Dart For Loop

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Welcome to Dart For Loop tutorial.

In this tutorial, we will learn how to write a for loop and some Dart example programs to understand the usage of Dart For Loop.

Syntax of Dart For Loop

Following is the syntax of For Loop in Dart programming language.

```
for (initialization; boolean_expression; update) {
     //statement(s)

 }
```

`initialization` section can contain one or more variables being initialized.

Based on the output of `boolean_expression` during each iteration, it is decided whether to execute the statements or not in the for loop. If `boolean_expression` evaluates to `true` , then the statements inside the for loop are executed. If `boolean_expression` evaluates to `false` , then the statements inside the for loop are not executed.

`update` section can contain update to the variables like increment, decrement or any kind of change in their values.

Working of For Loop

1. When the program control comes to a for loop statement, it executes the initialization block.
2. And then evaluates the `boolean_expression` .
    i. If `boolean_expression` evaluates to `true` ,
        i. then the statements inside the for loop are executed.
        ii. And then the update section is executed.
        iii. Now go to **step 2**.
    ii. If `boolean_expression` evaluates to `false` ,
    iii. Go out of the loop.

Dart For Loop to calculate Factorial of a number

In the following example, we will use Dart For Loop to calculate the factorial of a given number.

Dart program

```
void main(){
    var n = 6;
    var factorial = 1;

    //for loop to calculate factorial
    for(var i=2; i<=n; i++) {
        factorial = factorial*i;
    }

    print('Factorial of ${n} is ${factorial}');
}
```

Output

```
Factorial of 6 is 720
```

Dart Nested For Loop

You can write a For Loop inside another For Loop in Dart. This process is called nesting. Hence Nested For Loop.

Dart For Loop to print * triangle

In the following example, we will use Dart For Loop to *s in the shape of right angle triangle.

Dart program

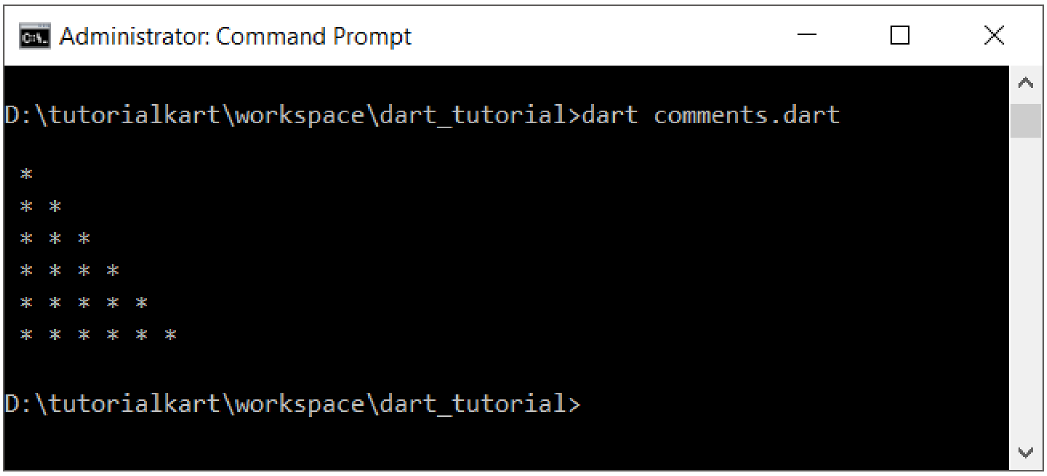
```
import 'dart:io';

void main(){
    var n = 6;

    print('');

    for(var i=1; i<=n; i++) {
        for(var j=0; j<i; j++) {
            stdout.write(' *');
        }
        print('');
    }
}
```

Output



```
D:\tutorialkart\workspace\dart_tutorial>dart comments.dart

 *
 * *
 * * *
 * * * *
 * * * * *
 * * * * * *

D:\tutorialkart\workspace\dart_tutorial>
```

Note: Here we used stdout.write() to write to console without new line at the end, unlike print().

Conclusion

In this Dart Tutorial, we learned the syntax and how to use for loop with the help of example programs.

Dart Exception Handling

- Dart - Try Catch

Dart List Operations

- Dart - List
- Dart List - Iterate
- Dart - Check if List is Empty
- Dart - Check if List Contains Element
- Dart Reverse List
- Dart Join Lists
- Dart - Check Equality of Two Lists