WYWM Team Planner

Welcome to the Team Planner handout, this is an additional information piece to be used alongside the PowerPoint presentation to develop an understanding of the project, it's process and the tools utilized in the application.

Please **feel free** to ask questions when prompted or during presentation.

PYTHON & DJANGO:

https://www.python.org/
https://www.djangoproject.com/

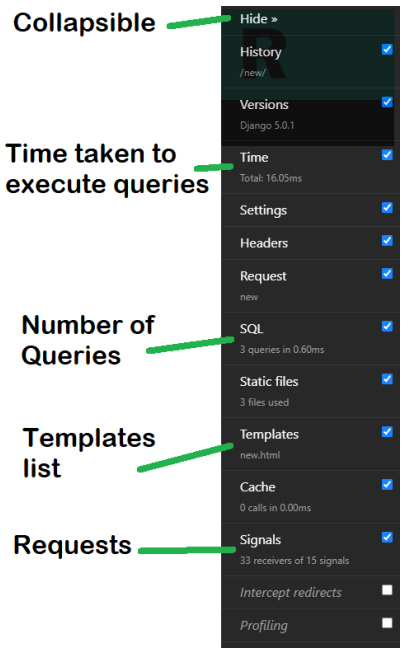
Python is a dynamically typed, versatile, high-level programming language. It is widely used across web development applications, data analysis and finance/mathematics. It is a powerful tool used due to it's professional, educational and business capabilities.

The Team Planner application utilised Python due to it being dynamically typed. This means that we can reference a variable within our code and update its value on the fly. Python was also essential due to our backend framework Django being that it is a web framework designed to leverage the python languages strengths to build a maintainable, scalable and rapidly developed project.

DJANGO DEBUG TOOLBAR:

https://django-debug-toolbar.readthedocs.io

A customizable debugging tool for Django web applications. It provides insights into queries, cache usage, and request/response cycles, aiding in performance optimization. It provides user access to a collapsible panel with interactive features, helping developers inspect what SQL queries are being executed in the workflow, which is useful when debugging.



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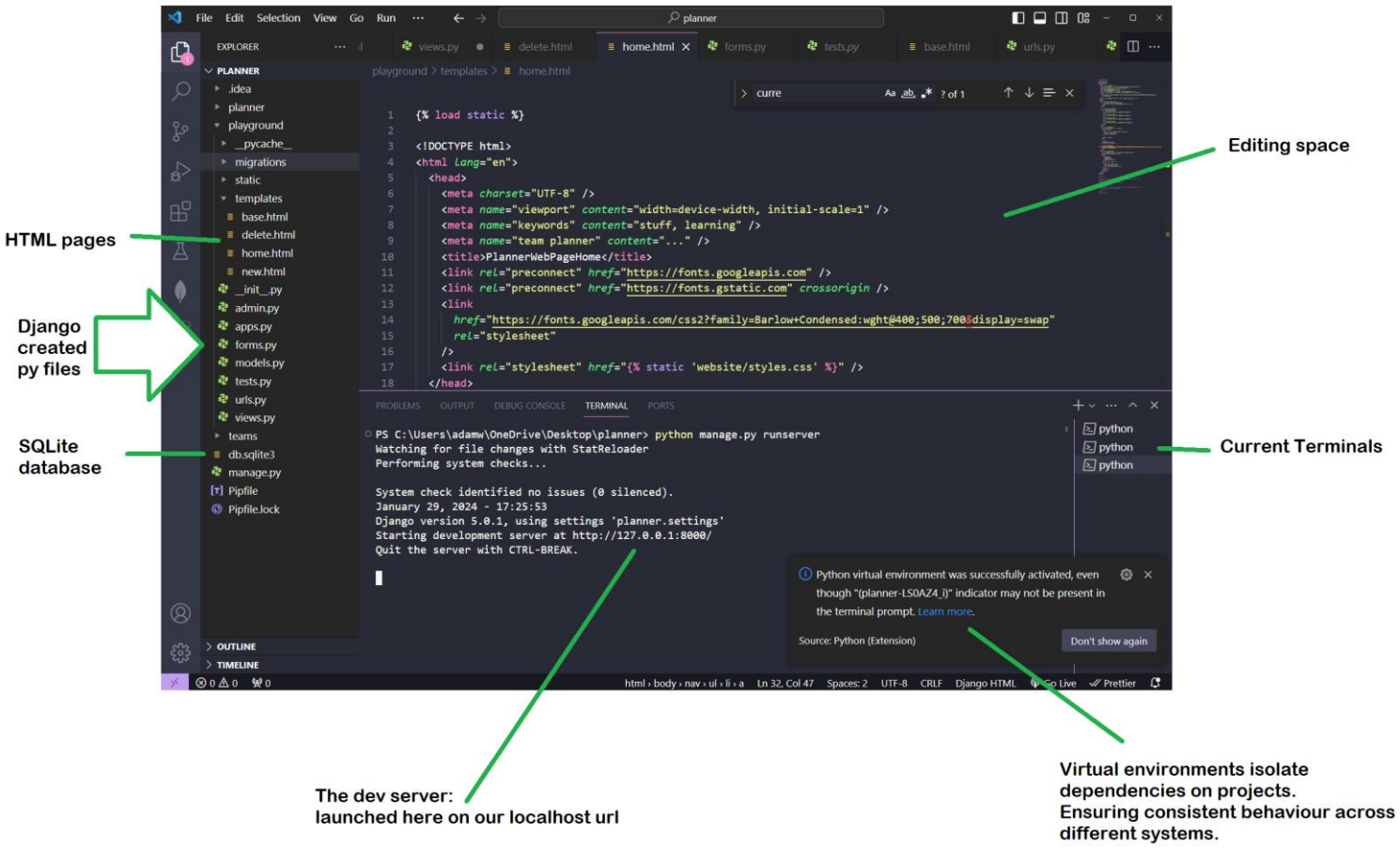
VS CODE:

