

Different types of **constructors** in Dart

Named Constructor

Named constructors are generally used to implement **a default behaviour** the user expects from your class.

```
1  class User {
2      final String name;
3      final String gender;
4
5      /*Named Constructor
6      User.male({required this.name}) : this.gender = 'male';
7      User.female({required this.name}) : this.gender = 'female';
8  }
9
10 void main() {
11     User uvais=User.male(name:'Uvais');
12     print(uvais.name); //Uvais
13     print(uvais.gender); //male
14 }
```

Redirecting Constructor

A constructor that does almost the same thing already implemented by another one. It may be the case to use redirecting constructors in order to **avoid code duplication**.

```
1  class User {
2      final String name;
3      final String gender;
4      /*Default Constructor
5      User({required this.name,required this.gender});
6      /*Named Constructor
7      User.male({required this.name}) : this.gender = 'male';
8      /*Redirecting Constructor
9      User.uvais() : this(name: 'Uvais', gender: 'male');
10     User.uvaisMohammad() : this.male(name: 'Uvais Mohammad');
11 }
12
13 void main() {
14     User uvais = User.uvais();
15     User uvaisMohammad = User.uvaisMohammad();
16     print(uvais.name); //Uvais
17     print(uvaisMohammad.name); //Uvais Mohammad
18 }
```

Factory Constructor

The **factory** keyword returns an instance of the given class that's not necessarily a new one. It can be useful when:

1. You want to return **an instance of a subclass** instead of the class itself.
2. You want to implement **a singleton**.
3. You want to return **an instance from a cache**.

```
1 class User {
2   final String name;
3   final String gender;
4   /*Named Constructor
5   User.male({required this.name}) : this.gender = 'male';
6   /*Factory Constructor
7   factory User.programmer(String language) ⇒ User.male(name: 'Programmer in $language');
8 }
9
0 void main() {
1   User uvais=User.programmer('Dart');
2   print(uvais.name);//Programmer in Dart
3 }
```