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**Lab Journal # 1**

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Code: CSL-341

Mobile Application Development Lab

Credit Hr # 01

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# Write the main steps involved in Flutter installation.

**Steps to install Flutter:**

1. **Download Flutter SDK:**
   * Go to <https://flutter.dev>
   * Download the latest stable version for your OS (Windows, macOS, Linux).
2. **Extract the ZIP file:**
   * Extract the downloaded zip to a desired location (e.g., C:\flutter).
3. **Set Flutter in Environment Variables:**
   * Go to *Environment Variables* → *System Variables* → *Path*
   * Add path to flutter\bin (e.g., C:\flutter\bin).
4. **Run Flutter Doctor:**
   * Open Command Prompt or Terminal.
   * Run flutter doctor to check system setup and install required dependencies.
5. **Install Android Studio (for Android development):**
   * Download and install Android Studio.
   * Set up Android SDK and Emulator if needed.
6. **Install Flutter and Dart extensions in VS Code (if using VS Code).**

# How you connect your mobile phone in replacement of Virtual Device? Write step by step procedure.

**Steps to connect a real mobile device:**

1. **Enable Developer Options on Phone:**
   * Go to *Settings > About Phone > Tap Build Number 7 times*.
   * Developer options will be enabled.
2. **Enable USB Debugging:**
   * In *Developer Options*, turn on **USB Debugging**.
3. **Connect your phone to PC using USB data cable.**
4. **Allow USB Debugging Authorization:**
   * When prompted on your phone, allow permission to connect to the computer.
5. **Verify connection:**
   * Run *flutter devices* in terminal.
   * Your phone should appear in the list of connected devices.

# In VS Code, which extension you install for Flutter and Dart?

* **Flutter** extension (by Dart Code)
* **Dart** extension (by Dart Code)

These extensions add Flutter and Dart support to Visual Studio Code.

# How can we create a flutter project?

**Steps to create a Flutter project:**

1. Open **VS Code**.
2. Open Command Palette (Ctrl + Shift + P).
3. Select Flutter: New Project.
4. Choose project type (generally "Application").
5. Enter the project name.
6. Choose the location to save the project.
7. Wait for Flutter to create the project structure.
8. Open the project and run it using your connected device or emulator.

# What is the advantage of setting path in environment variables?

**Advantage:**

* Setting the path in environment variables allows you to run **Flutter commands from any directory** in the terminal without needing to navigate to the Flutter folder every time.
* It makes development faster and more convenient.

**Regards**