**Assignment #4**

**Q:1**

List namelist = ['Bilal', 'Bilal', 'Bilal', 'Owais', 'Owais', 'Owais'];

var namelist1 = namelist.toSet().toList();

print(namelist1);

**Output:**

[Bilal, Owais]

**Q:2**

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

List<int> l = [];

int i = 0;

for (var e in a) {

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

l.add(e);

}

}

print(l);

**Output:**

[4, 16, 36, 64, 100]

**Q:3**

int num=7;

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

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

}

**Output:**

7 \* 1 = 7

7 \* 2 = 14

7 \* 3 = 21

7 \* 4 = 28

7 \* 5 = 35

7 \* 6 = 42

7 \* 7 = 49

7 \* 8 = 56

7 \* 9 = 63

7 \* 10 = 70

7 \* 11 = 77

7 \* 12 = 84

7 \* 13 = 91

7 \* 14 = 98

7 \* 15 = 105

**Q:4**

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

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

print(fruits[ i ]);

}

**Output:**

Apple

Banana

Mango

Orange

Strawberry

**Q:5**

int i ;

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

{

If ( i %5==0)

{

print('$i');

} }

**Output:**

5

10

15

20

25

30

35

40

45

50

55

60

65

70

75

80

85

90

95

100

**Q:6**

var celsius = 100;

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

print ("$celsius°C is $celsiusInF°F");

var fahrenheit = 212;

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

print("$fahrenheit°F is $fahrenheitInC°C");

**Output**

100°C is 212.0°F

212°F is 100.0°C

**Q:8**

print('a. Write First Number');

print('b. Write any Operation(+,-,\*,/,%)');

print('c. Write Second Number');

var first\_num = int.parse((stdin.readLineSync())!);

var oper = stdin.readLineSync();

var second\_num = int.parse((stdin.readLineSync())!);

var result;

if (oper == '+') {

result = first\_num + second\_num;

print('Addition of First Number and Second Number:$result');

} else if (oper == '-') {

result = first\_num - second\_num;

print('Subtraction of First Number and Second Number:$result');

} else if (oper == '\*') {

result = first\_num \* second\_num;

print('Multiplication of First Number and Second Number:$result');

} else if (oper == '/') {

result = first\_num / second\_num;

print('Division of First Number and Second Number:$result');

} else if (oper == '%') {

result = (first\_num /second\_num) \*100;

print('Percentage of First Number and Second Number:$result %');

}

a. First Number

Second Number

b. Operation(+,-,\*,/,%)

4

+

8

Addition of First Number and Second Number:12

**Q:9**

void main() {

print('Enter a character:');

String? ch = stdin.readLineSync();

if (

ch=="a" || ch=="e" || ch=="i" || ch=="o" || ch=="u" ||

ch=="A" || ch=="E" || ch=="I" || ch=="O" || ch=="U" )

{

print("TRUE");

}

else

{

print("FALSE");

} }

**Output**

Enter A Character

Result = true

**Q:10**

void main() {

var name = ' natsikaP nawaJ'

print(reverse(name));

}

String reverse(String input) {

var chars = input.split('');

return chars.reversed.join();

}

**Output** :

Result = “Jawan Pakistan”

**Q:12**

Iterable<int> findMissingInts(List<int> ints) sync\* {

for (var i = 0; i < ints.length - 1; i++) {

for (var j = ints[i] + 1; j < ints[i + 1]; j++) {

yield j;

}

}

}

main() {

print(findMissingInts([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]));

}

**Output**

(8, 28, 34, 43, 44, 47, 52, 65, 70, 91, 97)

**Q:13**

List unsortedList = [65, 34, 43, 44, 28, 70, 47, 52, 8, 11];

unsortedList.sort();

List sortedList = unsortedList;

print(sortedList);

print('Greatest number:${sortedList.last}');

print('Smallest number:${sortedList.first}');

**Output**

Greatest number:70

Smallest number:8

**Q:14**

List pair = [1,2,3,4,4];

int number = 18;

for (int i = 0; i <= 18; i++) {

for (int j = 0; j < 18; j++) {

if (i + j == 18) {

pair.add([i, j]);

}

}

}

print(pair);

Output:

[[1, 17], [2, 16], [3, 15], [4, 14], [5, 13], [6, 12], [7, 11], [8, 10], [9, 9], [10, 8], [11, 7], [12, 6], [13, 5], [14, 4], [15, 3], [16, 2], [17, 1], [18, 0]]

