FRANSISKA WIDYA KRISANTI

NIM: 2341760101

KELAS / NO. ABSEN: SIB 3B / 16

PEMROGRAMAN MOBILE

DART

Assignment - Tugas

Soal:

• Create a leetcode account and try to finish the problem set using dart

language (choose one):

• Easy: 5 problems

• Medium: 2 problems

• Hard: 1 problem

• Buat akun leetcode dan coba selesaikan rangkaian soal menggunakan bahasa dart

(pilih salah satu):

• Mudah: 5 soal

• Sedang: 2 soal

• Sulit: 1 soal

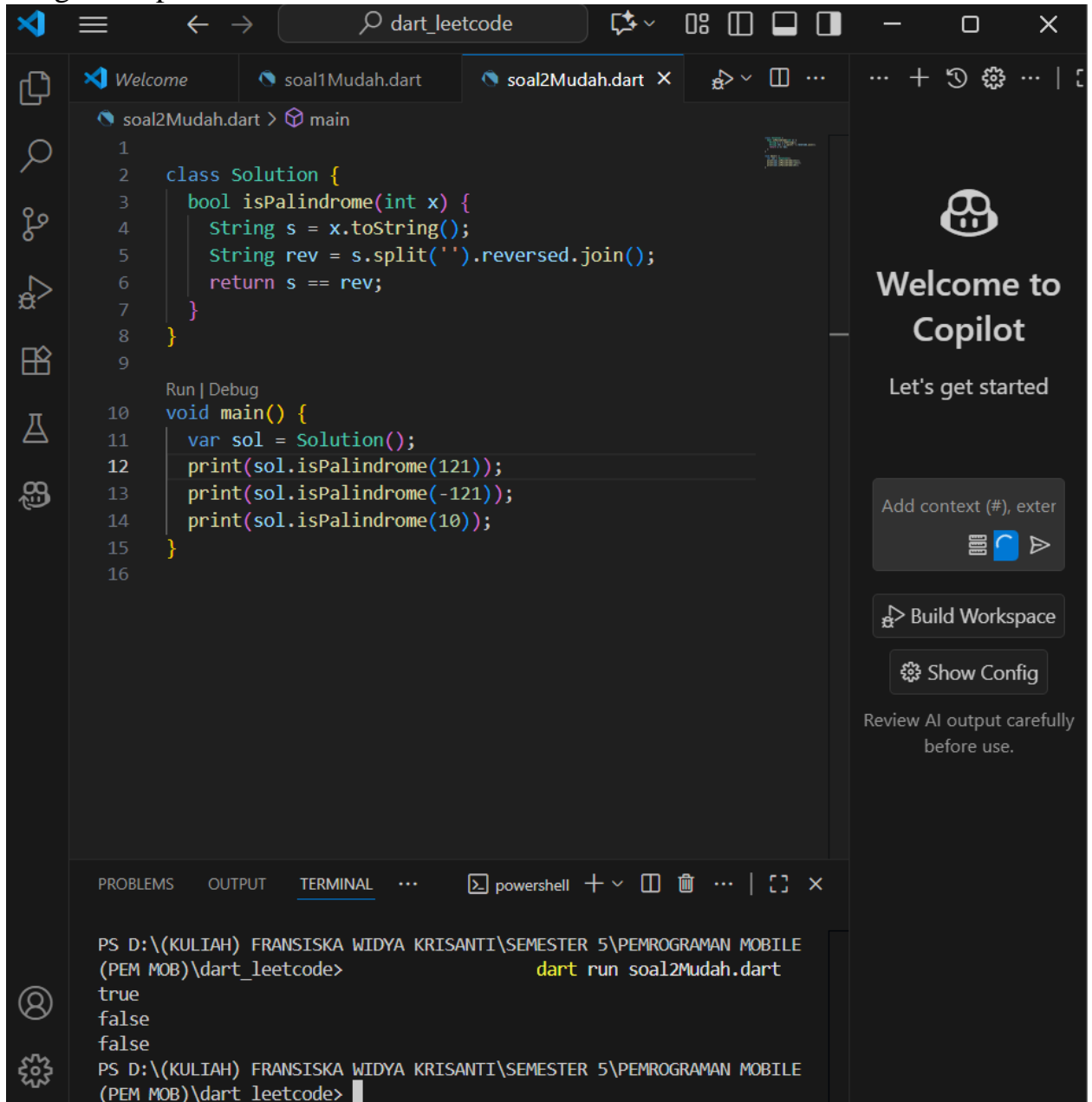Jawaban:

