Day 5

Task 1:

write a Dart program that asks the user to enter student details and output their details. The sequence of the program:

1. The program asks the user to enter the number of students he will enter and to enter them.
2. For each student the user should input:
    - Name
    - Student code
    - Number of courses
    - Degree of each course

The Output:

Details for each student:

1. Name
2. Code
3. Degrees
4. Total degrees
5. Percentage
6. Grade
    - 86->100 : excellent
    - 76->85 :very good
    - 66 ->75 :good
    - 50 ->65 :pass
    - <50 -> :fail

Task 2:

write a Dart program that asks the user to enter the number of numbers he wants to enter then asks him to input this numbers and outputs 1)the list of numbers he entered

2)their grounding sum (ex. 5 ->5+4+3+2+1=15)

3)their average value

4)the minimum value in the list

5)the maximum value in the list

Note: design this program using functions.

Functions:

1. void getList(List <double> list)
2. void showList(List <double> list)
3. void sumList(List <double> list)
4. double avgList(List <double> list)
5. Map maxAndMin(List <double> list)

Task 3:

write a Dart program that equates these two equations:

$$re = \frac{fact(x) * power(x,y) + sum(z)}{power(z,y) * fact(y)} = ?$$

$$re = \frac{power(x,y) * power(x,z)}{sum(x)*sum(y) + fact(z)* fact(y)} = ?$$

The functions to be created:

1. int fact(int number)
2. int sum(int number)
3. int power(int number ,int power)

In the main initialize x,y,z with values 2,3,5 respectively.

Validation:

Result of equation 1 should be equal 0.04133

Result of equation 2 should be equal 0.3468

Task 4:

Using Dart , create a class of name car ,its attributes are (car model (ex.2015) , chasse number , color ,price). Then create two objects of car class, the first car attribute values are (model:2017 , chasse number :12345 ,color :blue ,price :1550000) , And the second car attributes will be asked from the user , Then the details of the two cars will be printed to the user. Ex:

```
Enter c2 car model :
2005
Enter c2 car chasse number :
12343
Enter c2 car color :
black
Enter c2 car price :
400000
Car 1 model:2017
Car 1 chasse number:12345
Car 1 color:Blue
Car 1 price:1550000.0 EGP
--------------------
Car 2 model:2005
Car 2 chasse number:12343
Car 2 color:black
Car 2 price:400000.0 EGP
```

Task 5:

Using Dart, create a class of name car, its attributes are (car model (ex.2015), chasse number , color ,price).

The user is asked about the number of cars he wants to input (2 or more cars only are allowed), then he is asked to input the details of the cars.

Output:

1- the details of all cars he entered.
2- the total price of all cars he entered.

Hint: You will create a list of cars.

Ex.

```
yellow
Enter car 1 price :
300000
Enter car 2 model :
2020
Enter car 2 chasse number :
432343
Enter car 2 color :
black
Enter car 2 price :
1100000
model is 2002
chasse number is 23432
Car color is yellow
Price= 300000.0
-----------------------
model is 2020
chasse number is 432343
Car color is black
Price= 1100000.0
-----------------------
Total price is equal 1400000.0
```

Ex.

```
enter the number of cars : (2 or
 more)
1
Wrong number entered , Enter two
 cars or more

Process finished with exit code 0
```