**Q:15**

List marksheet = [

{

"id": 1,

"name": "Leanne Graham",

"username": "Bret",

"email": "Sincere@april.biz",

"address": {

"street": "Kulas Light",

"suite": "Apt. 556",

"city": "Gwenborough",

"zipcode": "92998-3874",

"geo": {"lat": "-37.3159", "lng": "81.1496"}

},

"phone": "1-770-736-8031 x56442",

"website": "hildegard.org",

"company": {

"name": "Romaguera-Crona",

"catchPhrase": "Multi-layered client-server neural-net",

"bs": "harness real-time e-markets"

}

},

{

"id": 2,

"name": "Ervin Howell",

"username": "Antonette",

"email": "Shanna@melissa.tv",

"address": {

"street": "Victor Plains",

"suite": "Suite 879",

"city": "Wisokyburgh",

"zipcode": "90566-7771",

"geo": {"lat": "-43.9509", "lng": "-34.4618"}

},

"phone": "010-692-6593 x09125",

"website": "anastasia.net",

"company": {

"name": "Deckow-Crist",

"catchPhrase": "Proactive didactic contingency",

"bs": "synergize scalable supply-chains"

}

},

{

"id": 3,

"name": "Clementine Bauch",

"username": "Samantha",

"email": "Nathan@yesenia.net",

"address": {

"street": "Douglas Extension",

"suite": "Suite 847",

"city": "McKenziehaven",

"zipcode": "59590-4157",

"geo": {"lat": "-68.6102", "lng": "-47.0653"}

},

"phone": "1-463-123-4447",

"website": "ramiro.info",

"company": {

"name": "Romaguera-Jacobson",

"catchPhrase": "Face to face bifurcated interface",

"bs": "e-enable strategic applications"

}

},

{

"id": 4,

"name": "Patricia Lebsack",

"username": "Karianne",

"email": "Julianne.OConner@kory.org",

"address": {

"street": "Hoeger Mall",

"suite": "Apt. 692",

"city": "South Elvis",

"zipcode": "53919-4257",

"geo": {"lat": "29.4572", "lng": "-164.2990"}

},

"phone": "493-170-9623 x156",

"website": "kale.biz",

"company": {

"name": "Robel-Corkery",

"catchPhrase": "Multi-tiered zero tolerance productivity",

"bs": "transition cutting-edge web services"

}

},

{

"id": 5,

"name": "Chelsey Dietrich",

"username": "Kamren",

"email": "Lucio\_Hettinger@annie.ca",

"address": {

"street": "Skiles Walks",

"suite": "Suite 351",

"city": "Roscoeview",

"zipcode": "33263",

"geo": {"lat": "-31.8129", "lng": "62.5342"}

},

"phone": "(254)954-1289",

"website": "demarco.info",

"company": {

"name": "Keebler LLC",

"catchPhrase": "User-centric fault-tolerant solution",

"bs": "revolutionize end-to-end systems"

}

},

{

"id": 6,

"name": "Mrs. Dennis Schulist",

"username": "Leopoldo\_Corkery",

"email": "Karley\_Dach@jasper.info",

"address": {

"street": "Norberto Crossing",

"suite": "Apt. 950",

"city": "South Christy",

"zipcode": "23505-1337",

"geo": {"lat": "-71.4197", "lng": "71.7478"}

},

"phone": "1-477-935-8478 x6430",

"website": "ola.org",

"company": {

"name": "Considine-Lockman",

"catchPhrase": "Synchronised bottom-line interface",

"bs": "e-enable innovative applications"

}

},

{

"id": 7,

"name": "Kurtis Weissnat",

"username": "Elwyn.Skiles",

"email": "Telly.Hoeger@billy.biz",

"address": {

"street": "Rex Trail",

"suite": "Suite 280",

"city": "Howemouth",

"zipcode": "58804-1099",

"geo": {"lat": "24.8918", "lng": "21.8984"}

},

"phone": "210.067.6132",

"website": "elvis.io",

"company": {

"name": "Johns Group",

"catchPhrase": "Configurable multimedia task-force",

"bs": "generate enterprise e-tailers"

}

},

{

"id": 8,

"name": "Nicholas Runolfsdottir V",

"username": "Maxime\_Nienow",

"email": "Sherwood@rosamond.me",

"address": {

"street": "Ellsworth Summit",

"suite": "Suite 729",

"city": "Aliyaview",

"zipcode": "45169",

"geo": {"lat": "-14.3990", "lng": "-120.7677"}

},

"phone": "586.493.6943 x140",

"website": "jacynthe.com",

"company": {

"name": "Abernathy Group",

"catchPhrase": "Implemented secondary concept",

"bs": "e-enable extensible e-tailers"