Memilih soal yang mudah yaitu 5 soal

1. Penggunaan two sum

```dart
class Solution {
  List<int> twoSum(List<int> nums, int target) {
    Map<int, int> seen = {};
    for (int i = 0; i < nums.length; i++) {
      int complement = target - nums[i];
      if (seen.containsKey(complement)) {
        return [seen[complement]!, i];
      }
      seen[nums[i]] = i;
    }
    return [];
  }
}

void main() {
  var sol = Solution();
  print(sol.twoSum([2,7,11,15], 9));
}
```

```
PS D:\(KULIAH) FRANSISKA WIDYA KRISANTI\SEMESTER 5\PEMROGRAMAN MOBILE
(PEM MOB)\dart_leetcode> dart run soal1Mudah.dart
[0, 1]
PS D:\(KULIAH) FRANSISKA WIDYA KRISANTI\SEMESTER 5\PEMROGRAMAN MOBILE
(PEM MOB)\dart leetcode>
```

2. Pengunaan palindrome

```dart
class Solution {
  bool isPalindrome(int x) {
    String s = x.toString();
    String rev = s.split('').reversed.join();
    return s == rev;
  }
}

void main() {
  var sol = Solution();
  print(sol.isPalindrome(121));
  print(sol.isPalindrome(-121));
