Q1: Take a list, say for example this one:

a = [1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89]

and write a program that prints out all the elements of the list that are less than 5.

A1: Dart List Remove Elements

void main() {

var a = [1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89];

a.removeWhere((element) => element > 5);

print(a);

}

Q2: Take two lists, for example:

a = [1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89]

b = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13]

and write a program that returns a list that contains only the elements that are common between them (without duplicates). Make sure your program works on two lists of different sizes.

A2: Dart Unique Elements

void main() {

var a = [1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89];

var b = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13];

var listCommen = a.where((element) => b.contains(element)).toSet().toList();

print(listCommen);

}

Q3: Let’s say you are given a list saved in a variable:

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

Write a Dart code that takes this list and makes a new list that has only the even elements of this list in it.

A3: Dart Filter List

void main() {

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

a = a.where((element) => element % 2 == 0).toList();

print(a);

}

Q4: Write a program that takes a list of numbers for example

a = [5, 10, 15, 20, 25]

and makes a new list of only the first and last elements of the given list. For practice, write this code inside a function.

A4: Dart List

void main() {

var a = [5, 10, 15, 20, 25];

a.removeRange(1,4);

print(a);

}

OR

void main() {

List<int> a = [5, 10, 15, 20, 25];

List<int> result = getFirstAndLastElements(a);

print(result);

}

List<int> getFirstAndLastElements(List<int> inputList) {

if (inputList.length < 2) {

throw Exception('Input list should have at least 2 elements.');

}

List<int> outputList = [inputList.first, inputList.last];

return outputList;

}