**Q1)** : **What are the various types of operators in dart? Explain with Examples.**

1. **Arithmetic Operators:**
   1. Addition
      1. Example: 2+2=4
   2. Subtraction
      1. Example: 3-2=1
   3. Multiplication
      1. Example: 3\*2=6
   4. Division
      1. Example: 3/2=1.5
   5. Divide and return integer
      1. Example: 5~/2=2
   6. Remainder
      1. Example: 5%2=1
   7. Increment
      1. Var Name=4
      2. Name=++Name (now value of Name will be 5)
   8. Decrement
      1. Var Name=4
      2. Name=--Name (now value of Name will be 3)
2. **Equality and Relational Operators**
   1. Greater than >
      1. 3>2 is true
   2. Lesser than <
      1. 3<2 is false
   3. Greater than or equal to >=
      1. 3>=2 is true
   4. Lesser than or equal to <=
      1. 3<=2 is false
   5. Equality ==
      1. 3==2 is false
   6. Not equal !=
      1. 3!=2 is false
3. **Logical Operator**
   1. AND operator &&
      1. (4 > 2 && 9 > 3) is True.
   2. OR operator ||
      1. (3 < 2 || 3 > 2) is True.
   3. NOT operator !
      1. !(8 > 10) is True.

**Q5): What are the data types supported in Dart? Explain with Examples**

1) **Number**

(i) **Integer:**

Contains whole number not the decimal numbers.

Example: 15,6.

(ii) **double**

Contains decimal numbers.

Example: 15.5, 70.5, 10.3.

(iii) **num**

That contains integer and double data types both.

Example: 15, 16.5, 20,100.

2) **String**

Which can contains sequence of characters, can be numbers and alphabets and special characters, typed inside “ “.

Example: “waqas”, “Today is Friday”, “waqas123”

3) **bool**

It represent Boolean values either True or False

Example 2>3 will return a bool i.e False

4) **List**

Group of objects/ sets of data

Example List list1=[1,4,3,2,5]

5) **Map**

It represents set of key-value pairs

Example: {Usrname: tom, Password: id}

Q9) Declare 5 legal & 5 illegal variable names.

**Legal variable names**

* String name = "Waqas Ahmed";
* var fatherName = "Orangzaib";
* int age = 20;
* var full\_name=”Waqas Ahmed";
* double weight="55.5";

**Legal variable names**

* var 123="4";
* int name="Waqas Ahmed";
* var $name="Waqas Ahmed";
* String 3name="Waqas Ahmed"
* double a ="5";

**(Q4): What is a difference between these operators “?? And?”**

**“?”** is a ternary operator

expression ? option1 : option2

If expression is true it goes with the option1 and if not, with the option2.

void main() {

print(2 == 2 ? "a truth" : "a lie"); // <- a truth

print(1 == 2 ? "a truth" : "a lie"); // <- a lie

}

**“??”** called a null operator, this operator returns expression on its left, except if it is null.

void main() {

print(0 ?? 1); // <- 0

print(1 ?? null); // <- 1

}