

## Day 3:

### Task 1: (Sum or Factorial)

write a Dart program that asks a user to enter a number.

The user have two options:

1. To get the sum of this number      $//5 \rightarrow 5+4+3+2+1+0 = 15$
2. To get the factorial of the number  $//5 \rightarrow 5 \times 4 \times 3 \times 2 \times 1 = 120$

### Task 2: (Triangle)

write a Dart program that Print this shape:

```
*  
***  
*****  
*****  
*****
```

### Task 3: (Power a value)

write a Dart program that asks a user to enter a number and a power to be calculated.     Ex:  $2^3 = 2 \times 2 \times 2 = 8$

```
please enter a number  
2  
please enter the power  
3  
the result the power is 8  
  
Process finished with exit code 0
```

## Task 4: (Generate a Product table)

write a Dart program that prints the product table but in a specific way.

The user is asked to enter 4 values:

1. The beginning value by which its product table will be generated firstly.
2. The ending value by which its product table will be generated lastly.
3. The lower boundary value of the product table.
4. The higher boundary value of the product table.

And the product tables will be generated depending on this values.

Ex:

```
-----
please enter the begining number of the product table
4
please enter the ending number of the product table
6
please enter the Lower boundry of the product table
1
please enter the highest boundry of the product table
10
4 * 1 = 4
4 * 2 = 8
4 * 3 = 12
4 * 4 = 16
4 * 5 = 20
4 * 6 = 24
4 * 7 = 28
4 * 8 = 32
4 * 9 = 36
4 * 10 = 40
-----
5 * 1 = 5
5 * 2 = 10
5 * 3 = 15
5 * 4 = 20
5 * 5 = 25
5 * 6 = 30
```

And so on.

## Task 5: (information about list)

write a Dart program that asks a user to input a list of numbers by the following:

1. The user is asked to enter the number of values he want to store in the list.
2. The user will be asked to enter the numbers sequentially .
3. The following will be printed to the user :
  - The list of numbers.
  - The sum of list numbers.
  - The average value of the list numbers . (Sum/no\_of\_val).
  - The minimum value in the list.
  - The maximum value in the list.

Ex:

```
please enter the number of values you want to enter :
5
enter the numbers
1
2
3
4
5
the list components :
1
2
3
4
5
the sum of the list is 15
the average = 3.0
min value =1
max value =5
```

## Task 6: (Mini list editor)

Create a Mini list editor using Dart language by which the list is initialized with no elements(numbers) and the user inputs the list numbers. The user should be able to:

1. Add values to the list.
2. Remove a value from the list.
3. Update a value in the list.
4. Print the values of the list
5. Search on a value in the list

More Details:

List mylist=[];

- 1- add value
- 2- remove value
- 3- update value
- 4- show value
- 5- search value

1  
number of value ?  
5  
add to list .  
-----

3  
enter old value  
20  
enter new value  
30  
.....

2  
a)remove by value  
b)remove by index

4  
print all data of list  
new line .

5  
a) found or not found  
b) get index .