  print(sol.isPalindrome(10));
}
```
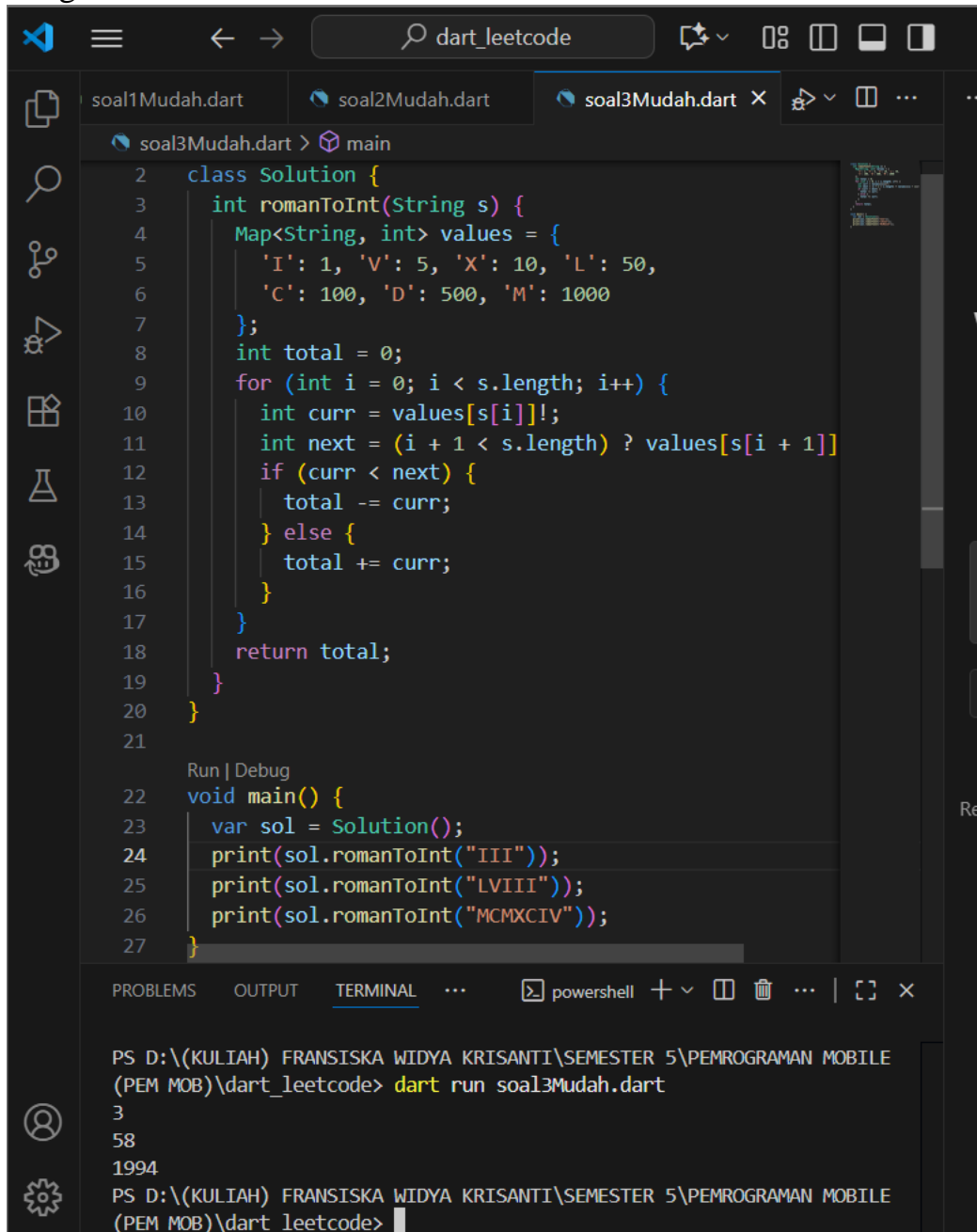
```
PS D:\(KULIAH) FRANSISKA WIDYA KRISANTI\SEMESTER 5\PEMROGRAMAN MOBILE
(PEM MOB)\dart_leetcode>                dart run soal2Mudah.dart
true
false
false
PS D:\(KULIAH) FRANSISKA WIDYA KRISANTI\SEMESTER 5\PEMROGRAMAN MOBILE
(PEM MOB)\dart_leetcode>
```
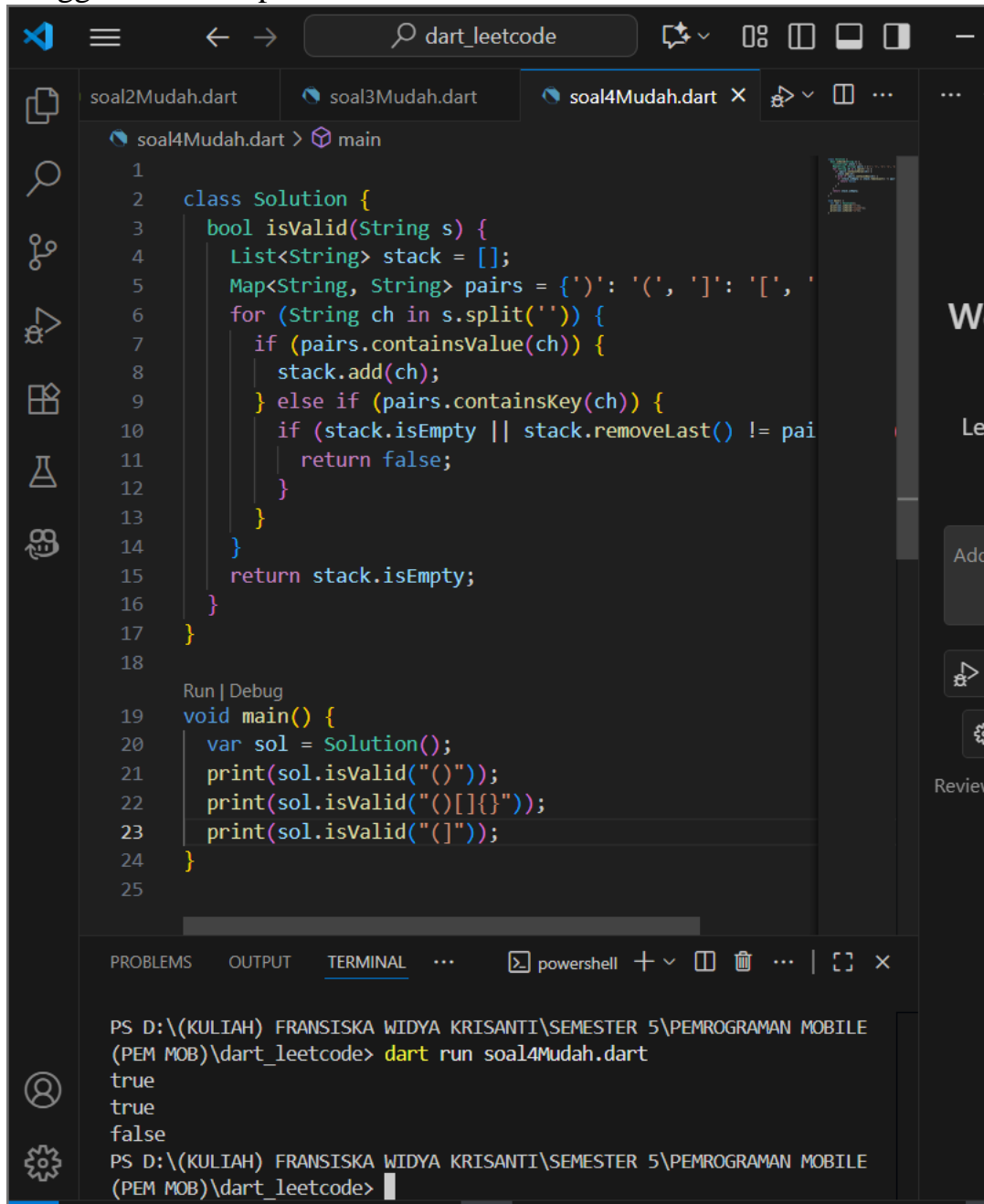
3. Pengunaan roman to int

```dart
class Solution {
  int romanToInt(String s) {
    Map<String, int> values = {
      'I': 1, 'V': 5, 'X': 10, 'L': 50,
      'C': 100, 'D': 500, 'M': 1000
    };
    int total = 0;
    for (int i = 0; i < s.length; i++) {
      int curr = values[s[i]]!;
      int next = (i + 1 < s.length) ? values[s[i + 1]]
      if (curr < next) {
        total -= curr;
      } else {
        total += curr;
      }
    }
    return total;
  }
}

void main() {
  var sol = Solution();
  print(sol.romanToInt("III"));
  print(sol.romanToInt("LVIII"));
  print(sol.romanToInt("MCMXCIV"));
}
```

