



**RIPHAH**  
INTERNATIONAL UNIVERSITY

# **MOBILE APPLICATION DEVELOPMENT**

## **LAB#03**

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SE 5-2

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## Lab Task

### Number, String

#### INPUT

```
void main() {  
  int age = 21;  
  String fname = 'Anees';  
  String sname='Ahmed';  
  print('My name is $fname $sname and I am $age years old.');
```

```
  String multilineAddress = '''  
  Street # 17 House # 1870 I-14/4  
  City, Islamabad  
  ''';  
  print('My Address is $multilineAddress');  
}
```

#### OUTPUT

```
C:/src/flutter/bin/cache/dart-sdk/bin/dart.exe --enable-asserts --no-serve-devtools E:\app\lib\main.dart  
My name is Anees Ahmed and I am 21 years old.  
My Address is   Street # 17 House # 1870 I-14/4  
  City, Islamabad  
  
Process finished with exit code 0
```

### Lists

#### INPUT

```

1  >> void main() {
2      int age = 21;
3      String fname = 'Anees';
4      String sname = 'Ahmed';
5      print('My name is $fname $sname and I am $age years old.');
```

```

6
7      String multilineAddress = '''
8      Street # 17 House # 1870 I-14/4
9      City, Islamabad
10     ''';
11     print('My Address is $multilineAddress');
```

```

12
13     List listOfCities = ['Chakwal', 'Islamabad', 'Lahore'];
14     listOfCities.forEach((city) {
15         print('Name of City: $city');
```

```

16     });
17 }
```

## OUTPUT

```

C:/src/flutter/bin/cache/dart-sdk/bin/dart.exe --enable-asserts
My name is Anees Ahmed and I am 21 years old.
My Address is   Street # 17 House # 1870 I-14/4
                City, Islamabad


Name of City: Chakwal
Name of City: Islamabad
Name of City: Lahore

Process finished with exit code 0
|
```

## Maps

## INPUT

```

1  >> void main() {
2      
3      Map mapOfCities = {'id1': 'Chakwal', 'id2': 'Islamabad', 'id3': 'Lahore'};|
4      mapOfCities['id3'] = 'Karachi';
5      print('Get City with id3: ${mapOfCities['id3']}');
6  }
7

```

## OUTPUT

```

C:/src/flutter/bin/cache/dart-sdk/bin/dart.exe --en
Get City with id3: Karachi

Process finished with exit code 0

```

## Runes

## INPUT

```

>> void main() {

    Runes SmileyEmoji = Runes('\u{1f607}');
    print(SmileyEmoji);

    print(String.fromCharCode(SmileyEmoji));
}
|

```

## OUTPUT

```
C:/src/flutter/bin/cache/dart-sdk/bin/dart.exe --enable-asserts
(128519)
😊

Process finished with exit code 0
```

## Arithmetic Operators

### INPUT

```
void main() {
    int a = 10;
    int b = 2;

    print('a = $a, b = $b');
    print('Addition: a + b = ${a + b}');
    print('Subtraction: a - b = ${a - b}');
    print('Multiplication: a * b = ${a * b}');
    print('Division : a / b = ${a / b}');
}
```

### OUTPUT

```
C:/src/flutter/bin/cache/dart-sdk/bin/dart.exe --enable-asserts
a = 10, b = 2
Addition: a + b = 12
Subtraction: a - b = 8
Multiplication: a * b = 20
Division : a / b = 5.0

Process finished with exit code 0
```

## Relational Operators

### INPUT

```

1  >> void main() {
2      int a = 10;
3      int b = 2;
4
5      print('a == b : ${a == b}');
6      print('a > b : ${a > b}');
7      print('a < b : ${a < b}');
8  }
9

```

## OUTPUT

```

C:/src/flutter/bin/cache/dart-sdk/bin/dart.exe --enable-asserts --
a == b : false
a > b : true
a < b : false

Process finished with exit code 0

```

## Test Operators

### INPUT

```

1  >> void main() {
2      int a = 10;
3      double b = 3.5;
4      String name = "Anees";
5
6      print('a is int: ${a is int}');
7      print('b is int: ${b is int}');
8      print('name is String: ${name is String}');
9      print('a is! double: ${a is! double}');
10 }
11

```

## OUTPUT

```
C:/src/flutter/bin/cache/dart-sdk/bin/dart.exe --
a is int: true
b is int: false
name is String: true
a is! double: true

Process finished with exit code 0
```

## Assignment Operators

### INPUT

```
>> void main() {
    int a = 10;
    int b = 5;

    print('Initial values: a = $a, b = $b');

    a += b;
    print('After a += b then a = $a');

    a -= b;
    print('After a -= b then a = $a');

    a *= b;
    print('After a *= b then a = $a');

    double c = 20;
    c /= b;
    print('After c /= b then c = $c');
}
```

### OUTPUT



```
C:/src/flutter/bin/cache/dart-sdk/bin/dart.exe --end
Initial values: a = 10, b = 5
After a += b then a = 15
After a -= b then a = 10
After a *= b then a = 50
After c /= b then c = 4.0

Process finished with exit code 0
```

