

1. How to duplicate repeating items inside a Dart list?

Problem

Consider the code:

final List<Ball> \_ballList = [Ball (), Ball (), Ball (), Ball (), Ball (),] What can to be done in order to not repeat Ball () multiple times?

void main(){

List<dynamic> ball\_list = ["ball", "ball", "Ali", "Ali", "Owais"];

var unique\_Names = ball\_list.toSet().toList();

print(unique\_Names);

}

Output:

Text

Description automatically generated

2. How to get difference of lists in Flutter/Dart?

Problem

Consider you have two lists [1,2,3,4,5,6,7] and [3,5,6,7,9,10]. How would you get the difference as output? eg. [1, 2, 4 ]

Code:

void main() {

List<int> first = [1, 2, 3, 4, 5, 6, 7];

List<int> second = [3, 5, 6, 7, 9, 10];

List<int> difference = first.toSet().difference(second.toSet()).toList();

print(difference);

}

Output:

Text

Description automatically generated

3. 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.

Code:

void main() {

List<int> a = [1, 4, 9, 16, 25, 36, 49, 64, 81, 100];

int i = 0;

List<int> l = [];

for (var e in a) {

if (++i % 2 == 0) {

l.add(e);

}

}

print(l);

}

Output:

Text

Description automatically generated

4. Ask the user for a number and determine whether the number is prime or not.s

void main(){

int i,m=0,flag=0;

int num = 5;

m=num~ /2;

for(i = 2;i<=m;i++){

if(num%i == 0){

print('$num is not a prime number');

flag=1;

break;

}

}

if(flag==0){

print('$num is prime number');

}

}

Output:

Text

Description automatically generated

5. Write a program to print multiplication table of 7 length 15.

void main() {

var num = 7;

for (var i = 1; i <= 15; i++) {

print("${num} X ${i} = ${num \* i}");

}

}

Output:

A screenshot of a computer

Description automatically generated with low confidence

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

void main() {

List <dynamic> fruits = ["Apple","Banana","Mango","Orange","Strawberry"];

for(var i=0; i<fruits.length; i++){

print(fruits[i]);

}

}

Output:

Graphical user interface, text

Description automatically generated

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

void main() {

var num = 5;

for (var i = 1; i >= 100; i+=5) {

print("${num} X ${i} = ${num \* i}");

}

}

8. 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”.

import "dart:io";

void main() {

print("Enter Fahrenhit value");

int? fahr = int.parse(stdin.readLineSync()!);

print("Celcius value is:${(fahr - 32.0) \* 5.0 / 9.0}");

// print("Enter Celsius value");

// int? cels = int.parse(stdin.readLineSync()!);

// print("Celcius value ifahr = ${(cels \* 9.0 / 5.0) + 32.0}");

}

9. 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.

import "dart:io";

void main() {

print("Enter 1st Number");

int? first\_Input = int.parse(stdin.readLineSync()!);

print("Enter 2nd Number");

int? second\_Input = int.parse(stdin.readLineSync()!);

print("do you want to multiply, minus, divide or add? (x,-,/,+)");

String? operator = (stdin.readLineSync()!);

if (operator == "+") {

print(first\_Input + second\_Input);

} else if (operator == "-") {

print(first\_Input - second\_Input);

} else if (operator == "/") {

print(first\_Input / second\_Input);

} else if (operator == "\*") {

print(first\_Input \* second\_Input);

} else {

print("use x,-,/ or + next time!");

}

}

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

import "dart:io";

void main() {

List<dynamic> vowels = ["a", "e", "i", "o", "u", "A", "E", "I", "O", "U"];

print("Enter One Character");

String? alphabet = (stdin.readLineSync()!);

for (var i = 0; i < vowels.length; i++) {

if (vowels[i] == alphabet) {

// bool a = true;

print("The character is Vowel");

} else {

// bool b = false;

print("The character is not vowel");

}

}

}