**Team Software Project – Preliminary Development Research**

As a group we came to the consensus that we wanted to use the Python programming language. We did consider other languages including C#, C++ and Java. We chose Python as this was the programming language that we are all most familiar with. Python is considered to be a more friendly language to program in and is great for small project.

**Potential Python IDEs:**

List of Python IDEs:

* IDLE
* Thonny
* Visual Studio Code
* Pycharm

IDLE is the basic code editor and has the following features (Python Software Foundation 31.01.2025):

* Works on Windows, Unix and macOS.
* Different keywords are colour coded e.g. input statement and print statements.
* 2 windows; the shell window and the editor window.
* The addition of pre-existing libraries. This feature is very difficult to use on IDLE.

[IDLE — Python 3.13.1 documentation](https://docs.python.org/3/library/idle.html)

Thonny is a Python IDE with the following features (University of Tartu Institute of Computer Science No Date):

* Simple debugger
* Step through expression evaluation
* Error highlighting
* Simple pip GUI for installing libraries

[Thonny, Python IDE for beginners](https://thonny.org/)

Visual Studio Code is an IDE for any language and has the following features (Arora No Date):

* Multiple languages available
* Debugging
* Keyboard shortcuts
* Error highlighting

[Thonny, Python IDE for beginners](https://thonny.org/)

Pycharm is a Python IDE with the following features (No Name 12.03.2024):

* Debugging
* Version control
* Syntax highlighting
* Integrated libraries

[What is PyCharm? Features, Advantages & Disadvantages - GeeksforGeeks](https://www.geeksforgeeks.org/what-is-pycharm-features-advantages-disadvantages/)

**Conclusion:**

As a group we have decided to use Thonny as the features included are enough for us to complete our project. IDLE was too simple and did not have the features necessary for us, Pycharm and Visual Studio Code had a lot of features unnecessary to the scope of our project.

**Libraries Necessary for our Project:**

We decided to use PyGame for the UI of our game as it is simple to learn and use and it gives us the functionality needed for our game without over complicating the process. It is installed in Thonny using the command – pip install pygame.