

JAWAN PAKISTAN

NAME :SYED OBAID ULLAH HASHMI

Roll NO:KWOWFL1165

Assignment 2

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

+ Addition Use to add two operands

Example

```
var a =8;
```

```
var c = 6;
```

```
var d= a+c;
```

```
print (d);
```

– Subtraction Use to subtract two operands

Example

```
var f =28;
```

```
var g = 63;
```

```
var e= f+g;
```

```
print (e);
```

* Multiply Use to multiply two operands

Example

```
var f =28;
```

```
var g = 63;
```

```
var h= f*g;
```

```
print (h);
```

/ Division Use to divide two operands

Example

```
var f =28;
```

```
var g = 63;
```

```
var k= f/g;
```

```
print (k);
```

~/ Division Use two divide two operands but give output in integer

```
var f =28;
```

```
var g = 63;
```

```
var j= f~/g;
```

```
print (j);
```

% Modulus Use to give remainder of two operands

-expr Unary Minus It is Use to reverse the sign of the expression

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

a. var a = 2, b = 1;

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

Explain the output at each stage:

ANS:

c. --a;(pre decrement 2-1)

d. --a - --b; (1-0)=>1

e. --a - --b + ++b; (1-0+1) =>2

var result = --a - --b + ++b + b--; (1-0+1+1) =>3

OUTPUT=3;

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.

CODE:

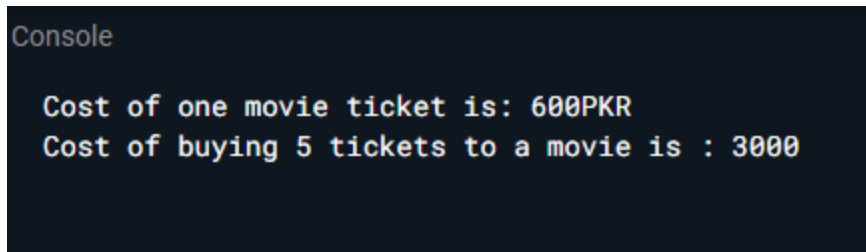
```
var ticket_cost= 600;
```

```
var cost_of_five_tickets=ticket_cost*5;
```

```
print("Cost of one movie ticket is: ${ticket_cost}PKR");
```

```
print("Cost of buying 5 tickets to a movie is : ${cost_of_five_tickets}");
```

OUTPUT:

A screenshot of a dark-themed console window. The title bar at the top says "Console" in a light blue font. Below the title bar, there are two lines of text in a monospaced font. The first line is "Cost of one movie ticket is: 600PKR" and the second line is "Cost of buying 5 tickets to a movie is : 3000".

```
Console  
  
Cost of one movie ticket is: 600PKR  
Cost of buying 5 tickets to a movie is : 3000
```

(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].

CODE:

```
var list1= [1,2,3,4,5,6,7] ;
```

```
var list2= [3,5,6,7,9,10];
```

```
var list3= list1.toSet().difference(list2.toSet()).toList();
```

```
print(list3);
```

OUTPUT:

Console

[1, 2, 4]

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

Ans:

“??” > null-aware operator is ??, which returns the expression on its left unless that expression’s value is null, in which case it evaluates and returns the expression on its right:

“?” >To guard access to a property or method of an object that might be null

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

Ans:

Number

int, double, num > Numbers in Dart are used to represent numeric literals

double units=3.30;

int id = 2;

double temperature = -16.5;

num age = 19;

num temperature = 18.5;

Strings

represent a sequence of characters

```
String name = "obaid";
```

```
String email = "11312312@afasfsfa";
```

Booleans

bool >It represents Boolean values true and false

```
String str = 'Hello ';
```

```
String str1 = 'World';
```

```
bool val = (str==str1);
```

```
print (val);
```

Lists

List > It is an ordered group of objects

```
var list1 =[7,14,21,28,35,42,49,56,63,70];
```

```
var list2 =["7x1","7x2","7x3","7x4","7x5","7x6","7x7","7x8","7x9","7x10"];
```

```
print(list1); print(list2);
```

Maps

Map >It represents a set of values as key-value pairs

```
Map l = new Map();
```

```
l['First'] = 'obaid';
```

```
l['Second'] = 'ullah';
```

```
l['Third'] = 'hashmi';
```

```
print(1);
```

(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.

```
var list1 =[7,14,21,28,35,42,49,56,63,70];
```

```
var list2=["7x1","7x2","7x3","7x4","7x5","7x6","7x7","7x8","7x9","7x10"];
```

```
var table= Map.fromIterables(list2,list1);
```

```
print (table);
```

OUTPUT:

Console

```
{7x1: 7, 7x2: 14, 7x3: 21, 7x4: 28, 7x5: 35, 7x6: 42, 7x7: 49, 7x8: 56, 7x9: 63, 7x10: 70}
```

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

CODE:

```
import 'dart:io';

void main() {
  var JS = "Admin";
  print("Enter your Password?");

  String? p = stdin.readLineSync();

  if (JS == p) {
    "Password is Correct";
  }
}
```

```
} else {  
    "Incorrect Password";  
}  
  
print("$p");  
}
```

(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.

CODE:

```
var name=['obaid','ali','rafay'];  
  
var score=[326,490,398];  
  
print("SCORE:");  
  
var m= Map.fromIterables(name,score);  
print (m);  
  
print("\nPERCENTAGE:");  
  
var per = [(326*100)/500,(412*100)/500,(398*100)/500];  
  
var m1= Map.fromIterables(name,per);  
print (m1);
```

OUTPUT

```
Console  
  
SCORE:  
{obaid: 326, ali: 490, rafay: 398}  
  
PERCENTAGE:  
{obaid: 65.2, ali: 82.4, rafay: 79.6}
```

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

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

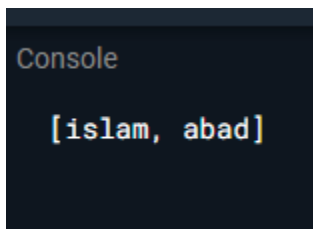
CODE:

```
var list1 = ['Hyder','abad'];
```

```
list1 .replaceRange(0,1,['islam']);
```

```
print (list1);
```

OUTPUT:

A screenshot of a console window with a dark background. The word "Console" is written in a light blue font at the top left. Below it, the output "[islam, abad]" is displayed in a light blue font, indicating the result of the string replacement operation on the list.

(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

CODE:


```
var cname="Obaid";
var currentmonth="September";
double nunits=330;
double cperunit=23;
double netamountpayable= nunits * cperunit ;
double latepaymentsurcharge=500 ;
double grossamountpayable=netamountpayable+latepaymentsurcharge;

print("Customer Name ${cname}");
print("Current Month ${currentmonth}");
print("Number of units ${nunits}");
print("Charges per unit ${cperunit}");
print("Net Amount Payable (within Due Date) ${netamountpayable}");
print("Late Payment Surcharge ${latepaymentsurcharge}");
print("Gross Amount Payable (after Due Date) ${grossamountpayable}");
```

OUTPUT

Console

```
Customer Name Obaid
Current Month September
Number of units 330
Charges per unit 23
Net Amount Payable (within Due Date) 7590
Late Payment Surcharge 500
Gross Amount Payable (after Due Date) 8090
```