# Theory Exercise

## ANS - 1 :

Flutter has many advantages:

- **Single Codebase**: You write one code that works on both **Android and iOS**.
- **Faster Development**: With **Hot Reload**, you can see changes instantly without restarting the app.
- **Beautiful UI**: It comes with **built-in widgets** that help make apps look good and work smoothly.
- **High Performance**: Flutter apps run fast because they are **compiled into native code**.
- **Open Source**: It's free and has a large community for support.

## ANS - 2 :

- **What is Dart?**
  Dart is the programming language used to write Flutter apps.

- **Why is Dart good for mobile apps?**

    - It's **fast**, which makes apps smooth.
    - Supports **Hot Reload**, which helps in quick testing.
    - Dart is **easy to learn** if you know other languages like Java or JavaScript.
    - It works well with Flutter's **widget-based design**.

## ANS - 3 :

Here are the steps :

1. **Download Flutter SDK** from https://flutter.dev.
2. **Extract the ZIP file** and place it in a folder (like `C:\flutter`).
3. **Set the environment variable** for Flutter in your system's PATH.
4. **Install Android Studio** (or VS Code) as your code editor.
5. In Android Studio, install the **Flutter and Dart plugins**.
6. Run `flutter doctor` in the terminal to check if everything is set up.

## ANS - 4 :

**Basic Flutter App Structure**

- **main.dart**:
  This is the **starting file** of your app. It runs first.

**main() function**:
It's the **entry point** of the app. It calls `runApp()` to start the app.

```
void main() {
  runApp(MyApp());
}
```

- **Widget Tree**:
  The app is built using **widgets** (like building blocks). These widgets are arranged in a tree-like structure:
    - Example: `MaterialApp` > `Scaffold` > `AppBar`, `Body`, etc.