https://code.visualstudio.com

An Integrated Development Environment (IDE) that supports writing code in a lightweight (consuming resources such as processing power of the CPU in an economical way) while being very powerful. It supports numerous languages and supports additional frameworks and features such as extensions.

VS Code was integral to the project, as it was the application used to store our Django apps as well as HTML and CSS.



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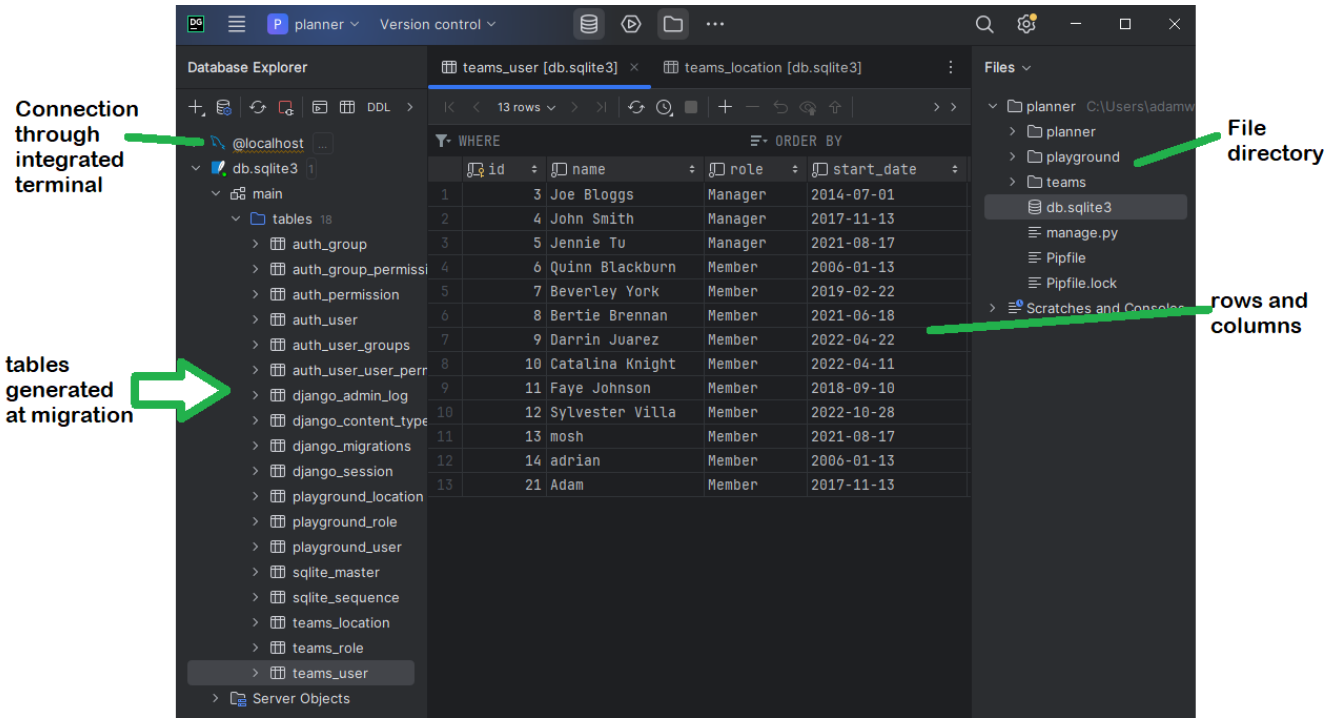
Data Grip:

https://www.jetbrains.com/datagrip

A powerful IDE that supports database management systems. It has features that ease access to navigation, query execution and data analysis.

