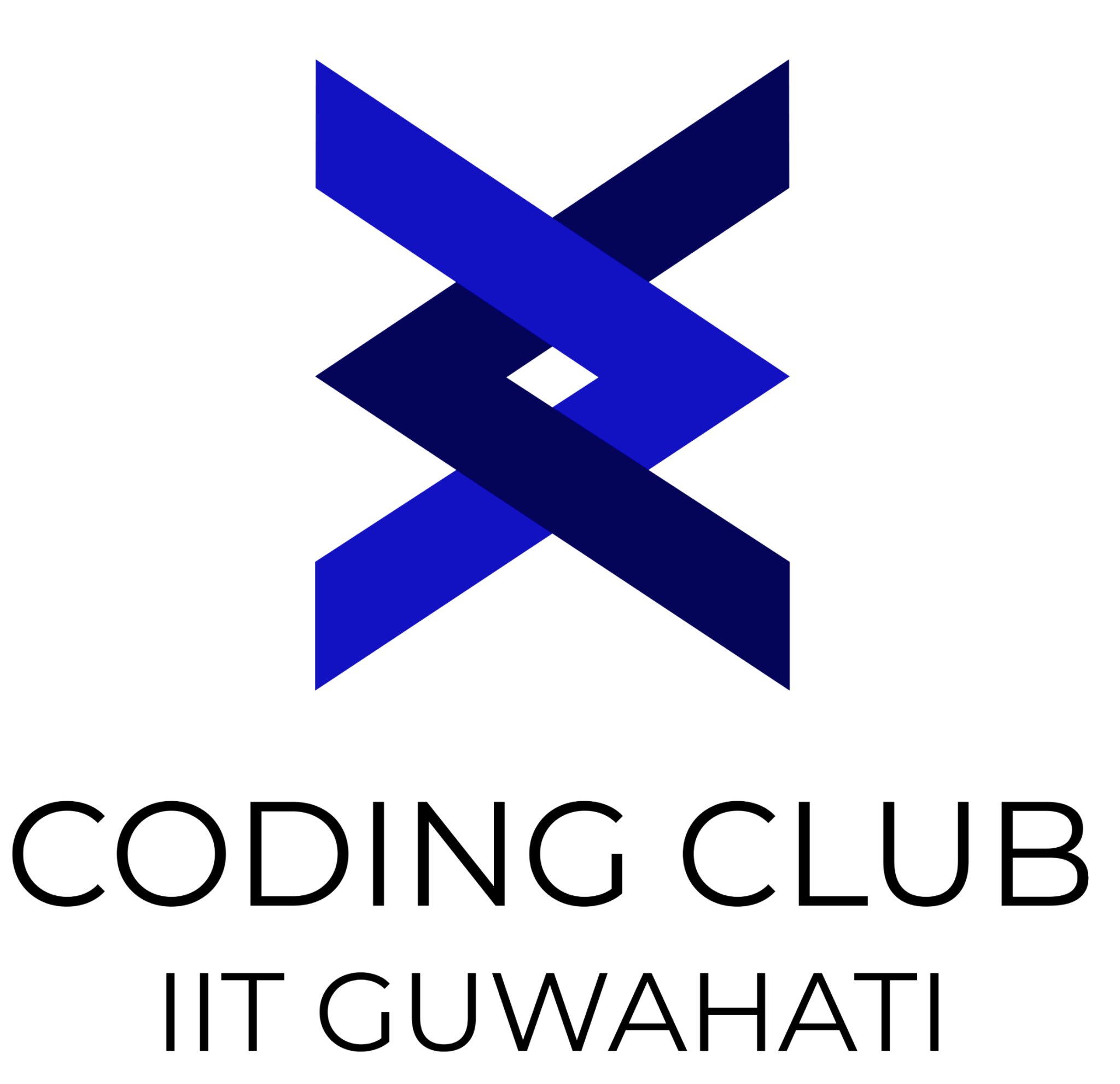
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Flutter Course

***Course Curriculum***

***Coding Club, IIT Guwahati***

**Head:** *Varenya Tiwari (AficionadoXD#7443)*

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# **WEEK 1**

* Installation (App and Web on Visual Studio Code)
* Github and VCS ( On VS code and Android Studio)
* Dart tutorial (Basic, Loops, Function, Exception Handling, List and Maps, Classes, Constructors)
* Go through with Hot reload, Stateful and Stateless Widget
* Assignment: Quiz and Dart Programming

**Resources:**

**Installation:**

Working on flutter is feasible on both android studio and VS code, if you’re already comfortable with any one of them proceed with the same but if you’re new to using both of them. Android Studio is usually preferred for flutter app development and VS code for flutter web development. Resources for installation are provided for both of them.

