the process of selecting a location is broken down. In this example, the individual processes include location selection, displaying info and options to be displayed. The location select will allow users to choose from a set list of locations, or auto select based on if the user's account already uses a location. The info to display breaks down how the information will be shown – first via the information provided through a database that the website will use, and then additionally from external sources like links to weather apps. The display options then show examples of how this information could be displayed, either as flat values or as shown over time.

Data Flow Diagram:



Flowchart:

