# Installing and Setting Up Dart and Flutter in Visual Studio Code

## 1. Install Flutter and Dart SDK

1. Download Flutter SDK:  
 - Go to the official Flutter website: https://flutter.dev and download the Flutter SDK for your operating system.  
 - Extract the downloaded zip file to a desired location (e.g., C:\flutter for Windows).  
  
2. Set Environment Path:  
 - Add the Flutter binary path to the system's PATH variable.  
 - On Windows: Add C:\flutter\bin.  
 - On macOS/Linux: Add the path to your shell configuration file (e.g., .zshrc or .bashrc).  
 - Run `flutter doctor` in the terminal to verify installation.  
  
3. Install Dart SDK:  
 - The Dart SDK comes with Flutter, so a separate installation is unnecessary.

## 2. Install Visual Studio Code

- Download and install Visual Studio Code from https://code.visualstudio.com/.

## 3. Install Flutter and Dart Extensions in VS Code

1. Open Visual Studio Code.  
2. Go to the Extensions view by clicking on the Extensions icon in the Activity Bar or pressing Ctrl+Shift+X.  
3. Search for and install the following extensions:  
 - Flutter: This extension provides Flutter-specific functionality.  
 - Dart: This extension supports the Dart programming language.

## 4. Set Up Flutter in Visual Studio Code

1. Create a Flutter Project:  
 - Open the command palette (Ctrl+Shift+P) and type `Flutter: New Project`.  
 - Select a project name and directory.  
 - Wait for the project to be created.  
  
2. Select the Device:  
 - Ensure you have an emulator or a connected device ready.  
 - Use the Device Selector in the bottom-right corner of VS Code to select your device.  
  
3. Run the Project:  
 - Press F5 or use the Run > Start Debugging option to run the Flutter app.

## 5. Additional Setup

- Install Android Studio (optional but recommended):  
 - Download Android Studio for additional tools like emulators and platform-specific dependencies.  
 - Set up the Android SDK and ensure its path is added to the system environment.  
  
- Run `flutter doctor`:  
 - Use the terminal to run `flutter doctor` to identify and fix any setup issues.