

# ***Mobile Application Development Lab***

***CSL-341***

## ***Lab Journal 1***



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## ***TASK 1:***

Write the main steps involved in Flutter installation.

### *Installation of Flutter and setting up the environment*

#### ***STEP 1:***

**Download Flutter SDK:** Go to the [Flutter official website](https://flutter.dev/docs/get-started/install) and download the SDK for your operating system.

#### ***STEP 2:***

**Extract the File:** Unzip the downloaded file to a location on your computer (e.g., C:\flutter (for Windows)).

#### ***STEP 3:***

**Set Environment Variable:** Add the Flutter **bin** folder to the system **Path** to use Flutter commands from anywhere.

#### ***STEP 4:***

**Check Dependencies:** Open the cmd and run the command:  
`flutter doctor`

#### ***STEP 5:***

**Install Android Studio:** Install Android Studio, as it provides the required tools and emulator.

#### ***STEP 6:***

**Install Flutter and Dart Plugins:** Open Android Studio, go to **Plugins**, and install **Flutter** and **Dart** plugins.

#### ***STEP 7:***

**Verify Installation:** Command will show the installed flutter version  
`flutter --version`

## ***TASK 2:***

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

### ***Connect Mobile Instead of Virtual Device (Step-by-Step)***

#### ***STEP 1:***

**Enable Developer Mode** On your phone

go to **Settings** → **About Phone** and tap **Build Number** 7 times to enable **Developer Options**.

#### ***STEP 2:***

**Enable USB Debugging** In **Developer Options**, turn on **USB Debugging**.

#### ***STEP 3:***

**Connect Your Phone** Use a USB cable to connect your phone to the computer.

#### ***STEP 4:***

**Allow Debugging Access** When prompted on your phone, allow debugging access.

#### ***STEP 5:***

**Check Connection** Run the following command in the terminal:

`flutter devices`

#### ***STEP 6:***

If your phone appears in the list, it is connected successfully. **Run the Flutter App** – Use:

`flutter run`

## TASK 3:

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

The image shows two screenshots of the Visual Studio Code interface, specifically the extension marketplace. The top screenshot displays the 'Dart' extension by Dart Code (dartcode.org). It has 11,435,268 downloads and an 81-star rating. The extension is described as 'Dart language support and debugger for Visual Studio Code.' The interface includes buttons for 'Disable', 'Uninstall', 'Switch to Pre-Release Version', and 'Auto Update'. The 'Installation' section on the right shows the identifier 'dart-code.dart-code', version '3.106.0', last updated '2025-03-05, 15:56:15', and size '14.59MB'. The bottom screenshot displays the 'Flutter' extension by Dart Code (dartcode.org). It has 10,367,208 downloads and an 85-star rating. The extension is described as 'Flutter support and debugger for Visual Studio Code.' The interface includes buttons for 'Disable', 'Uninstall', 'Switch to Pre-Release Version', and 'Auto Update'. The 'Installation' section on the right shows the identifier 'dart-code.flutter', version '3.106.0', last updated '2025-03-05, 15:56:16', and size '26.52KB'. Both screenshots show the 'main.dart' file open in the editor and the 'Extension: Dart' or 'Extension: Flutter' tab selected in the sidebar.

**Dart**  
Dart Code | dartcode.org | 11,435,268 | ★★★★★ (81)  
Dart language support and debugger for Visual Studio Code.  
Disable Uninstall Switch to Pre-Release Version Auto Update  
DETAILS FEATURES CHANGELOG  
chat discord twitter dartcode help contribute  
Introduction  
Dart Code extends VS Code with support for the Dart programming language, and provides tools for effectively editing, refactoring, running, and reloading Flutter mobile apps.  
Installation  
Identifier dart-code.dart-code  
Version 3.106.0  
Last Updated 2025-03-05, 15:56:15  
Size 14.59MB

**Flutter**  
Dart Code | dartcode.org | 10,367,208 | ★★★★★ (85)  
Flutter support and debugger for Visual Studio Code.  
Disable Uninstall Switch to Pre-Release Version Auto Update  
DETAILS FEATURES CHANGELOG DEPENDENCIES  
Introduction  
This VS Code extension adds support for effectively editing, refactoring, running, and reloading Flutter mobile apps. It depends on (and will automatically install) the Dart extension for support for the Dart programming language.  
Note: Projects should be run using F5 or the Debug menu for full debugging functionality.  
Installation  
Identifier dart-code.flutter  
Version 3.106.0  
Last Updated 2025-03-05, 15:56:16  
Size 26.52KB

## ***TASK 4:***

How can we create a flutter project?

### ***STEP 1:***

Open VS Code.

### ***STEP 2:***

Open the Command Palette.

### ***STEP 3:***

Type "Flutter: New Project" and select it.

### ***STEP 4:***

Choose "Flutter Application" as the project type.

### ***STEP 5:***

Enter a project name.

### ***STEP 6:***

Select a folder where you want to save the project.

### ***STEP 7:***

Wait for dependencies to install

## ***TASK 5:***

What is the advantage of setting path in environment variables?

- Flutter commands may be used without going to the Flutter folder in any terminal or command prompt.
- It is no longer necessary to manually navigate to the Flutter installation location every time.
- Work is done worldwide by commands such as flutter doctor, flutter run, and flutter create.
- Other programs, such as Android Studio and Visual Studio Code, are able to immediately identify Flutter.
- The system won't recognize Flutter instructions if the path isn't defined, which might lead to failures