It was used to inspect data points and to gain a visual representation of the data during POST and GET requests to the SQLite database, aiding development.



APPROACH & DESIGN:

Utilising a user-centric approach. From requirements provided, a quick mind map and basic UI design were drawn up through a wire frame process. Holding true to the Unix design philosophy where possible. Where the small, focussed programs “do one thing and do it well”, such as:

Utilising the DRY (Don’t Repeat Yourself) principle, classes and nested functions assist with code scalability. With the main function having access to variables outside, it allows for more modular and readable code.

Also applying minimal coupling, where a model is not over-reliant on another (such as the reference of too many foreign keys that may have impacts later if a model is changed).

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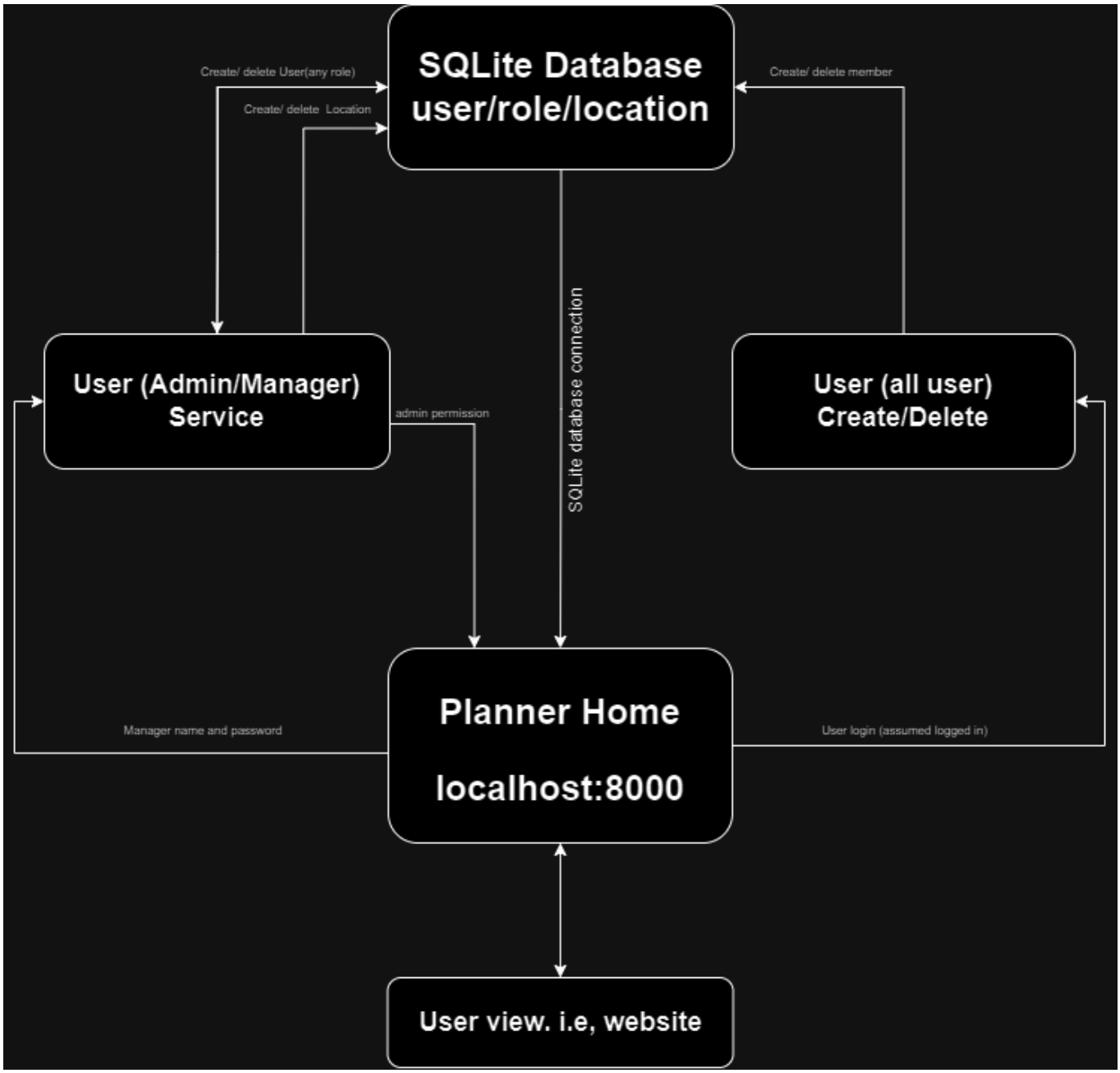
A basic dataflow diagram:



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