**NAME: PAWAN KHIANI**

**ID: KWOWFL3479**

**BATCH: 02**

**COURSE: MOBILE APP DEVELOPMENT USING FLUTTER**

**ASSIGNMENT # 03**

**QUESTION # 01:**

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

**ANSWER:**

Following are the various types of operators in dart

1. Arithmetic
2. Equality and Relational
3. Logical

**ARTHMETIC:**

Operators such as

1. Addition (+) {e.g: print(6+4); = 10}
2. Subtraction (-) {e.g: print(6-4); = 2}
3. Multiplication (\*) {e.g: print(6\*4); = 24}
4. Division (/) {e.g: print(6/4); = 1.5}
5. Division with remainder (%) {e.g: print(6%4); = 2}
6. Division with remainder (~/) {e.g: print(6~/4); = 1}

**EQUALITY & RELATIONAL:**

Operators such as

1. < (Less than) {e.g: 6 < 4 is false}
2. > (Greater than) {e.g: 6 > 4 is true}
3. <= (Less than equal to) {e.g: 6 <= 4 is false}
4. >= (Greater than equal to) { e.g: 6 >= 4 is true}
5. == (Equality) { e.g: 6 == 4 is false }
6. != (Not Equal) { e.g: 6 != 4 is false }

**LOGICAL:**

Operators such as

1. && (AND) {e.g: 6 && 5 are less than 4 is false }
2. || (OR) {e.g: 4 || 6 are multiple of 2 is true}
3. ! (NOT) {e.g: !(7<5) is true}

**QUESTION # 02:**

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.

**ANSWER:**

**QUESTION # 03:**

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].

**ANSWER:**

In dart, difference can be solved by using the following syntax:

List<int> difference = list1.toSet().difference(list2.toSet()).toList();

  print(difference.toString());

**SOURCE CODE:**

void main() {

  var list1 = [1, 2, 3, 4, 5, 6, 7];

  var list2 = [3, 5, 6, 7, 9, 10];

  List<int> difference = list1.toSet().difference(list2.toSet()).toList();

  print(difference.toString());

}

**OUTPUT:**

**PS C:\Users\HP\Desktop\Assignment 3> dart main.dart**

**[1, 2, 4]**

**QUESTION # 04:**

What is a difference between these operators “?? And?”

**ANSWER:**

**QUESTION # 05:**

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

**ANSWER:**

Data types plays a very important role in any Programming Language, and in dart following are the data type that are supported:

**NUMBERS:**

* **int**(normal numbers can be stored only, no decimal allowed. E.g: int a = 14),
* **double**(Only Numbers having decimal can be stored. E.g: double a= 15.5),
* **num**(Both decimal and without decimal number can be stores. E.g: num a = 12/1.5)

**STRINGS: String**(Can stored a single name, or a whole line. E.g: string a = Pawan Khiani, string b = Pawan Khiani is a dart student)

**BOOLEAN: bool (**It gives only two status. **TRUE**/**FALSE)**

**LISTS: list (**It stores and manipulate an elements of a particular given set**)**

**MAPS: Map (**A map is a collection of key/value pairs**)**

**QUESTION # 06:**

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.

**ANSWER:**

List<num> a = [7, 14, 21, 28, 35, 42, 49, 56, 63, 70];

  List<num> b = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10];

  var data = Map.fromIterables(a, b);

  print(data);

**OUTPUT:**

PS C:\Users\HP\Desktop\Assignment 3> Dart run main.dart

**{7: 1, 14: 2, 21: 3, 28: 4, 35: 5, 42: 6, 49: 7, 56: 8, 63: 9, 70: 10}**

**QUESTION # 07:**

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

f. entered matches the original password”. Show “Incorrect password” otherwise.

**ANSWER:**

**QUESTION # 08:**

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.

**ANSWER:**

**QUESTION # 09:**

Declare 5 legal & 5 illegal variable names.

**ANSWER:**

**QUESTION # 10:**

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

**ANSWER:**

**QUESTION # 11:**

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

**ANSWER:**

**QUESTION # 12:**

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”.

**ANSWER:**

**QUESTION # 13:**

Find 5 new methods of List and String.

**ANSWER:**