Inheritance

In this lesson, you will be introduced to Inheritance, a powerful concept in Object-Oriented Programming.

We'll cover the following

Introduction

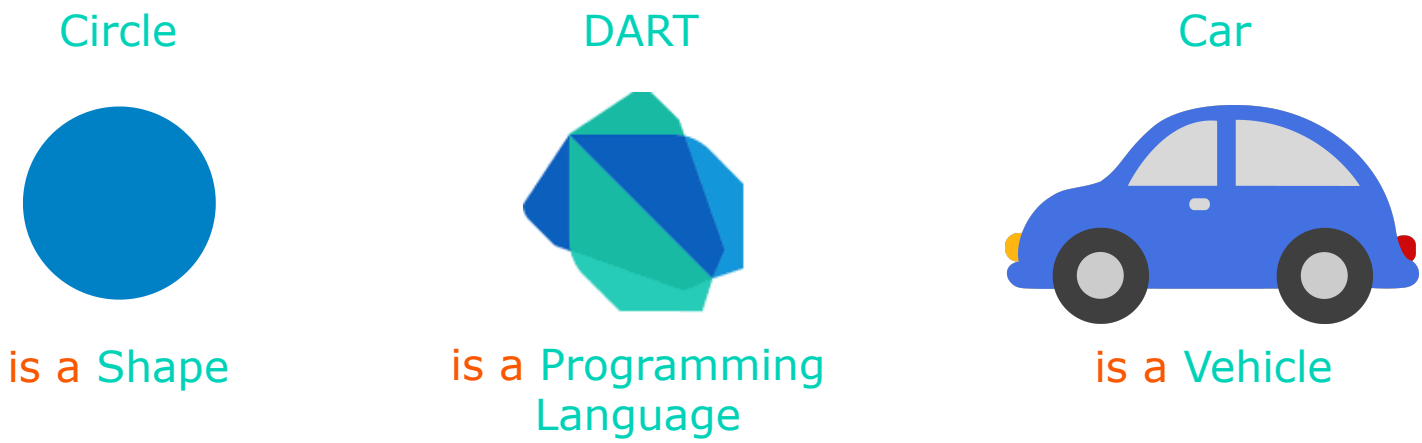
Now that you have been familiarized with objects and classes, let's talk about **inheritance**, one of the core concepts of object-oriented programming.

Inheritance is a concept through which you can create a new class from already existing class. The new class *inherits* the properties (instance variables) and methods of the existing class. The class that inherits the class members is known as the **subclass**, while the class that is being inherited from is known as the **superclass**.

> Every class is a subclass of the superclass `Object` which is at the very top of the class hierarchy and has no superclass of its own.

The *IS A* Relationship

The next question that might be coming to your mind is when do we use inheritance? Well, the answer is that wherever we come across an *IS A* relationship between objects, we can use inheritance.



In the above illustration, we can see the objects have an *IS A* relationship between them.

- Circle is a shape
- DART is a programming language
- Car is a vehicle

The class before *is a* is the subclass and the class after *is a* is the superclass.

Superclass	Subclass
Shape	Circle
Programming Language	DART
Vehicle	Car

Now that we know what inheritance is, let's look at an example in the next lesson.