}

},

{

"id": 9,

"name": "Glenna Reichert",

"username": "Delphine",

"email": "Chaim\_McDermott@dana.io",

"address": {

"street": "Dayna Park",

"suite": "Suite 449",

"city": "Bartholomebury",

"zipcode": "76495-3109",

"geo": {"lat": "24.6463", "lng": "-168.8889"}

},

"phone": "(775)976-6794 x41206",

"website": "conrad.com",

"company": {

"name": "Yost and Sons",

"catchPhrase": "Switchable contextually-based project",

"bs": "aggregate real-time technologies"

}

},

{

"id": 10,

"name": "Clementina DuBuque",

"username": "Moriah.Stanton",

"email": "Rey.Padberg@karina.biz",

"address": {

"street": "Kattie Turnpike",

"suite": "Suite 198",

"city": "Lebsackbury",

"zipcode": "31428-2261",

"geo": {"lat": "-38.2386", "lng": "57.2232"}

},

"phone": "024-648-3804",

"website": "ambrose.net",

"company": {

"name": "Hoeger LLC",

"catchPhrase": "Centralized empowering task-force",

"bs": "target end-to-end models"

}

}

];

print(

'---------------------------------------------------------------------');

print(' MarkSheet ');

print(

'---------------------------------------------------------------------');

List subject = [

[77, 88, 90, 80, 88],

[77, 88, 99, 89, 90],

[77, 60, 70, 80, 90],

[77, 88, 66, 77, 88],

[77, 88, 77, 89, 90],

[77, 88, 88, 55, 89],

[77, 88, 88, 86, 98],

[77, 88, 88, 78, 90],

[77, 88, 88, 78, 90],

[77, 88, 88, 78, 90],

];

for (int i = 0; i < marksheet.length; i++) {

marksheet[i]['Subject'] = subject[i];

}

var total;

var per;

for (int i = 0; i < marksheet.length; i++) {

print(' Student ID: ${marksheet[i]['id']}');

print(' Student Name: ${marksheet[i]['name']}');

print(

' Student Username: ${marksheet[i]['username']}');

print(' Student Email: ${marksheet[i]['email']}');

print(

' Student Address: ${marksheet[i]['address']['suite']}, ${marksheet[i]['address']['street']},${marksheet[i]['address']['city']}');

print(

' Student ZipCode: ${marksheet[i]['address']['zipcode']}');

print(

' Student Phone Number: ${marksheet[i]['phone']}');

print(

' Student Website: ${marksheet[i]['website']}');

print(

'---------------------------------------------------------------------');

print(' Student Company Info: ');

print(

'---------------------------------------------------------------------');

print(

' Student Conpany Name: ${marksheet[i]['company']['name']}');

print(

' Student Conpany CatchPhrase: ${marksheet[i]['company']['catchPhrase']}');

print(

' Student Conpany BS: ${marksheet[i]['company']['bs']}');

print(

'---------------------------------------------------------------------');

print(

'---------------------------------------------------------------------');

print(' Student GeoLocation: ');

print(

'---------------------------------------------------------------------');

print(

' Latitude: ${marksheet[i]['address']['geo']['lat']}');

print(

' Longitude: ${marksheet[i]['address']['geo']['lng']}');

print(

'---------------------------------------------------------------------');

print(' English: ${marksheet[i]['Subject'][0]}');

print(' Urdu: ${marksheet[i]['Subject'][1]}');

print(' Maths: ${marksheet[i]['Subject'][2]}');

print(' Physics: ${marksheet[i]['Subject'][3]}');

print(

' Chemistry: ${marksheet[i]['Subject'][4]}');

total = marksheet[i]['Subject'][0] +

marksheet[i]['Subject'][1] +

marksheet[i]['Subject'][2] +

marksheet[i]['Subject'][3] +

marksheet[i]['Subject'][4];

per = (total / 500) \* 100;

print(

'---------------------------------------------------------------------');

print(' Total :$total');

print(

'---------------------------------------------------------------------');

print(

'---------------------------------------------------------------------');

print(' Percentage:$per');

print(

'---------------------------------------------------------------------');

if (per >= 90) {

print(

'---------------------------------------------------------------------');

print(' Grade A');

print(

'---------------------------------------------------------------------');

} else if (per >= 80) {

print(

'---------------------------------------------------------------------');

print(' Grade B');

print(

'---------------------------------------------------------------------');

} else if (per >= 70) {

print(

'---------------------------------------------------------------------');

print(' Grade C');

print(

'---------------------------------------------------------------------');

} else if (per >= 60) {

print(

'---------------------------------------------------------------------');

print(' Grade D');

print(

'---------------------------------------------------------------------');

} else if (per >= 50) {

print(

'---------------------------------------------------------------------');

print(' Grade E');

print(

'---------------------------------------------------------------------');

} else if (per >= 40) {

print(

'---------------------------------------------------------------------');

print(' Grade F');

print(

'---------------------------------------------------------------------');

}

}