Plants Project

Akhila Sharma

Ideation:

Plants Native to New Zealand:

- Colour/Scent
- Seasonal(when to plant, when they flower)
- Kingdom/Family
- Status(threatened, at risk, not threatened)
- Instructions on how to care for the plant(watering, pruning, etc)
- Instructions on how to plant the plant(soil depth, etc)

Concept:

This project is about plants which are native to New Zealand. The project will be a source of information so that everyone can work together to protect our native species from extinction.

The purpose of this project is to help people find native species(Plant Region), to help them find out if the species is in danger(Status), and if necessary, to help them plant more(Planting instructions).

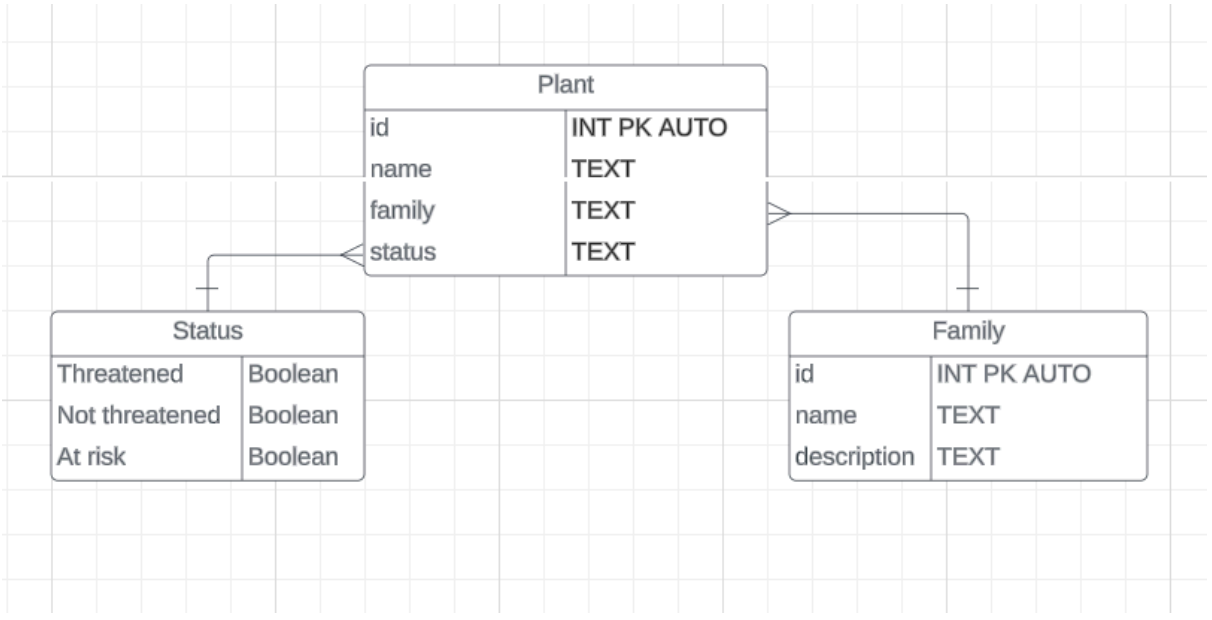
The website/database can be used by scientific researchers, who can find the plants in their specified region(s) and then study them. The project can also be used by environmental caretakers, who can look at the plant status, and then go to the region and plant more. They could also go to the region to see how the plants are doing, and potentially be able to update the status of the species.

The project helps in storing and finding information about plants which are native to New Zealand, which can help people to see the plants as well as take care of the species.

Database Notes:

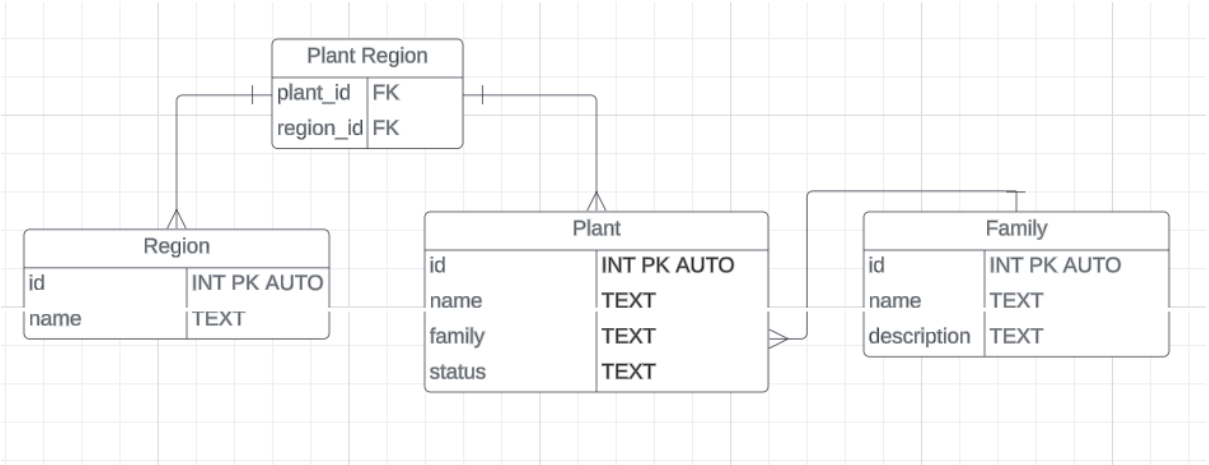
Entity Relationship Diagrams:

