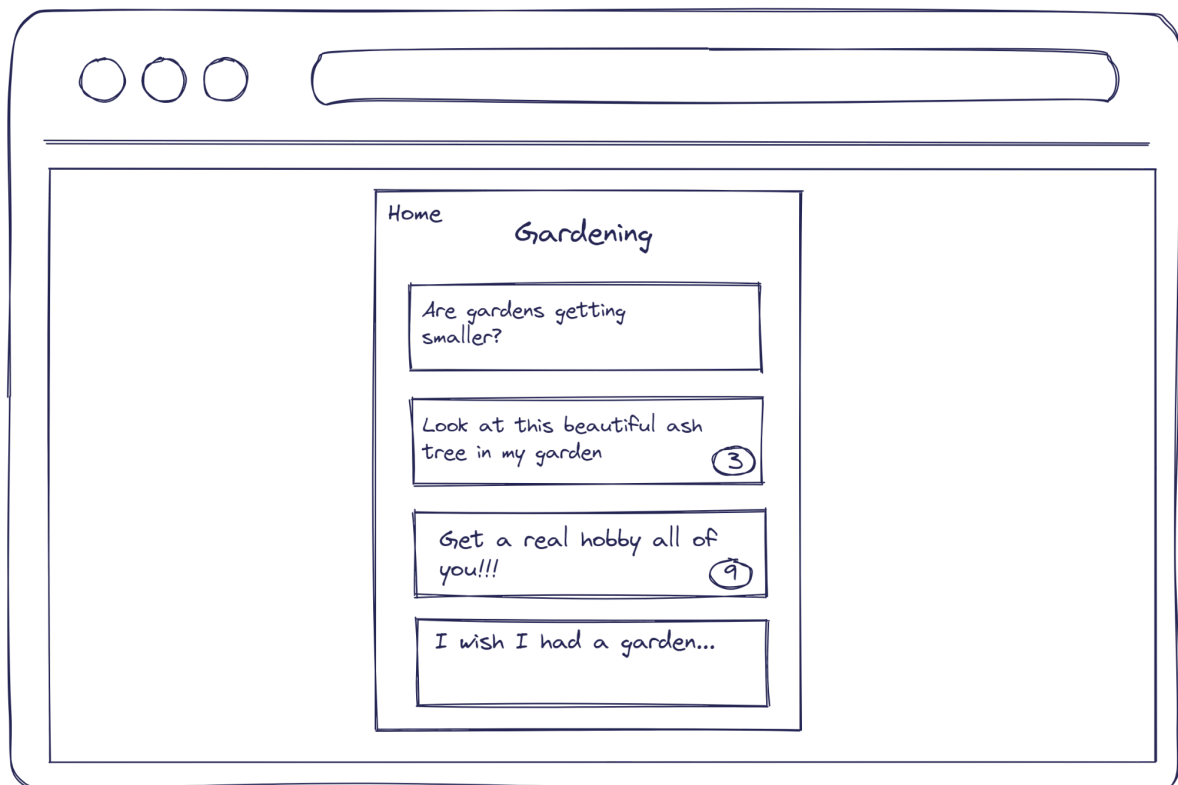# Assignment - OOP

Learning Objectives

- Consolidate your understanding of:
    - Object-oriented programming
    - UML
    - Unit testing

Core Assignments

Forum

Your task is to create an object-oriented system to model an online forum. The forum will be divided into forum pages, each with a title (e.g. "Gardening", "Knitting" etc.). The forum will have users which have usernames and can create posts on forum pages. Posts include a title, a date, an author and some text. Users can comment on these posts. Comments include a date, an author and some text.

First, create UML class diagrams for your system. At minimum, you should have classes for users, forum pages, posts and comments.

We're going to follow a Test-Driven Development approach so, next, create a set of unit tests for your system.

Finally, implement and export your classes to satisfy your unit tests.

Extension Assignments

Forum++

Add as many of the following features to your forum:

- A new type of post: the poll. Polls are like posts but instead of having text they have a set of options other users can vote for.
- Forum admins. Admins can delete any post or comment (not just their own).
- Post restrictions. Forum pages can optionally block users from creating posts until they've made a certain number of comments on the page.
- Up-votes. Users can up or down-vote posts and comments. Users can only cast one vote and can change or remove it if they like. Posts and comments should have a method for calculating their net score (to display).
- Deletion. Both comments and posts can be deleted by their creators.