Assignment 3 (List, Map, Loop)

Q.1: Create a list of names and print all names using list.

Q.2: Create an empty list of type string called days. Use the add method to add names of 7 days and print all days.

Q.3: Create a list of Days and remove one by one from the end of list.

Q.4: Create a list of numbers & write a program to get the smallest & greatest number from a list.

Q.5: Create a map with name, phone keys and store some values to it. Use where to find all keys that have length 4.

Q.6: Create Map variable name world then inside it create countries Map, Key will be the name country & country value will have another map having capitalCity, currency and language to it. by using any country key print all the value of Capital & Currency.

Q.7:
 Map<String, double> expenses = {

'sun': 3000.0, 'mon': 3000.0, 'tue': 3234.0,

};

Check if "fri" exist in expanses; if exist change it's value to 5000.0 otherwise add 'fri' to expenses and set its value to 5000.0 then print expenses.

Q.8: remove all false values from below list by using removeWhere or retainWhere property.

List<Map<String, bool>> usersEligibility = [{'name': 'John', 'eligible': true},
 {'name': 'Alice', 'eligible': false},
 {'name': 'Mike', 'eligible': true},

{'name': 'Sarah', 'eligible': true}, {'name': 'Tom', 'eligible': false},];

Q.9: Given a list of integers, write a dart code that returns the maximum value from the list.

Q.10: Write a Dart code that takes in a list of strings and removes any duplicate elements, returning a new list without duplicates. The order of elements in the new list should be the same as in the original list.

Q 11: Write a Dart code that takes in a list and an integer n as parameters. The program should print a new list containing the first n elements from the original list.

Q.12: Write a Dart code that takes in a list of strings and prints a new list with the elements in reverse order. The original list should remain unchanged.

Q.13: Implement a code that takes in a list of integers and returns a new list containing only the unique elements from the original list. The order of elements in the new list should be the same as in the original list.

Q.14: Write a Dart code that takes in a list of integers and prints a new list with the elements sorted in ascending order. The original list should remain unchanged.

Q.15: Implement a Dart code that uses the where() method to filter out negative numbers from a list of integers. The program should take in the original list as a parameter and print a new list containing only the positive numbers.

Q.16: Implement a Dart code that uses the where() method to filter out odd numbers from a list of integers. The program should take in the original list as a parameter and print a new list containing only the even numbers.

Q.17: Given a list of integers, write a Dart code that uses the map() method to create a new list with each value squared. The program should take in the original list as a parameter and print the new list.

Q.18: Create a map named "person" with the following key-value pairs: "name" as "John", "age" as 25, "isStudent" as true. Write a Dart code to check if the person is both a student and over 18 years old. Print "Eligible" if both conditions are true, otherwise print "Not eligible".

Q.19: Given a map representing a product with keys "name", "price", and "quantity", write Dart code to check if the product is in stock. If the quantity is greater than 0, print "In stock", otherwise print "Out of stock".

Q.20: Create a map named "car" with the following key-value pairs: "brand" as "Toyota", "color" as "Red", "isSedan" as true. Write Dart code to check if the car is a sedan and red in color. Print "Match" if both conditions are true, otherwise print "No match".

Q.21: Given a map representing a user with keys "name", "isAdmin", and "isActive", write Dart code to check if the user is an active admin. If the user is both an admin and active, print "Active admin", otherwise print "Not an active admin".

Q.22: Given a map representing a shopping cart with keys as product names and values as quantities, write Dart code to check if a product named "Apple" exists in the cart. Print "Product found" if it exists, otherwise print "Product not found".

Q23: Consider the code:
List nameList = [Bilal, Bilal, Bilal, Huzaifa, Huzaifa, Huzaifa];
What can to be done in order to not repeat Bilal and Huzaifa multiple times?

Q24: Let's say you are given a list saved in a variable:
Consider a = [1, 4, 9, 16, 25, 36, 49, 64, 81, 100].
Write a code that takes this list and makes a new list that has only the even elements of this list in it.

Q25: Write a program to print multiplication table of 7 length 15 using loop.

Q26: Write a program to print items of the following array using for loop:
fruits = ["apple", "banana", "mango", "orange", "strawberry"].

Q27: Write a program to print multiples of 5 ranging 1 to 100.

Q28: The Temperature Converter: It's hot out! Let's make a converter based on the steps here.
a. Store a Celsius temperature into a variable.
b. Convert it to Fahrenheit & output "NNoC is NNoF".
c. Now store a Fahrenheit temperature into a variable.
d. Convert it to Celsius & output "NNoF is NNoC".
Note: NN = any number

Q29: Write a program to create a calculator for +, -, *, / & % using if
statements. Take the following input:
a. First number Second number
b. Operation (+, -, *, /, %)
Compute & show the calculated result to user.

Q30: Write a program that takes a character (I. e. string of length 1) and
returns true if it is a vowel, false otherwise.

Q31: Write a program to reverse a string. For example, if my string is
"natsikaP nawaJ" then my result will be "Jawan Pakistan".

Q32: List numList = [1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 29, 30, 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 42, 45, 46, 48, 49, 50, 51, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 66, 67, 68, 69, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 92, 93, 94, 95, 96, 98, 99, 100];
Find the missing number in array of 1 to 100?

Q33: List<int> unsortedList = [65, 34, 43, 44, 28, 70, 47, 52, 8, 11];
Find the largest and smallest number in an unsorted integer array?

Q34: Let, int number = 18;
Find all pairs of an integer array whose sum is equal to a given number?

Q35:. Create a Marks sheet using loop with given data also add 5 Subjects in root directory.