

```
1 void main() {
2   // Print your name and assignment number
3   print('Name: Durr e Najaf');
4   print('Assignment No: 2\n');
5
6   // Task 1: Sorting and Merging
7   print('Task 1: Sorting and Merging');
8   List<int> list1 = [5, 2, 8, 1];
9   List<int> list2 = [7, 3, 6, 4];
10  list1.sort();
11  list2.sort();
12  List<int> mergedList = [...list1, ...list2]..sort();
13  print('Merged and Sorted List: $mergedList\n');
14
15  // Task 2: Filtering and Mapping
16  print('Task 2: Filtering and Mapping');
17  List<int> numbers = [5, -1, 4, -2, 5, -6, 7, -8];
18  List<int> positiveNumbers = numbers.where((num) => num >= 0).toList();
19  List<int> squaredNumbers = positiveNumbers.map((num) => num * num).toList();
20  print('Squared Positive Numbers: $squaredNumbers\n');
21}
```

Name: Durr e Najaf
Assignment No: 2

Task 1: Sorting and Merging
Merged and Sorted List: [1, 2, 3, 4, 5, 6, 7, 8]

Task 2: Filtering and Mapping
Squared Positive Numbers: [9, 16, 25, 49]

Task 3: Searching and Removing
List after removing all occurrences of 'apple': [banana, orange, grape, banana]

Task 4: Extracting and Combining
Combined Integer: 123456789

Task 5: Reversing and Summing
Sum of the First Half: 260

Task 6: Sorting and Grouping

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```
49 // Task 6: Sorting and Grouping
50 print('Task 6: Sorting and Grouping');
51 List<String> words = ['dart', 'is', 'awesome', 'fun'];
52 words.sort((a, b) => a.length.compareTo(b.length));
53 Map<int, List<String>> groupedByLength = {};
54 for (var word in words) {
55   groupedByLength[word.length] ??= [];
56   groupedByLength[word.length]!.add(word);
57 }
58 print('Grouped Words by Length: $groupedByLength\n');
59
60 // Task 7: Shuffling and Slicing
61 print('Task 7: Shuffling and Slicing');
62 List<int> numbersTask7 = [1, 2, 3, 4, 5, 6, 7, 8];
63 numbersTask7.shuffle();
64 int mid = numbersTask7.length ~/ 2;
65 List<int> firstHalf = numbersTask7.sublist(0, mid);
66 List<int> secondHalf = numbersTask7.sublist(mid);
67 print('First Half: $firstHalf, Second Half: $secondHalf\n');
68
69 // Task 8: Filtering and Counting
70 print('Task 8: Filtering and Counting');
71 List<int> numbersTask8 = [2, 3, 4, 5, 6, 7, 8, 9, 10];
72 List<int> primeNumbers = numbersTask8.where(isPrime).toList();
73 print('Prime Numbers: $primeNumbers, Count: ${primeNumbers.length}\n');
74
75 // Task 9: Searching and Substituting
76 print('Task 9: Searching and Substituting');
77 List<String> sentences = ['dart is awesome', 'I love dart', 'dart is fun'];
```

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Task 6: Sorting and Grouping
Grouped Words by Length: (2: [is], 3: [fun], 4: [dart], 7: [awesome])

Task 7: Shuffling and Slicing
First Half: [1, 5, 6, 3], Second Half: [4, 2, 8, 7]

Task 8: Filtering and Counting
Prime Numbers: [2, 3, 5, 7], Count: 4

Task 9: Searching and Substituting
Updated Sentences: [flutter is awesome, I love flutter, flutter is fun]

Task 10: Combining and Reducing
Sum of Combined List: 36

The parameter name 'num' matches a visible type name.
Try adding a name for the parameter or changing the parameter name to not match an existing type.

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Dart 3.5.1 • Flutter 3.24.1 Stable channel

```
21 // Task 3: Searching and Removing
22 print('Task 3: Searching and Removing');
23 List<String> fruits = ['apple', 'banana', 'orange', 'apple', 'grape', 'banana',
24   'apple'];
25 String searchString = 'apple';
26 fruits.removeWhere((fruit) => fruit == searchString);
27 print('List after removing all occurrences of 'apple': $fruits\n');
28
29 // Task 4: Extracting and Combining
30 print('Task 4: Extracting and Combining');
31 List<List<int>> nestedLists = [
32   [1, 2, 3],
33   [4, 5, 6],
34   [7, 8, 9]
35 ];
36 List<int> flatList = nestedLists.expand((list) => list).toList();
37 String combinedString = flatList.join('');
38 int combinedInteger = int.parse(combinedString);
39 print('Combined Integer: $combinedInteger\n');
40
41 // Task 5: Reversing and Summing
42 print('Task 5: Reversing and Summing');
43 List<int> numbersTask5 = [10, 20, 30, 40, 50, 60, 70, 80];
44 List<int> reversedNumbers = List.from(numbersTask5.reversed);
45 int halfwayIndex = reversedNumbers.length ~/ 2;
46 int sumOfFirstHalf = reversedNumbers.sublist(0, halfwayIndex).reduce((a, b) => a +
47   b);
48 print('Sum of the First Half: $sumOfFirstHalf\n');
```

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Run

74

// Task 9: Searching and Substituting

75

print("Task 9: Searching and Substituting");

76

List<String> sentences = ["dart is awesome", "I love dart", "dart is fun"];

77

String searchSubstring = "dart";

78

String replaceSubstring = "flutter";

79

List<String> updatedSentences = sentences.map((sentence) =>

80

sentence.replaceAll(searchSubstring, replaceSubstring)).toList();

81

print("Updated Sentences: \$updatedSentences\n");

82

// Task 10: Combining and Reducing

83

print("Task 10: Combining and Reducing");

84

List<int> listA = [1, 2, 3, 4];

85

List<int> listB = [5, 6, 7, 8];

86

List<int> combinedList = List.generate(listA.length, (index) => listA[index] +

87

listB[index]);

88

int sumOfCombinedList = combinedList.reduce((a, b) => a + b);

89

print("Sum of Combined List: \$sumOfCombinedList\n");

90

}

91

// Helper function to check if a number is prime

92

bool isPrime(int number) {

93

if (number < 2) return false;

94

for (int i = 2; i <= number ~/ 2; i++) {

95

if (number % i == 0) return false;

96

}

97

return true;

98

}

99

}

100

2 issues

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line 18, col 46

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line 19, col 51

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