# Installation of VS Code:

**Steps to Download and Install Visual Studio Code:**

1. **Download VS Code**:
   * Go to the [Visual Studio Code website](https://code.visualstudio.com/).
   * Click on the "Download for Windows" button. This will detect the operating system and offer the appropriate installer.
2. **Run the Installer**:
   * Once the download completes, locate the downloaded installer in the downloads folder. Double-click on the installer file to start the installation process.
3. **Install VS Code**:
   * The VS Code Setup Wizard will open. Click on "Next" to proceed.
   * Review the License Agreement and click "I accept the agreement" if you agree to the terms. Then, click "Next".
4. **Select Installation Location**:
   * Choose the destination folder where you want to install Visual Studio Code or use the default location. Click "Next".
5. **Select Start Menu Folder**:
   * Choose the folder where you want the VS Code shortcuts to be placed in the Start Menu. Click "Next".
6. **Select Additional Tasks**:
   * Optionally, select any additional tasks such as creating a desktop icon or adding VS Code to the PATH. Click "Next".
7. **Ready to Install**:
   * Review your selected options. Click "Install" to begin the installation process.
8. **Install Completes**:
   * Once the installation completes, click "Finish" to exit the setup wizard.

# First-time Setup:

Installing useful extensions based on your programming languages and needs. Some essential extensions.

Configuring the integrated terminal to use ie PowerShell, Command Prompt, Git Bash.

# User Interface Overview:

**Activity Bar**: provides quick access to different views like Explorer, Search, Source Control, Run and Debug, and Extensions.

**Side Bar**: hosts File Explorer, Search, Source Control, and Extensions panels for managing project files, searching, version control, and extensions.

**Editor Group**: The central area where files are edited, it supports multiple tabs for simultaneous file editing and can be split horizontally or vertically.

**Status Bar**: displays project and file information such as language mode, Git integration, task status, and extension details.

# Command Palette

The Command Palette in Visual Studio Code (VS Code) is a text-based interface accessed via Ctrl+Shift+P (Windows) that allows users to quickly execute various commands and tasks without navigating menus or remembering specific keyboard shortcuts. It enables tasks such as file management, editing, Git operations, extension management, debugging, and more, enhancing efficiency and productivity in coding workflows.

# Extensions in VS Code:

Extensions in Visual Studio Code enhance its functionality by providing additional tools, integrations, and customization options. Users can find, install, and manage extensions through the Extensions view (Ctrl+Shift+X), enabling them to tailor VS Code to support specific programming languages, frameworks, and workflows. Essential extensions for web development include those for language support, debugging, version control, code formatting, and productivity enhancements, empowering developers to optimize their coding experience and productivity effectively within the editor.

# Integrated Terminal:

The integrated terminal in Visual Studio provides a convenient way to access and execute commands directly within the editor. Accessed via `Ctrl+`` or through the View menu, it offers seamless integration with the workspace, supports quick command execution with keyboard shortcuts, and allows for customization and extension. Compared to an external terminal, it enhances productivity by maintaining context within the development environment, facilitating focused coding and task management without switching between applications.

# File and Folder Management:

**Creating**: creates new files and folders using the Explorer view or the command palette (Ctrl+Shift+P). Right-click within the Explorer view to create new files or folders.

**Opening**: Open files by double-clicking in the Explorer view or using Ctrl+P for quick file search and open. Open folders using File > Open Folder... or by dragging and dropping into the VS Code window.

**Managing**: Rename, delete, move, and copy files and folders directly within the Explorer view. Use context menus or commands in the command palette (Ctrl+Shift+P) for these actions.

# Settings and Preferences:

In Visual Studio Code, users can find and customize settings through the Settings interface accessible via File > Preferences > Settings (or Ctrl+,). This interface allows for searching and modifying various settings directly or editing the settings.json file for advanced configurations. Examples of customization include changing the theme by selecting from installed options, adjusting font size under Editor: Font Size, and modifying keybindings for shortcuts. These settings empower users to personalize their coding environment to enhance productivity and comfort while working in VS Code.

# Debugging in VS Code:

**Installing Required Extensions**

**Configuring Launch Configuration**

**Setting Breakpoints**

Start Debugging

# Using Source Control:

Integrating Git with Visual Studio Code (VS Code) facilitates efficient version control for developers. Start by initializing a Git repository using git init in the integrated terminal, then stage and commit changes with git add . and git commit -m "message", respectively, to track project revisions. Pushing changes to GitHub involves linking your local repository to a remote one (git remote add origin <repository\_URL>) and pushing commits (git push -u origin main). VS Code enhances this process with its Source Control view, allowing users to manage changes, commit messages, branches, and resolve conflicts directly within the editor, streamlining development and collaboration workflows effectively.

**Reference:**

Visual Studio Code. (n.d.). Visual Studio Code. <https://code.visualstudio.com/>