**For windows :**

[**Setup Flutter, Visual Studio Code and Android Emulator on Windows**](https://www.youtube.com/watch?v=-z1DcFsZlpc)

**For mac:**

[**https://www.youtube.com/watch?v=hL7pkX1Pfko**](https://www.youtube.com/watch?v=hL7pkX1Pfko)

Note: If Android studio hangs on your device, type this command on the terminal : defaults write com.google.android.studio AppleWindowTabbingMode manual

Moving From Android Studio to VS code:

[**Moving to Visual Studio Code from Android Studio | by Suragch | Flutter Community | Medium**](https://medium.com/flutter-community/moving-to-visual-studio-code-from-android-studio-a-guide-for-flutter-developers-8ce506406faf)

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**Some cool extensions:**

[**VS Code Extensions Every FLUTTER Developer Should Have + Bonus Theme & Fonts - YouTube**](https://www.youtube.com/watch?v=VHhksMa2Ffg&t=62s)

**Setting up android emulator:**

While you can also use your physical device for testing out your application during the development phase, it’s still better to use an emulator to reduce the hassle a bit while developing.

[**https://youtu.be/zBMKDOFo2HU**](https://youtu.be/zBMKDOFo2HU)

**Github and VCS:**

Being able to use Github and work on a project as a team easily is one of the most crucial things in development, so make sure you go through these videos and understand the basic terminology used in Git and how to remotely perform those operations from your IDE.

[**Visual Studio Code | How to use git and github - YouTube**](https://www.youtube.com/watch?v=Fk12ELJ9Bww)

[**How to Use Git and GitHub in Android Studio - YouTube**](https://www.youtube.com/watch?v=ebqbIyicCFU)

**Dart Tutorial:**

Basic Programming knowledge is expected to work easily on development projects and since flutter is based on Dart, some basic programming tutorials are provided for the same, so you can get an idea of how things are supposed to work in your application.

[**https://dartpad.dev/?null\_safety=true**](https://dartpad.dev/?null_safety=true)

Use Dartpad Online IDE for dart programming.

1. [**Fundamentals of Dart Playlist**](https://www.youtube.com/playlist?list=PLlxmoA0rQ-LyHW9voBdNo4gEEIh0SjG-q)

You don’t need to watch the whole playlist right away, for now cover these for basic dart overview: Videos (3-29, 39-42)

1. [**Overview of Dart in 20 mins**](https://www.youtube.com/watch?v=FLQ-Vhw1NYQ&list=PL4cUxeGkcC9jLYyp2Aoh6hcWuxFDX6PBJ&index=3)

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**Dart Null Safety:**

Dart 2.12 and Flutter 2 introduced feature of sound null safety. However, we can still run our app without sound null safety.

[**Null safety using Assertion, if-null operator, late and required keywords**](https://codewithandrea.com/videos/dart-null-safety-ultimate-guide-non-nullable-types/#:~:text=Use%20the%20late%20keyword%20to,rather%20than%20when%20it's%20created.&text=By%20declaring%20a%20non%2Dnullable,with%20some%20compile%2Dtime%20guarantees.)

**Hot Reload, Stateful and Stateless Widgets:**

[**Flutter tutorial for beginner**](https://www.youtube.com/playlist?list=PL4cUxeGkcC9jLYyp2Aoh6hcWuxFDX6PBJ): Basic Flutter Overview Videos 1-7

For Running an application with unsound null safety.

In the terminal type the following command,

**flutter run --no-sound-null-safety**

By the end of this week, try to get familiar with your IDE, Github and have a basic programming knowledge in Dart. Next Week onwards we’ll start working with widgets and using them to make some basic application and UI frameworks with flutter.

**Assignment:**

Deadline: 4th July EOD

<https://forms.gle/BCdj57X3Y2kJk2ce9>