## **System Development Tool**

## The researchers will be using the following development tools in the creation of this project.

| **SYSTEM** | **DESCRIPTION** | **FUNCTION** |
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| HTML | HTML, or HyperText Markup Language, is the standard markup language for documents intended to be highlighted in an internet browser. | Every HTML page contains a set of HTML elements, which include tags and attributes. HTML elements are the foundation of a web page. A tag tells the web browser where an element begins and ends, whereas an attribute describes an element's properties. |
| Javascript | JavaScript is a dynamic programming language used for web development, web applications, game development, and many other things. | It enables you to implement dynamic features on web pages that would be impossible to implement using only HTML and CSS. |
| CSS+ | Cascading Style Sheets is a style sheet language that is used to describe the presentation of a document written in a markup language like HTML or XML. CSS, like HTML and JavaScript, is a foundational technology of the World Wide Web. | This is a simple mechanism for adding style (e.g., fonts, colors, spacing) to Web documents. |
| Django | Django is a free and open-source, Python-based web framework that follows the model–template–views architectural pattern. | Stores and manages data using django models and passing it through its view templates for Users to see. |
| Django channels | Django Channels is a third-party package that extends Django to handle real-time Web applications, enabling websockets and other asynchronous protocols. Its primary purpose is to make it easier to build real-time web applications with Django, using a familiar and straightforward API. | Django Channels allows you to handle different protocols such as WebSocket, HTTP long-polling, and HTTP2 Server Push with ease, and enables you to add real-time features like chat, notifications, and streaming updates to your Django application. |

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## ***HTML,*** or Hypertext Markup Language, is a markup language used for creating and structuring content on the World Wide Web. It is the standard language for creating web pages and applications and provides a set of elements that define the structure, content, and layout of a web page. The researcher will use this to establish the foundation and initial stage of the website.

## ***JavaScript*** is a high-level, object-oriented programming language primarily used for front-end web development. It provides developers with the ability to create interactive and dynamic web pages, enhancing user experience and functionality. JavaScript can be used to manipulate HTML and CSS, handle events, create animations, and interact with web APIs, making it a versatile language that is widely used across the web. The researchers intend to utilize this as a search engine and implement other functionalities such as file uploading and basic button functionalities.

## ***CSS*** (*Cascading Style Sheets*) is a language used to describe the visual appearance and layout of a web page written in HTML. It allows developers to separate the content of a web page from its presentation, defining style rules that apply to individual or groups of elements. CSS enables web developers to create consistent and responsive designs, as well as animations and interactive effects that enhance user experience, resulting in beautiful and functional websites.

## ***Django*** is a Python-based web framework that allows for fast and secure development of websites and web applications. Its feature-rich toolkit offers developers a wide range of functionality that simplifies common web development tasks, such as URL routing, database integration, user authentication, and template rendering. With Django, developers can easily create maintainable and scalable web applications while minimizing development time and effort.

***Django Channels*** is a third-party package that extends Django to handle real-time Web applications, enabling websockets and other asynchronous protocols.Django Channels allows you to handle different protocols such as WebSocket, HTTP long-polling, and HTTP2 Server Push with ease, and enables you to add real-time features like chat, notifications, and streaming updates to your Django application.

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