# Flutter Assignment 2

Question 1 - What is the execution process of flutter code?

Flutter Uses DART as Language to build cross platform
applications.There are two parts in Flutter. Flutter Framework (Providing
Widgets and Libraries) and Flutter SDK (Collection of Tools to Develop
app) . These apps are converted to native code once compiled . While talking about compilation,
there are two kinds of operation/compilation
Static Compilation: Statically compiled programs are all translated into machine code before
execution. Ex: AOT(Ahead of Time) - C/C++
Dynamic Interpretation: is executed by one-to-one translation. Ex: JIT(Just in Time) -
Javascript/Python.
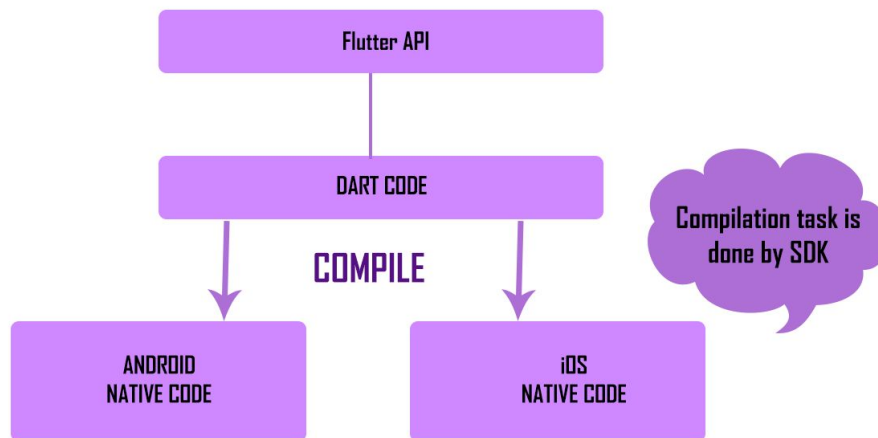
The above diagram shows how flutter code is compiled

Starting again , Flutter code runs on a **High Performance Graphics Rendering Engine** called
SKIA which is developed in C,C++ . Just as a game running on a game engine . This is its own
engine to render and show widgets on screen . **DART enables compilation of 32/64 bit ARM
code for ios/android .**

Question 2 - Can we convert a native app to flutter? If yes, then how

Yes , we can convert or **not actually convert** but use an incremental approach with flutter.For example our application is at POINT A and after that we thought to move to Flutter then we can make callers from that application which will then be used in Flutter and then we can use **INTENTS or Segues** in Android and IOS to change to the Specific Activity which is completely written in flutter .Flutter uses a flexible system that allows us to call platform-specific APIs whether available in Kotlin or Java code on Android, or in Swift or Objective-C code on iOS.We need to build proper communication channels to call the native apis developed previously.Currently, Flutter offers two usable types of channels outside of basic binary: Message Channel, and Method Channel. The Message Channel is very convenient to pass data between Flutter and the native code, while the Method Channel is useful for calling functions.

Question 3 - What are the limitations of flutter as compared to native apps?

- No internal API Access or Root Permissions
- Being a cross platform technology it converts complete code base to native and then its rendered on top of application layer
- Not Great for Huge scale applications
- No Proper release Pipeline Implementation
- Api / Code Push Level Updates (OTA / On Air)
- Less Libraries
- Device level Implementation is hard to access
- Still some parts in Beta