***Mobile Application Development Lab***

***CSL-341***

***Lab Journal***



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# Tasks

1. Write the main steps involved in Flutter installation.

Answer:

 **Download Flutter SDK**:

* [Flutter's official website](https://flutter.dev/) use this to download the latest stable version for your OS.

 **Extract Flutter SDK**:

* Unzip the downloaded file to a location (/Users/fawadnaveed/flutter what I used).

 **Set Up Environment Variables**:

* Added Flutter to the system PATH so you can run flutter commands globally.

 **Install Dependencies**:

* Ensure that Git is installed and available in the system.
* For macOS, use Homebrew: brew install git.

 **Run flutter doctor**:

* Open a terminal and run flutter doctor to check if all dependencies are installed.

 **Installing Android Studio (for Android Development)**:

* Install Android SDK and configure an emulator.

 **Enabling Web, Desktop, or**:

* Run flutter config --enable-web for web support.
* Use of Xcode on mac for iOS development.

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

Answer:

1. **Enable Developer Mode on your mobile phone**:
   * Go to **Settings** → **About Phone** → Tap **Build Number** 7 times to enable Developer Options.
2. **Enable USB Debugging**:
   * In **Developer Options**, enable **USB Debugging**.
3. **Connect the Device to PC**:
   * Use a USB cable to connect your mobile phone.
4. **Authorize Debugging (if prompted)**:
   * Accept the prompt on your phone to allow USB debugging from your computer.
5. **Check Device Connection**:
   * Open a terminal and run:

nginx

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flutter devices

* + If your device appears in the list, it’s successfully connected.

1. **Run the Flutter Project on Mobile**:
   * Navigate to your Flutter project directory and run:

arduino

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flutter run

* + App is launched mobile phone instead of a virtual emulator.

1. In VS Code, which extension you install for flutter and Dart?

Answer: **Flutter Extension**

1. How can we create a flutter project?

Answer:

1. **Open Terminal or Command Prompt**.
2. Navigate to the folder where you want to create the project.
3. Run the following command:

lua

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flutter create project\_name

Example:

lua

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flutter create my\_app

1. Navigate into the project folder:

bash

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cd my\_app

1. Open the project in VS Code:

css

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code .

1. Run the app:

arduino

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flutter run

1. What is the advantage of setting path in environment variables?

Answer:

 **Allows Global Access**: You can run flutter commands from any directory.

 **Simplifies Development**: No need to specify the full path of the Flutter SDK every time.

 **Helps VS Code Recognize Flutter**: Ensures smooth integration with development tools.

  **Prepare System for Future Updates**: Makes it easy to update Flutter without reconfiguring paths.