Assignment # 4: Types of Constructors in Dart

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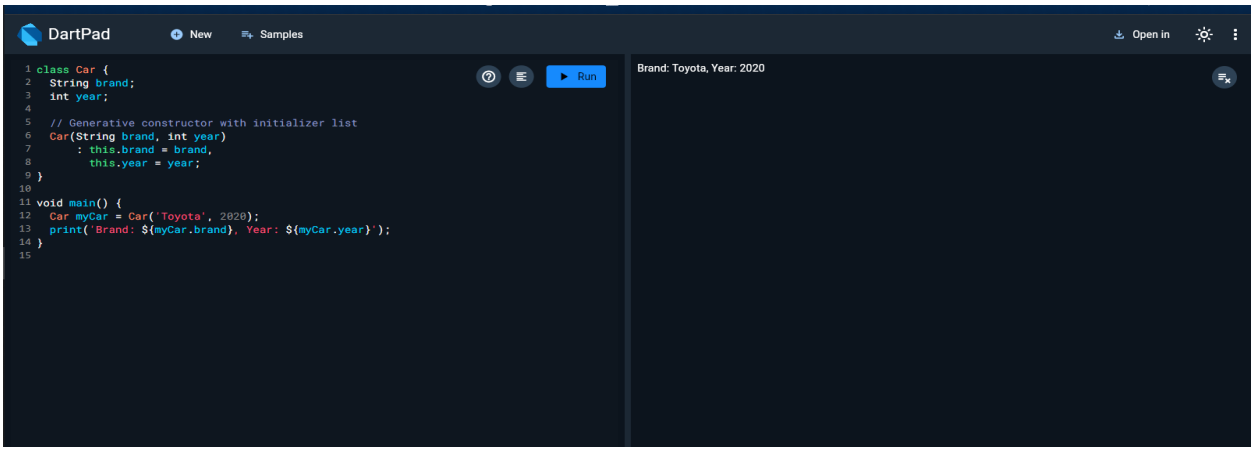
1. Generative Constructors

A generative constructor is the most common type of constructor in Dart. It’s used to create an instance of a class. If you don’t provide any constructors in a class, Dart creates a default generative constructor.

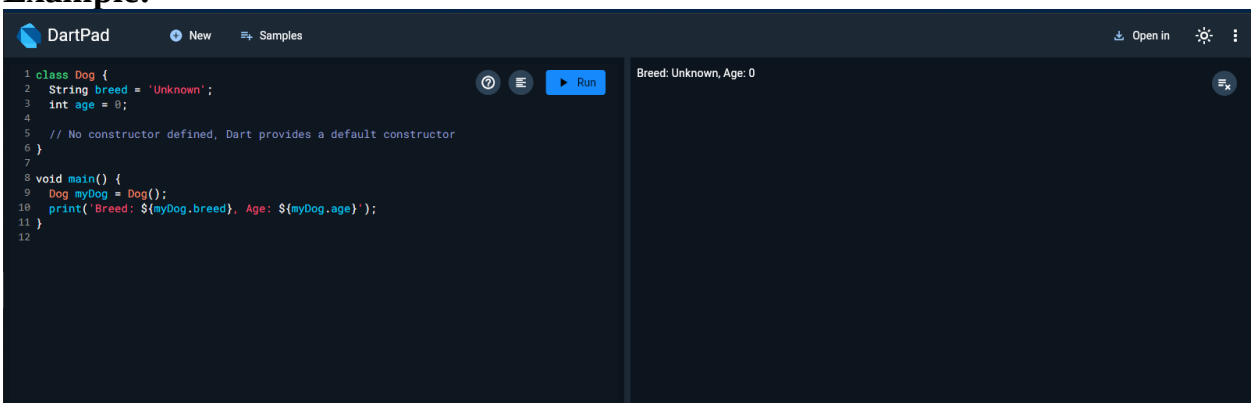
Example:



2. Default Constructors

A default constructor is a type of generative constructor that Dart provides automatically if you don't define any constructors in your class. It has no parameters and simply initializes the object.

