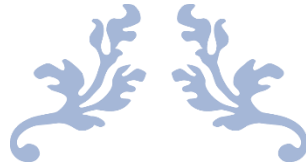




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LAB 04



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Course : Mobile App development

Section: SE 5-2

Presented to :

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Topic : Types of constructors in dart :

Constructor Type	Description	Example Usage
Default Constructor	Initializes fields with default values	<code>var s1 = Student();</code>
Parameterized	Initializes fields with provided values	<code>var s2 = Student.parameterized("Ali", 22);</code>
Named	Uses a named function to initialize fields	<code>var s3 = Student.named(studentName: "Waqar", studentAge: 25);</code>
Redirecting	Calls another constructor for initialization	<code>var s4 = Student.young("Hassan");</code>
Constant	Creates immutable objects with final fields	<code>const s5 = Student.constant("Bilal", 30);</code>

Implementation :

```
main.dart x
1  class Student {
2      final String name;
3      final int age;
4
5      // 1. Default constructor
6      Student()
7          : name = "Unknown",
8          age = 0;
9
10     // 2. Parameterized constructor
11     Student.parameterized(this.name, this.age);
12
13     // 3. Named constructor
14     Student.named({required String studentName, required int studentAge})
15         : name = studentName,
16         age = studentAge;
```



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```
18 // 4. Redirecting constructor
19 Student.young(String studentName) : this.parameterized(studentName, 18);
20
21 // 5. Constant constructor (for immutable objects)
22 const Student.constant(this.name, this.age);
23
24 void display() {
25     print("Name: $name, Age: $age");
26 }
27 }
28
29 void main() {
30     // Using default constructor
31     var s1 = Student();
32     print("Default Constructor:");
33     s1.display();
34
35     s1 = Student.parameterized("Ali", 22);
36     print("\n After updating S1:");
37     s1.display();
38     // Using parameterized constructor
39     var s2 = Student.parameterized("Ali", 22);
40     print("\nParameterized Constructor:");
41     s2.display();
42
43     // Using named constructor
44     var s3 = Student.named(studentName: "Wagdar", studentAge: 25);
45     print("\nNamed Constructor:");
46     s3.display();
47
48     // Using redirecting constructor
49     var s4 = Student.young("Hassan");
50     print("\nRedirecting Constructor:");
51     s4.display();
52
53
54     // Using constant constructor
55     const s5 = Student.constant("Bilal", 30);
56     print("\nConstant Constructor:");
57     s5.display();
58
59 }
```



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Output:-

```
main.dart x
C:/flutter/bin/cache/dart-sdk/bin/dart.exe --enable-asserts --no-serve-devtools C:\Users\shehrV
Default Constructor:
Name: Unknown, Age: 0

After updating S1:
Name: Ali, Age: 22

Parameterized Constructor:
Name: Ali, Age: 22

Named Constructor:
Name: Waqar, Age: 25

Redirecting Constructor:
Name: Hassan, Age: 18

Constant Constructor:
Name: Bilal, Age: 30

Process finished with exit code 0
```
