Q1) what are the various types of operators in dart? Explain with Examples.

1. **Arithmetic Operators**
   1. Add
      1. Example: 3+2=5
   2. Subtract
      1. Example: 3-2=1
   3. Multiply
      1. Example: 3\*2=6
   4. Divide
      1. Example: 3/2=1.5
   5. Divide and return integer
      1. Example: 3~/2=1
   6. Remainder
      1. Example: 3%2=1
   7. Increment
      1. Var Name=3
      2. Name=++Name (now value of Name will be 4)
   8. Decrement
      1. Var Name=3
      2. Name=--Name (now value of Name will be 2)
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. (3 > 2 && 5 > 3) is True.
   2. OR operator ||
      1. (3 > 2 || 3 > 2) is True.
   3. NOT operator !
      1. !(5 > 10) is True.

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

1) **Number**

(i) **Int:**

That contains whole number not the decimal numbers.

Example: 15,6,40

(ii) **double:**

That contains decimal numbers.

Example: 15.5, 90.5, 10.3

(iii) **num**

That contains integer and double data types both.

Example: 15, 16.5, 20,100.8

2) **String**

Which can contains sequence of characters, can be numbers and alphabets and special characters, denoted in “ “.

Example: “Annas”, “Today is Friday”, “kashif111”

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: pass@123}

Q9) Declare 5 legal & 5 illegal variable names.

**Legal variable names**

* var name = "Annas Ahmed";
* String fatherName = "Shabbir Ahmed";
* int age = 19;
* var full\_name="Annas Ahmed";
* var address123="Karachi, Pakistan";

**Legal variable names**

* var 123address="Karachi, Pakistan";
* var #name="Annas Ahmed"
* var full-name="Annas Ahmed"
* String full name="Annas Ahmed"
* var print="Annas Ahmed"

(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

}