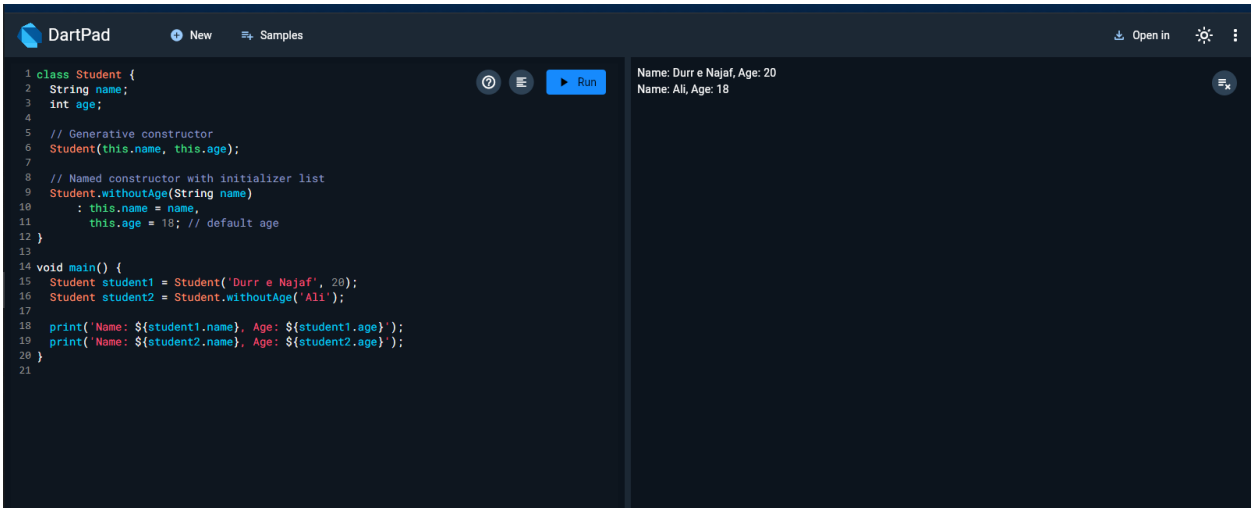
Example:



3. Named Constructors

Named constructors allow you to create multiple constructors with different names in a class. This is useful when you want to create objects in different ways.

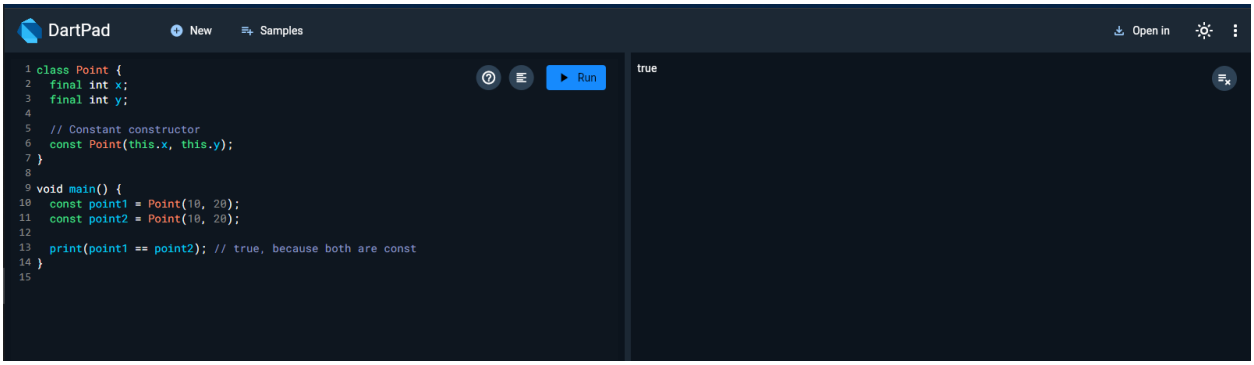
Example:



4. Constant Constructors

Constant constructors are used when you want to create immutable objects (objects that can't be changed after creation). These objects must be marked as `const`.

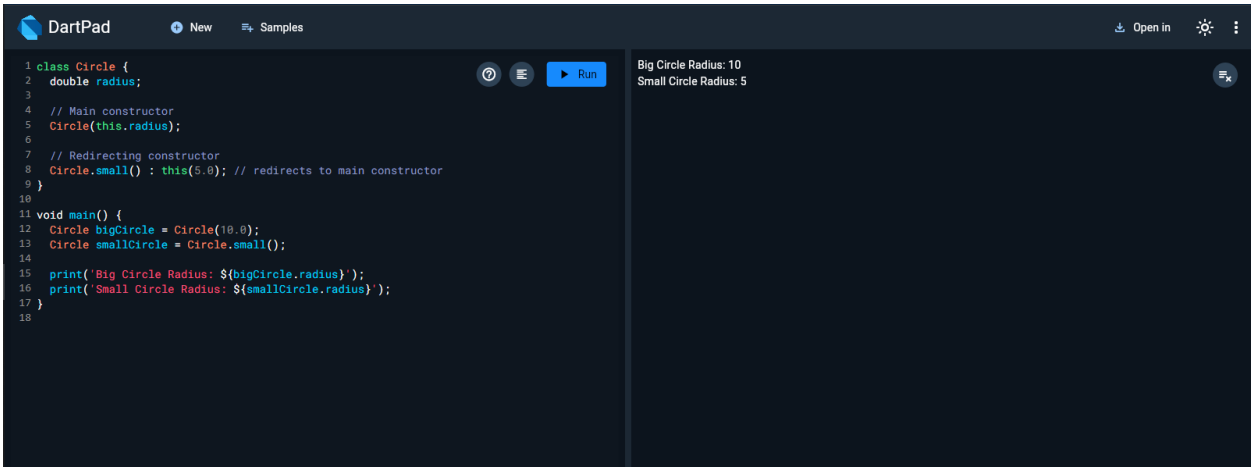
Example:



