

# Documentation of the Towers of Hanoi game

**Framework:** Visual Studio Code

**Languages:** HTML, CSS, JAVASCRIPT

This document discusses why VS Code was selected as the Integrated Development Environment (IDE) and JavaScript, HTML, and CSS as the primary languages to be used in building the Tower of Hanoi game. The aim was to have an interactive, user-friendly game with clean code that is simple to develop and maintain.

The reasons for VS code being used:

- **Lightweight and Fast:** Known for optimal performance, VS Code comes with a fast startup time along with great responsiveness during the development cycle. This is especially useful when developing a game prototype like the Tower of Hanoi.
- **Extensive Extensions:** VS Code has a lot of extensions that support JavaScript, HTML, and CSS. These extensions come with added features such as syntax highlighting, linters, formatters, and even built-in support for Git, making it easier to manage the development process.
- **Integrated Debugging:** With Visual Studio Code, it is easier to debug and assess the code on the spot as you develop it. The integrated debugger makes it so.
- **Version Control Integration:** VS Code comes with Git and GitHub integrated, providing a cross-version control and collaboration interface, which is especially useful when dealing with numerous versions in game development.
- **Customizable Workspace:** Customization of themes, layouts, and integration of other tools is possible, enabling personalization with development in VS Code.
- **Cross-Platform Compatibility:** Compared to other IDEs available, VS Coding is the most compatible not only with Windows but with macOS and Linux too.

The reasons for the languages chosen (JavaScript, CSS, HTML):

- **JavaScript** facilitates the logic and interactivity of the game, allowing real-time updates, user interaction, and animations. It provides seamless gameplay by dynamically moving disks across towers, checking for winning conditions, and managing user inputs. Besides, JavaScript is widely supported across different

browsers, making the game accessible across different devices without needing additional installations.

- HTML gives the structural layout of the game. It lays out the towers, disks, and controls, with JavaScript able to manipulate them dynamically. The simplicity of HTML and its compatibility with CSS and JavaScript ensure that it is the perfect tool for structuring the game interface.
- CSS enhances the aesthetics of the game by incorporating styles into elements such as the background, disks, and towers. CSS renders the game user-friendly and neat by defining colors, shapes, and layout. CSS also enables transitions and animations, thereby making the movement of the disks smoother and more appealing to the eye. CSS additionally enables responsive design, thereby making the game adaptable to different screen sizes and devices.

These languages and Vs code utilized together enables development of a simple, interactive, and visually appealing Tower of Hanoi game that can be played directly in a web browser. This technology stack was selected due to its ease of use, rapid development capabilities, cross-platform compatibility, and ability to deliver a smooth gaming experience.