

Mobile Application Development with Flutter

Lecture 7: Conditions & Loops

Conditions in Dart

- When we write a program we need to be able to tell the computer what to do in different situations
- With conditions, we can control the flow of the dart program
- For Example
 - When user press ‘subtract’ button, we want to perform subtraction
 - By pressing ‘add’ button, we want to add numbers

Types of Condition

- If Condition
- If-Else Condition
- If-Else-If Condition
- Switch case
- Ternary Operator

Prepared by Ehtisham Rasheed

1 if Statement

```
int age = 20;  
  
if (age >= 18) {  
    print("Adult");  
}
```

2 if-else Statement

```
int marks = 40;  
  
if (marks >= 50) {  
    print("Pass");  
} else {  
    print("Fail");  
}
```

3 if-else-if Ladder

```
int marks = 75;

if (marks >= 80) {
    print("Grade A");
} else if (marks >= 70) {
    print("Grade B");
} else if (marks >= 60) {
    print("Grade C");
} else {
    print("Fail");
}
```

4 Nested if

```
int age = 20;  
bool hasID = true;  
  
if (age >= 18) {  
    if (hasID) {  
        print("Entry allowed");  
    } else {  
        print("ID required");  
    }  
}
```

5 Ternary Operator

```
int age = 17;  
String result = age >= 18 ? "Adult" : "Minor";  
print(result);
```

6 switch Case

```
int day = 3;

switch (day) {
    case 1:
        print("Monday");
        break;
    case 2:
        print("Tuesday");
        break;
    case 3:
        print("Wednesday");
        break;
    default:
        print("Invalid");
}
```

Loops in Dart

- In Programming, loops are used to repeat a block of code until certain conditions are not completed
- For, e.g., if you want to print your name 100 times, then rather than typing `print("your name");` 100 times, you can use a loop
- There are different types of loop in Dart. They are:
 - For Loop
 - For In
 - For Each Loop
 - While Loop
 - Do While Loop

1 for Loop

```
for (int i = 1; i <= 5; i++) {  
    print(i);  
}
```

```
List<String> names = ["Ali", "Sara", "Ahmed"];
```

```
for (int i = 0; i < names.length; i++) {  
    print(names[i]);  
}
```

Pras...

2 for-in Loop

```
for (var name in names) {  
    print(name);  
}
```

3 forEach Loop

```
names.forEach((name) {  
    print(name);  
});
```

```
names.forEach((name) => print(name));
```

4 while Loop

```
int i = 1;  
  
while (i <= 5) {  
    print(i);  
    i++;  
}
```

5 do-while Loop

```
int i = 1;  
  
do {  
    print(i);  
    i++;  
} while (i <= 5);
```

Prepared by Rasheed

Rasheed

6 break Statement

```
for (int i = 1; i <= 5; i++) {  
    if (i == 3) break;  
    print(i);  
}
```

7 continue Statement

```
for (int i = 1; i <= 5; i++) {  
    if (i == 3) continue;  
    print(i);  
}
```