PROBLEMS   OUTPUT   TERMINAL   ...

PS D:\(KULIAH) FRANSISKA WIDYA KRISANTI\SEMESTER 5\PEMROGRAMAN MOBILE (PEM MOB)\dart_leetcode> dart run soal3Mudah.dart
3
58
1994
PS D:\(KULIAH) FRANSISKA WIDYA KRISANTI\SEMESTER 5\PEMROGRAMAN MOBILE (PEM MOB)\dart leetcode>

4. Penggunaan valid parenthess

```dart
class Solution {
  bool isValid(String s) {
    List<String> stack = [];
    Map<String, String> pairs = {')': '(', ']': '[',
    for (String ch in s.split('')) {
      if (pairs.containsValue(ch)) {
        stack.add(ch);
      } else if (pairs.containsKey(ch)) {
        if (stack.isEmpty || stack.removeLast() != pai
          return false;
        }
      }
    }
    return stack.isEmpty;
  }
}

void main() {
  var sol = Solution();
  print(sol.isValid("()"));
  print(sol.isValid("()[]{}"));
  print(sol.isValid("(]"));
}
```
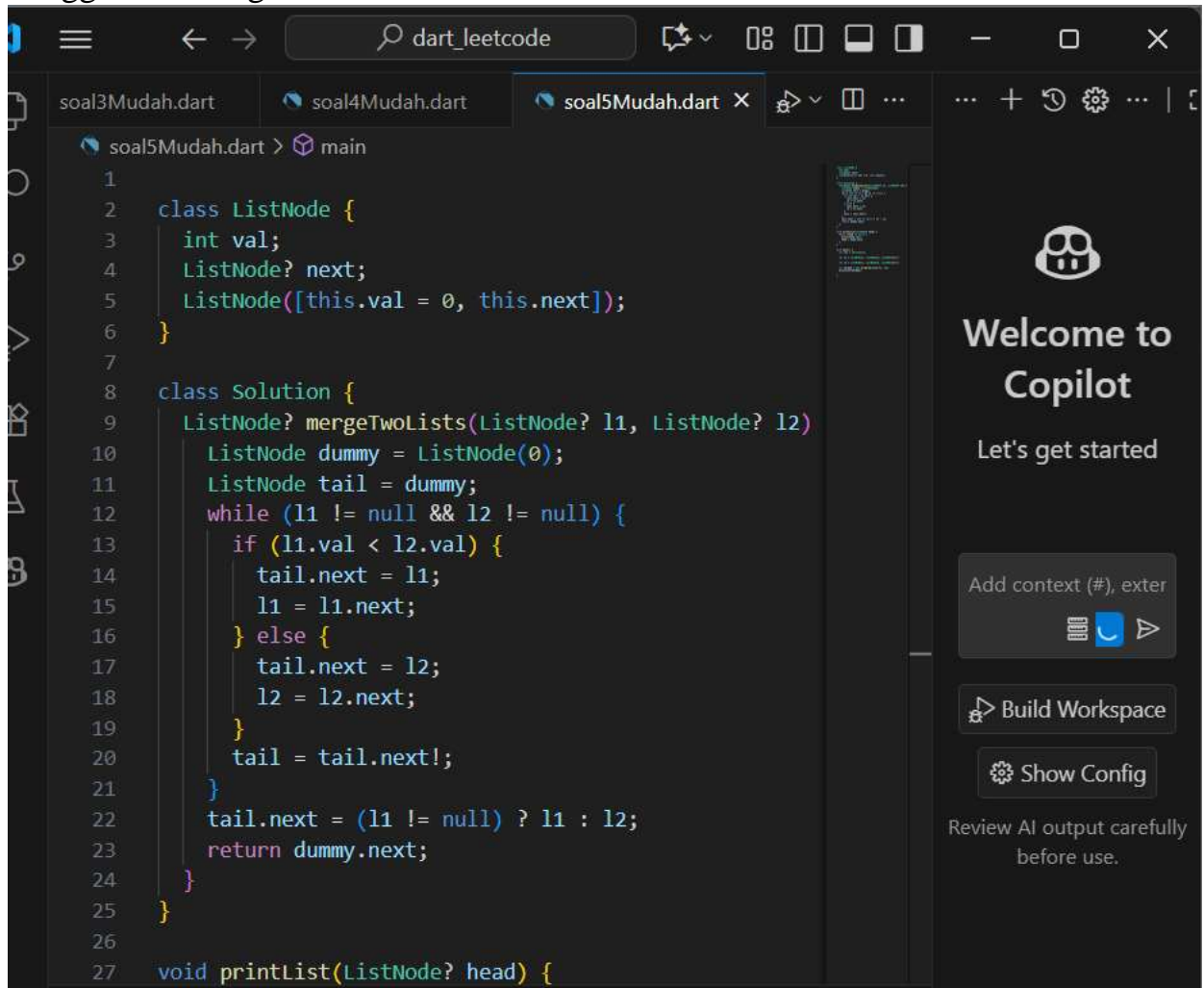
Terminal output:

```
PS D:\(KULIAH) FRANSISKA WIDYA KRISANTI\SEMESTER 5\PEMROGRAMAN MOBILE
(PEM MOB)\dart_leetcode> dart run soal4Mudah.dart
true
true
false
PS D:\(KULIAH) FRANSISKA WIDYA KRISANTI\SEMESTER 5\PEMROGRAMAN MOBILE
(PEM MOB)\dart_leetcode>
```

