

Task 1:

• Arithmetic Operators. “ + , - , ++ , * “ • Relational Operators. “ < , > , <= , >= “ • Type Test Operators. “ is , is! “ • Bitwise Operators. “ a|b , a&b , a^b “ • Assignment Operators. “ = , += , *= , ??= “ • Logical Operators. “ && , || , ! “

Task 2:

```
void main () {  
    num ticket_price = 600 ;  
    num cost_of_5 =ticket_price *5 ;  
    print("cost of 5 tickets are $cost_of_5 ");  
}
```

Task 3:

```
void main () {  
    List<int> firstlist = [1,2,3,4,5,6,7];  
    List<int> secondlist = [3,5,6,7,9,10];  
    List<int> difference_between_list = firstlist.toSet().difference(secondlist.toSet()).toList();  
    print(difference_between_list.toString());  
}
```

Task 4:

?

You can make a variable nullable by putting a question mark (?) at the end of its type.

??

Called also null operator. This operator returns expression on its left, except if it is null, and if so, it returns right expression:

Task 5:

Data types in dart Number : int,double,num,float,var String: String , var Boolean: bool List: list Map: Map
Examples are given in below tasks.

Task 6:

```
import 'dart:core';  
void main(List<String> args) {
```

```
List <dynamic> table_of_7 = [7,14,21,28,35,42,49,56,63,70];

List <dynamic> range10 = [1,2,3,4,5,6,7,8,9,10];

Map < dynamic,dynamic > table = Map.fromIterables(range10,table_of_7);

print (table);

}
```

Task 7:

```
import 'dart:io';

void main() {

  var password = "Assignment 3";

  print("Enter your password: ");

  var code = stdin.readLineSync();

  print("Confirm your password: ");

  var code_confirm = stdin.readLineSync();


  if (code == "" && code_confirm == "") {

    print("Please enter your password.");

  } else if (code == password && code_confirm == password)

    print("Correct! The password you entered matches the original password.");

  else if (code != code_confirm) {

    print("Password does not match!");

  } else {

    print("Incorrect password.");

  }

}
```

Task 8:

```
void main() {
```

```

var students = ['Fawwaz', 'Ali', 'Musab'];

var score = [475, 430, 320];

int total_marks = 500;

num percentage_stud1 =
    num.parse(((score[0] / total_marks) * 100).toStringAsFixed(2));
num percentage_stud2 =
    num.parse(((score[1] / total_marks) * 100).toStringAsFixed(2));
num percentage_stud3 =
    num.parse(((score[2] / total_marks) * 100).toStringAsFixed(2));

print(students[0] +
    " obtained ${score[0]} marks with a percentage of $percentage_stud1%");
print(students[1] +
    " obtained ${score[1]} marks with a percentage of $percentage_stud2%");
print(students[2] +
    " obtained ${score[2]} marks with a percentage of $percentage_stud3%");
}

```

Task 9:

5 legal variable names Anas123,anas_ahmed,a2abc,t_23da,A2H_anas 5 illegal variable names _anas ,
 "123 , 12anas , 1_anas , anas

Task 10:

```

import 'dart:io';

void main() {
    var City_Name = 'Hyderabad';
    print(City_Name);
    print(City_Name.replaceAll('Hyder', 'Islam'));
}

```

}Task 11:

```
import 'dart:io';

void main() {
  print("<--- K-ELECTRIC BILL --->");
  print("Enter customer name: ");
  String? name = stdin.readLineSync();
  print("Enter current month: ");
  String? month = stdin.readLineSync();
  print("Enter number of units: ");
  num number_of_units = num.parse(stdin.readLineSync()!);
  num charges_per_unit = 5.8; //5 rupees and 8 paisas
  num net_amount_payable =
    num.parse((number_of_units * charges_per_unit).toStringAsFixed(2));
  num late_payment_surcharge = num.parse(
    ((net_amount_payable * 5) / 100).toStringAsFixed(2)); //5 percent
  num gross_amount_payable = net_amount_payable + late_payment_surcharge;

  print("\nGenerating the bill, please wait.");
  print("\nCustomer Name: $name");
  print("Current Month: $month");
  print("Number of units: $number_of_units");
  print("Charges per unit: $charges_per_unit");
  print("Net Amount Payable (within due date): $net_amount_payable");
  print("Late Payment Surcharge: $late_payment_surcharge");
  print("Gross Amount Payable (after due date): $gross_amount_payable");
}
```