**Assignment #3**

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**Qno1 Answer : 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?**

**Answer:**

**void main() {**

**List<String> \_ballList = ["Ball ()", "Ball ()", "Ball ()", "Ball ()", "Ball ()",];**

**print("before $\_ballList");**

**\_ballList = \_ballList.toSet().toList();**

**print("after $\_ballList");**

**}**

**Qno2 Answer : -**

How to get difference of lists in 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? E.g. [1, 2, 4].

**Answer:**

**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.toString());**

**}**

**Qno3 Answer :** 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.

**Answer:**

**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);**

**}**

**Qno4 Answer :** Ask the user for a number and determine whether the number isprime or not.s

**Answer:**

**import 'dart:io';**

**void main() {**

**stdout.write("Please give us a number: ");**

**int chosenNumber = int.parse(stdin.readLineSync());**

**checkPrime(chosenNumber);**

**}**

**void checkPrime(int number) {**

**// List comprehensions**

**List<int> a = [**

**for (var i = 1; i <= number; i++)**

**if (number % i == 0) i**

**];**

**// Check for prime**

**a.length == 2**

**? print("The chosen number is a prime")**

**: print("The chosen number is not a prime");**

**}**

**Qno5 Answer :** Write a program to print multiplication table of 7 length 15.

**Answer:**

void main() {

  int j = 7;

  for (var i = 1; i <= 15; i++) {

    int ans = i \* j;

    print("$j \* $i = $ans");

  }

}

**Qno6 Answer :** Write a program to print items of the following array using for loop:

fruits = [“apple”, “banana”, “mango”, “orange” , “strawberry”].

**Answer:**

void main() {

  var fruits = ['apple', 'banana', 'mango', 'orange', 'strawberry'];

  print(fruits);

  for (var fruit in fruits) {

    print(" $fruits");

  }

  print(fruits);

}

**Qno7 Answer :** Write a program to print multiples of 5 ranging 1 to 100

**Answer:**

**void main() {**

**for (int number = 0; number<=100; number++){**

**//now check if number is multiple of 5**

**if (number%5==0){**

**print (number);**

**}**

**}**

**}**

**Qno8 Answer** 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”.

**Answer:**

void main() {

  //Condition 1

  var Celcius\_Temprature = 27;

  print("temprature is ${Celcius\_Temprature} °C");

  var Fahrenheit\_Temprature = (27 \* 9 / 5) + 32;

  print("${Celcius\_Temprature}oC is ${Fahrenheit\_Temprature}oF");

//Condition 2

  var Fahrenheit\_temprature = 80;

  print("temprature is ${Fahrenheit\_temprature} °F");

  var Celcius\_temprature = (80 - 32) \* 5 / 9;

  print(" ${Fahrenheit\_temprature}oF is ${Celcius\_temprature}oC");

}

**Qno10 Answer**  Write a program that takes a character (i.e.string of length 1) and returns true if it is a vowel,false otherwise

**Answer:**

**void main() {**

**var char;**

**stdout.writeln('enter a vowel');**

**String vowel = stdin.readLineSync()!;**

**print('vowel');**

**if (char == ['A', 'E', 'I', 'O', 'U', 'a', 'e', 'i', 'o', 'u']) {**

**print('true');**

**} else {**

**print('False');**

**}**

**}**