## Logical Operators

### INPUT

```
> void main() {
    bool x = true;
    bool y = false;

    print(x && y);
    print(x || y);
    print(!x);
    print(!y);
}
```

### OUTPUT

```
C:/src/flutter/bin/cache/dart-sdk/bin/dart.exe
false
true
false
true

Process finished with exit code 0
```

## Conditional Operators

### INPUT

```

>> void main() {
    int a = 10;
    int b = 20;

    String result = (a > b) ? "a is greater" : "b is greater";
    print(result);
}

```

**OUTPUT**

## Cascade Operators

**INPUT**

```

class Person {
    String name = "";
    int age = 0;

    void show() {
        print("Name: $name\nAge: $age");
    }
}

void main() {
    var person = Person()
    ..name = "Anees"
    ..age = 21
    ..show();
}

```

**OUTPUT**

```
C:/src/flutter/bin/cache/dart-sdk/bin
Name: Anees
Age: 21

Process finished with exit code 0
```

## If else-else if

### INPUT

```
void main() {
  int marks = 75;

  if (marks >= 90) {
    print("Grade: A");
  } else if (marks >= 75) {
    print("Grade: B");
  } else if (marks >= 50) {
    print("Grade: C");
  } else {
    print("Fail");
  }
}
```

### OUTPUT

```
C:/src/flutter/bin/cache/dart-
Grade: B

Process finished with exit cod
|
```

## For Loop

### INPUT

```
void main() {
  List listOfCities = ['Chakwal', 'Islamabad', 'Lahore'];
  for (int i = 0; i < listOfCities.length; i++) {
    print('listOfCities: ${listOfCities[i]}');
  }
}
```

## OUTPUT

```
C:/src/flutter/bin/cache/dart-sdk/bin/dart.
listOfCities: Chakwal
listOfCities: Islamabad
listOfCities: Lahore

Process finished with exit code 0
```

## While Loop

### INPUT

```
void main() {
  List listOfCities = ['Chakwal', 'Islamabad', 'Lahore'];
  int i = 0;

  while (i < listOfCities.length) {
    print('listOfCities: ${listOfCities[i]}');
    i++;
  }
}
```

## OUTPUT

```
C:/src/flutter/bin/cache/dart-sdk/bin/dart.exe --e
listOfCities: Chakwal
listOfCities: Islamabad
listOfCities: Lahore

Process finished with exit code 0
```

## Do-While

### INPUT

```
void main() {
  List listOfCities = ['Chakwal', 'Islamabad', 'Lahore'];
  int i = 0;

  do {
    print('listOfCities: ${listOfCities[i]}');
    i++;
  } while (i < 3);
}
```

### OUTPUT

```
C:/src/flutter/bin/cache/dart-sdk/bin/dart.
listOfCities: Chakwal
listOfCities: Islamabad
listOfCities: Lahore

Process finished with exit code 0
```

## Switch Case

### INPUT

```
void main() {  
    int marks = 85;  
  
    switch (marks) {  
        case 100:  
            print("Perfect Score! Grade: A+");  
            break;  
        case 90:  
            print("Excellent! Grade: A");  
            break;  
        case 80:  
            print("Very Good! Grade: B");  
            break;  
        case 70:  
            print("Good! Grade: C");  
            break;  
        case 60:  
            print("Pass. Grade: D");  
            break;  
        default:  
            print("Fail or invalid marks.");  
    }  
}
```

## OUTPUT

```
C:/src/flutter/bin/cache/dart-sdk/bin/dart.exe --  
Fail or invalid marks.  
  
Process finished with exit code 0
```

## Functions

## INPUT

```

void main() {
  void orderEspresso(int howManyCups) {
    | print('Cups #: $howManyCups');
  }
  orderEspresso(3);|
}

```

## OUTPUT

```

C:/src/flutter/bin/cache/dart-sdk/bin/dart.exe --e
Cups #: 3

Process finished with exit code 0

```

## Classes

## INPUT

```

class Person {
  String name;
  int age;
  Person(this.name, this.age);

  void showInfo() {
    | print("Name: $name, Age: $age");
  }
}

void main() {
  var p1 = Person("Anees", 21);|
  p1.showInfo();
}

```

## OUTPUT

```
C:/src/flutter/bin/cache/dart-sdk/bin/dart.exe
Name: Anees, Age: 21

Process finished with exit code 0
```

## Classes & Inheritance

### INPUT

```
class BaristaNamedConstructor {
  String? name;

  BaristaNamedConstructor({this.name});
}
class BaristaInheritance extends BaristaNamedConstructor {
  int? yearsOnTheJob;

  BaristaInheritance({this.yearsOnTheJob}) : super();
}
void main() {
  BaristaInheritance baristaInheritance = BaristaInheritance(yearsOnTheJob: 7);
  baristaInheritance.name = 'Anees';

  print('baristaInheritance.yearsOnTheJob: ${baristaInheritance.yearsOnTheJob}');
  print('baristaInheritance.name: ${baristaInheritance.name}');
}
```

### OUTPUT

```
C:/src/flutter/bin/cache/dart-sdk/bin/dart.exe --enabl
baristaInheritance.yearsOnTheJob: 7
baristaInheritance.name: Anees

Process finished with exit code 0
```