5. Penggunaan merge two lists


```dart
class ListNode {
  int val;
  ListNode? next;
  ListNode([this.val = 0, this.next]);
}

class Solution {
  ListNode? mergeTwoLists(ListNode? l1, ListNode? l2)
    ListNode dummy = ListNode(0);
    ListNode tail = dummy;
    while (l1 != null && l2 != null) {
      if (l1.val < l2.val) {
        tail.next = l1;
        l1 = l1.next;
      } else {
        tail.next = l2;
        l2 = l2.next;
      }
      tail = tail.next!;
    }
    tail.next = (l1 != null) ? l1 : l2;
    return dummy.next;
  }
}

void printList(ListNode? head) {
```

```dart
26
27  void printList(ListNode? head) {
28    while (head != null) {
29      print(head.val);
30      head = head.next;
31    }
32  }
33
    Run | Debug
34  void main() {
35    var sol = Solution();
36
37    var l1 = ListNode(1, ListNode(2, ListNode(4)));
38
39    var l2 = ListNode(1, ListNode(3, ListNode(4)));
40
41    var merged = sol.mergeTwoLists(l1, l2);
42    printList(merged);
43
44  }
45
```

PROBLEMS   OUTPUT   TERMINAL   ···   powershell

```
1
1
2
3
4
4
PS D:\(KULIAH) FRANSISKA WIDYA KRISANTI\SEMESTER 5\PEMROGRAMAN MOBILE
```