Version 1:



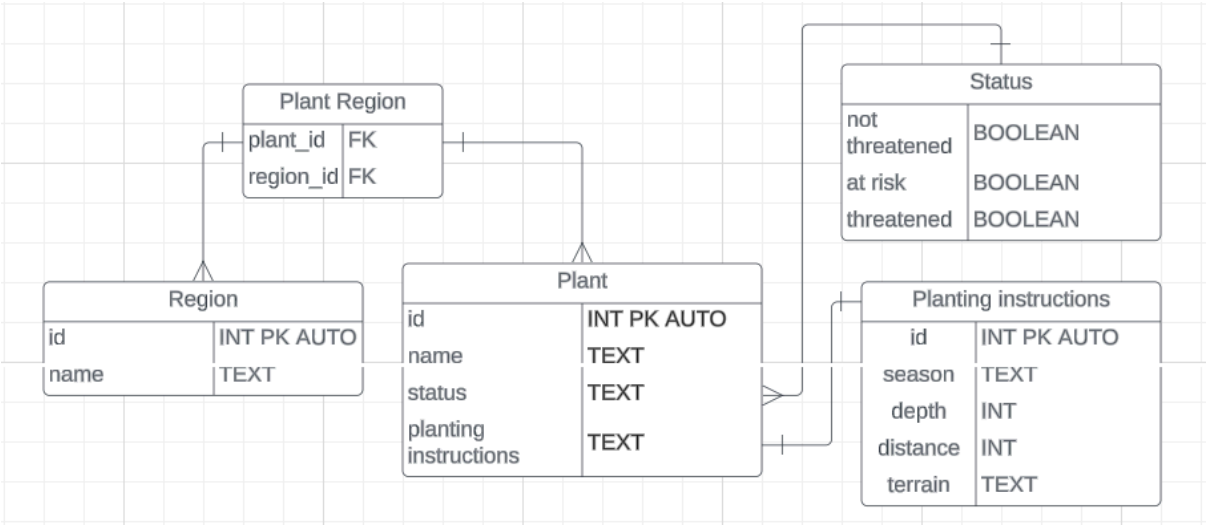
Version 2:

I added tables with many-to-many relationships to meet the standard requirements.



Version 3:

I changed the family table back to a status table as that was more relevant to the purpose of the project. I also added a Planting instructions table to add more information about the plant, rather than just having where it is and how threatened it is.

