**ASSIGNMENT # 4**

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

Problem

Consider the code:

final List<Dynamic> \_nameList = [Bilal, Bilal, Bilal, Owais, Owais,

Owais]

What can to be done in order to not repeat Bilal and Owais multiple

times?

void main() {

final List <dynamic> \_nameList = ['Bilal ()', 'Bilal ()', 'Bilal ()', 'Owais ()', 'Owais ()', 'Owais ()'];

print(\_nameList);

print(\_nameList.toSet().toList());

}

2. 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.

void main() {

var a = [1, 4, 9, 16, 25, 36, 49, 64, 81, 100];

var even =[], odd=[];

for (var i in a ){

////condition/////

if( i%2 == 0){

even.add(i);

}

else if(i%2 != 0 ){

odd.add(i);

}

//// even number /////

}

print("The orignal form of List = $a");

print("The even generated form of List = $even");

print("The odd generated form of List = $odd");

}

3. Ask the user for a number and determine whether the number is

prime or not.

void main() {

int enterednum, i ;

int d = 0;

enterednum=3;

print( "Entered Number is $enterednum ");

var m=enterednum ~/ 2;

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

{

if(enterednum % i == 0)

{

print("Number is not Prime.");

d=1;

break;

}

if(d==0){

print("Number is Prime.");}

}

}

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

loop.

void main()

{

var tableOf= 7;

var startTab = 1;

var endTab = 15;

///// table of 7 /////

for (var i=startTab; i<=endTab ; i++){

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

}

}

5. Write a program to print items of the following array using for loop:

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

void main()

{

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

for(var fruit in fruits){

print(fruit);

}

}

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

void main()

{

var num = 5;

for(var i=1; i <= 100 ; i++){

var multiples= num\*i;

if(multiples <= 100){

print(multiples);

}

}

}

7. 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”.

void main()

{

// Declaration and assigning value

var celsius\_Temperature = 26;

var fahrenheit\_Temperature = 68;

//formula's

var fahrenheit = (celsius\_Temperature \* 9/5) + 32;

var celsius = (fahrenheit\_Temperature - 32) \* 5/9;

//printing the value

print ("The conversion of $celsius\_Temperature°C is $fahrenheit°F");

if(fahrenheit>=77){

print("Its Hot today");

}

else{

print("Its Cold Today");

}

print ("The conversion of $fahrenheit\_Temperature°F is $celsius°C");

if(celsius>=25){

print("Its Hot today");

}

else{

print("Its Cold Today");

}

}

8. 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.

void main()

{

var firstNumber = 88;

var secondNumber = 55 ;

var operation = "\*";

print("Calculator");

if(operation == "+"){

print("You Want to Add");

print ("$firstNumber + $secondNumber = ${firstNumber+secondNumber}");

}

else if(operation == "-"){

print("You Want to Subtract");

print ("$firstNumber - $secondNumber = ${firstNumber-secondNumber}");

}

else if(operation == "\*"){

print("You Want to Multiply");

print ("$firstNumber X $secondNumber = ${firstNumber\*secondNumber}");

}

else if(operation == "/"){

print("You Want to Divide");

print ("$firstNumber / $secondNumber = ${firstNumber/secondNumber}");

}

else if(operation == "%"){

print("You Want to Reminder");

print ("$firstNumber % $secondNumber = ${firstNumber%secondNumber}");

}

else{

print("Error : Enter the correct operator");

}

}

9. Write a program that takes a character (I. e. string of length 1) and

returns true if it is a vowel, false otherwise.

void main() {

var letter = "i";

print("The Lenght of your input is ${letter.length}");

if (letter.length == 1) {

if (letter == "a" ||

letter == "e" ||

letter == "i" ||

letter == "o" ||

letter == "u") {

print("It is a vowel");

print(true);

} else {

print("It is not a vowel");

print(false);

}

} else {

print("Enter Only One Letter ");

}

}

10. Write a program to reverse a string. For example, if my string is

"natsikaP nawaJ" then my result will be "Jawan Pakistan".

void main() {

stdout.write("Please give a word: ");

String input = stdin.readLineSync().toLowerCase();

String revInput = input.split('').reversed.join('');

}

11. How are duplicates removed from a given array? [Ahmed, Bilal,

Muhammad, Owais, Muhmmad, Ali, Ahmed]

void main() {

import "dart:convert";

void main(){

final myList = [

{

'name': 'Andy',

'age': 41

},

{

'name': 'Bill',

'age': 43

},

{

'name': 'Andy',

'age': 41

}

];

// convert each item to a string by using JSON encoding

final jsonList = myList.map((item) => jsonEncode(item)).toList();

// using toSet - toList strategy

final uniqueJsonList = jsonList.toSet().toList();

// convert each item back to the original form using JSON decoding

final result = uniqueJsonList.map((item) => jsonDecode(item)).toList();

print(result);

}

12. Find the missing number in array of 1 to 100?

void main (){

for(int num in a){

if(a.contains(num+1) == false && a.last != num){

return num+1

}

return null; // No missing value

}

}

13. Find the largest and smallest number in an unsorted integer

array?

// Main function

void main() {

// Creating a geek list

var geekList = [121, 12, 33, 14, 3];

// Declaring and assigning the

// largestGeekValue and smallestGeekValue

var largestGeekValue = geekList[0];

var smallestGeekValue = geekList[0];

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

// Checking for largest value in the list

if (geekList[i] > largestGeekValue) {

largestGeekValue = geekList[i];

}

// Checking for smallest value in the list

if (geekList[i] < smallestGeekValue) {

smallestGeekValue = geekList[i];

}

}

// Printing the values

print("Smallest value in the list : $smallestGeekValue");

print("Largest value in the list : $largestGeekValue");

}

14. Find all pairs of an integer array whose sum is equal to a given

number?

// Main function

void main() {

Input : arr[] = {1, 5, 7, -1},

sum = 6

Output : 2

Pairs with sum 6 are (1, 5) and (7, -1)

Input : arr[] = {1, 5, 7, -1, 5},

sum = 6

Output : 3

Pairs with sum 6 are (1, 5), (7, -1) &

(1, 5)

Input : arr[] = {1, 1, 1, 1},

sum = 2

Output : 6

There are 3! pairs with sum 2.

Input : arr[] = {10, 12, 10, 15, -1, 7, 6,

5, 4, 2, 1, 1, 1},

sum = 11

}