

Assignment 2

M.Hassan Zaheer

(1) What are the various types of operators in dart? Explain with Examples.

Ans:

The following are the various types of operators in Dart:

1. Arithmetic Operators

These class of operators contain those operators which are used to perform arithmetic operation on the operands. Eg: (+,-,-expr,*,~/,%,%)

2. Relational Operators

These class of operators contain those operators which are used to perform relational operation on the operands. It goes like this: (>,<,>=,<=,==,!=)

3. Type Test Operators

These class of operators contain those operators which are used to perform comparison on the operands. It goes like this: (is,is!)

4. Bitwise Operators

These class of operators contain those operators which are used to perform bitwise operation on the operands. It goes like this: (&|,^,~,<<,>>)

5. Assignment Operators

These class of operators contain those operators which are used to assign value to the operands. It goes like this: (=,??=)

6. Logical Operators

These class of operators contain those operators which are used to logically combine two or more conditions of the operands. It goes like this: (&&||,!)

7. Conditional Operator

These class of operators contain those operators which are used to perform comparison on the operands. It goes like this: (condition ? expersion1 : expersion2, expersion1 ?? expersion2)

8. Cascade Notation Operator

These class of operators allows you to perform a sequence of operation on the same element. It allows you to perform multiple methods on the same object. It goes like this: (..)

Assignment 2

- (2) What will be the output in variables a, b & result after execution of the following script:

a. `var a = 2, b = 1;`

a=2,b=1

b. `var result = --a - --b + ++b + b--;`

result=3

Explain the output at each stage:

c. --a;

a=1 (pre-Increment)

d. $--a - --b;$

$a=1 - b=0 \Rightarrow 1$ (pre-Increment with subtraction)

e. $--a - --b + ++b;$

$a=1 - b=0 \Rightarrow 1 + b=1 \Rightarrow 2$ (pre-Increment with addition)

f. $--a - --b + ++b + b--;$

a=1 - b=0 => 1 + b=1 => 2 + b=1 => 3 (post-increment with

- (3) Cost of one movie ticket is 600 PKR. Write a script to store ticket price in a variable & calculate the cost of buying 5 tickets to a movie.

Ans:

In dart file.

- (4) How to get difference of lists in Dart?

Problem: Consider you have two lists [1,2,3,4,5,6,7] and [3,5,6,7,9,10]. How would you get the difference as output? E.g. [1, 2, 4].

Ans:

In dart file.

- (5) What is a difference between these operators “?? And?”

Ans:

Operator Symbol	Operator Name	Operator Description
condition ? expersion1 : expersion2	Conditional Operator	It is a simple version of if-else statement. If the condition is true than expersion1 is executed else expersion2 is executed.
expersion1 ?? expersion2	Conditional Operator	If expersion1 is non-null returns its value else returns expersion2 value.

(6) What are the data types supported in Dart? Explain with Examples.

Ans:

Numbers (int, double,num)
Strings (String)
Booleans (bool)
Lists (List, also known as arrays)
Sets (Set)
Maps (Map)

(7) Solve:

- a. First declare an array and assign the numbers of the table of 7.
- b. Second declare another array and assign the numbers 1-10
- c. Now write down the table of 7 using map.fromiterables method.

Ans:

In dart file.

(8) Write a program that

- a. Store correct password in a JS variable.
- b. Asks user to enter his/her password
- c. Validate the two passwords:
- d. Check if user has entered password. If not, then give message “Please enter your password”
- e. Check if both passwords are same. If they are same, show message “Correct! The password you entered matches the original password”. Show “Incorrect password” otherwise.

Ans:

In Dart file.

(9) Write a program to store 3 student names in an array. Take another array to store score of these three students. Assume that total marks are 500 for each student, display the scores & percentages of students.

Ans:

In Dart file.

(10) Declare 5 legal & 5 illegal variable names.

Ans:

In Dart file.

Assignment 2

- (11) Write a program to replace the “Hyder” to “Islam” in the word “Hyderabad” and display the result.

Ans:

In Dart file.

- (12) Write a program to generate your K-Electric bill 7. All the amounts should be rounded off to 2 decimal places. Display the following fields:

- a. Customer Name
- b. Current Month
- c. Number of units
- d. Charges per unit
- e. Net Amount Payable (within Due Date)
- f. Late Payment Surcharge
- g. Gross Amount Payable (after Due Date)

Where, Net Amount Payable (within Due Date) = Number of units * Charges per unit

& Gross Amount Payable (after Due Date) = Net Amount + Late Payment Surcharge

Ans:

In Dart file.

OR

- (13) Write a program that shows the message “First fifteen days of the month” if the date is less than 16th of the month else shows “Last days of the month”.

Ans:

In Dart file.

Best of Luck!