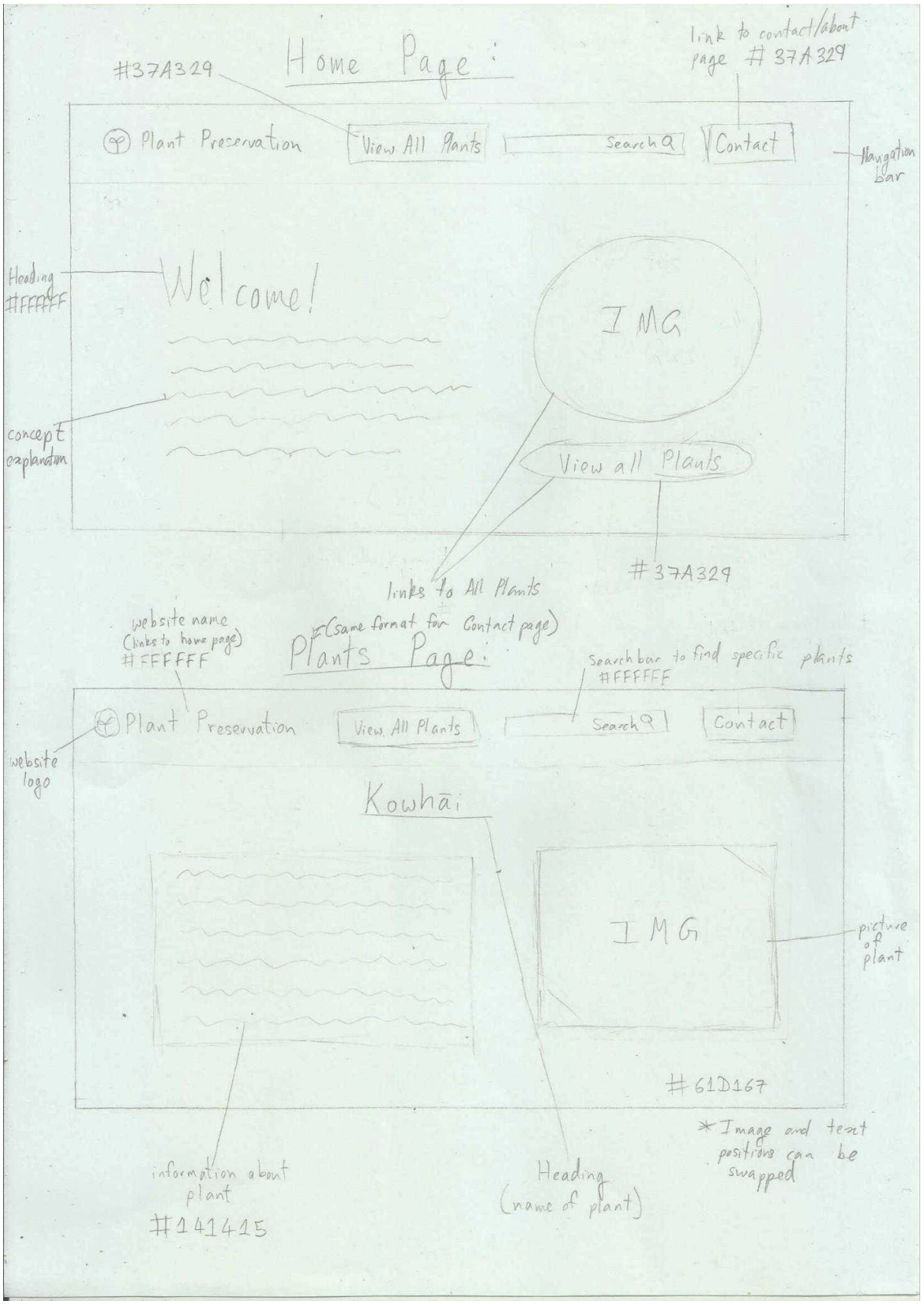


Database Tables(with sample data):

Structure	Sample 1- Kowhai	Sample 2- Kauri
Plant table: - Plant id - Plant name - Plant status - Plant planting instructions	1 (following is from other tables) Kowhai Not threatened 1	1 (following is from other tables) Kauri Threatened 2

Planting instructions table - Instructions id - Season - Depth(cm) - Distance - Terrain	1 Autumn 15 30 flat	1 All 10 60 flat
Status table: - Threatened - Not threatened - At risk	No Yes No	Yes No No
Region table: - Region id - Name of region	1 Northland	1, 2 Northland, Auckland
Plant Region table: - Plant id - Region id	1 1 (Foreign keys to Plant table and Region table)	2 1, 2 (Foreign keys to Plant table and Region table)

Website Layout:



I have decided to make the link to the home page the logo/name of the website, and have put it in the top left corner. I made this decision to have consistency and meet the general standards that most websites follow.
This will make it easier for my user to navigate the website, helping it follow Nielsen's heuristics.
I also decided to keep the design relatively simple, with only a few things on my navigation bar and only three main things on each page(heading, text, and images). Keeping the website minimalistic and easily readable will also make it easier for users.
On my home page, I decided to have a small introduction paragraph explaining what the website is for so that the users know how to use it.

App Routes:

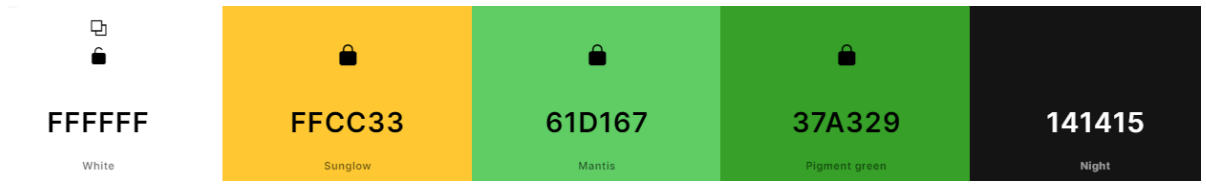
```
#homepage
@app.route('/')
def homepage():


#plants page
@app.route('/plant/<int:id>')
def plant(id):


#about/contact information page
@app.route('/contact')
def contactpage():
```

Fonts & Colours:

Titles/Headings in Lora medium
Paragraphs in Verdana
e.g.

Lorem ipsum dolor sit amet

Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.



Database Queries(SQL):

Query	Expected Result
SELECT * FROM Plant;	1, Kowhai, Not threatened, [1, Autumn, 15, 30, flat] 2, Kauri, Threatened, [1, All, 10, 60, flat]
SELECT * FROM Plant WHERE status=”threatened”	2, Kauri, Threatened, [1, All, 10, 60, flat]
SELECT Planting_instructions FROM Plant WHERE season = ”Autumn” AND terrain=”flat”;	1, Kowhai, Not threatened, [1, Autumn, 15, 30, flat]
SELECT * FROM Plant WHERE terrain=”flat” ORDER BY name; (alphabetical order)	2, Kauri, Threatened, [1, All, 10, 60, flat] 1, Kowhai, Not threatened, [1, Autumn, 15, 30, flat]
INSERT INTO Plant(name, status) VALUES(“Pohutukawa”, “At risk”);	3, Pohutukawa, At risk, [NULL]
DELETE FROM Region WHERE name=”Auckland”; SELECT * FROM Plant;	1, Kowhai, Not threatened, [1, Autumn, 15, 30, flat] 3, Pohutukawa, At risk, [NULL]