

- Read the following articles and summarize the key points:

- **Dart Programming – Classes**

1. **Class**: A blueprint for creating objects, containing attributes and methods.
2. **Object**: An instance of a class, created using the new keyword (optional in Dart).
3. **Constructors**: Special methods used to initialize objects, which can be default, parameterized, or named.
4. **Inheritance**: Allows a class to inherit properties and methods from another class using the extends keyword.
5. **Method Overriding**: A subclass can redefine a parent class's methods using the @override annotation.
6. **Interfaces**: Used to enforce specific methods in a class for consistent implementation.
7. Dart provides robust tools for building organized, reusable, and maintainable code through classes.

- **OOP in Flutter**

1. **Understanding OOP**: Object-Oriented Programming involves creating objects with attributes (data) and methods (behavior) to organize code flexibly and reusable.
2. **Importance of OOP** in Flutter: OOP simplifies building complex apps using reusable components, making the code more structured and maintainable.

3. **Four Principles of OOP**: Abstraction, Encapsulation, Inheritance, and Polymorphism are key to designing OOP-based code.

4. **Abstraction in Flutter**: Focuses on hiding complex details and highlighting essential features using Abstract Classes and Interfaces.

5. **Encapsulation**: Hides object data using private properties and controls access through methods.

6. **Inheritance**: Allows reusing code by inheriting classes, reducing redundancy and enhancing efficiency.

7. **Polymorphism**: Enables implementing the same function in different ways, increasing flexibility when working with objects.

8. **Widgets as Objects**: In Flutter, widgets are objects, showcasing the importance of OOP in designing user interfaces.

9. **State Management**: Relies on OOP principles to organize and handle dynamic data in applications.

10. **Practical Application**: The article provides practical examples of using OOP in Flutter, like creating custom classes and managing inheritance and encapsulation for better code structure.