5. Redirecting Constructors

A redirecting constructor is used when you want one constructor to call another constructor in the same class. This helps to avoid code duplication.

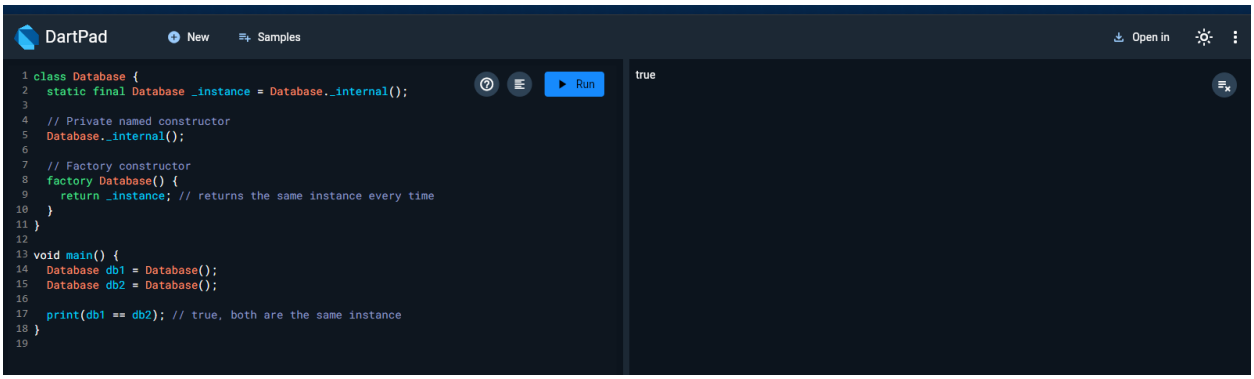
Example:



6. Factory Constructors

Factory constructors are used to return instances of a class. They can be used to control the object creation process, for example, by returning a cached object instead of creating a new one every time.

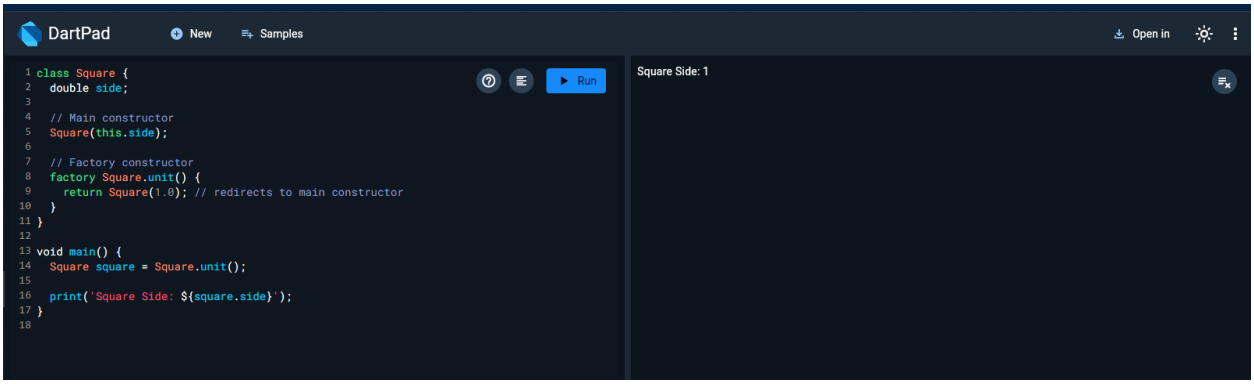
Example:



7. Redirecting Factory Constructors

A redirecting factory constructor is a factory constructor that redirects to another constructor, either in the same class or in a different class.

Example:



8. Constructor Tear-offs

Constructor tear-offs allow you to pass a constructor as a function. This is useful when you want to create instances of a class dynamically or when you want to pass a constructor to a function.

Example: