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Code :  
Main

```
11 public class DLLMain {  
    Run | Debug | Codeium: Refactor | Explain | Generate Javadoc  
12     public static void main(String[] args) {  
13         DLL dll = new DLL();  
14         dll.addLast(in:10);  
15         dll.addLast(in:100);  
16         dll.addLast(in:34);  
17         dll.addLast(in:20);  
18         dll.addLast(in:200);  
19         dll.addLast(in:75);  
20         System.out.println("Initial data : ");  
21         dll.print();  
22         System.out.println();  
23  
24         System.out.println("Display data from toArray() function : ");  
25         //cek fungsi toArray()  
26         int[] arr = dll.toArray();  
27         for(int x : arr){  
28             System.out.print(" "+x);  
29         }  
30  
31         System.out.println();  
32         System.out.println();  
33  
34         System.out.println("Display data from sublist() function : ");  
35  
36         //cek fungsi sublist()  
37         DLL subList = dll.sublist(start:1, end:3);  
38         subList.print();  
39  
40         System.out.println();  
41  
42         //cek fungsi addAll()  
43         DLL dll2 = new DLL();  
44         dll2.addLast(in:212);  
45         dll2.addLast(in:212);  
46         dll2.addLast(in:212);  
47         dll.addAll(dll2);  
48         System.out.println("Display data from addAll() function : ");  
49         dll.print();  
50  
51         System.out.println();  
52  
53         //cek fungsi containAll  
54         DLL dll3 = new DLL();  
55         dll3.addLast(in:100);  
56         dll3.addLast(in:34);  
57         dll3.addLast(in:212);  
58         System.out.println("Display data from containsAll() function : ");  
59         System.out.println(""+dll.containsAll(dll3));  
60  
61         System.out.println();  
62  
63         //cek fungsi removeAll()  
64         dll.removeAll(dll3);  
65         System.out.println("Display data from removeAll() function : ");  
66         dll.print();  
67     }  
68 }  
69
```

## DLL

```
Codeium: Refactor | Explain | Generate Javadoc
12 int[] toArray(){
13     int [] data = new int[size()]; // It creates an empty array.
14     Node2P tmp = head;
15     int index = 0;
16     while (tmp != null) { // It traverses the DLL using a loop, retrieves the data from each node, and adds it to the array.
17         data[index++] = tmp.data;
18         tmp = tmp.next;
19     }
20     return data; // Finally, it returns the populated array.
21 }
22
23 //soal 2
Codeium: Refactor | Explain
24 DLL sublist(int start, int end){
25     DLL sublist = new DLL();
26     if (start < 0 || end >= size() || start > end) { // It checks if the given start and end positions are valid within the range of the DLL.
27         System.out.println("Invalid sublist range!!");
28         return sublist;
29     }
30     Node2P tmp = head;
31     int index = 0;
32     while (tmp != null && index <= end) {
33         if (index >= start) { // If the positions are valid, it creates a new DLL object, sublist, and copies the elements from the DLL's start position
34             //to the end position into sublist.
35             sublist.addLast(tmp.data);
36         }
37         tmp = tmp.next;
38         index++;
39     }
40     return sublist; // Finally, it returns the sublist.
41 }

42
43 //soal 3
Codeium: Refactor | Explain
44 void addAll(DLL list){
45     Node2P tmp = list.head; // It adds all the elements from the given list DLL to the tmp DLL.
46     while (tmp!=null){ // It uses a loop to iterate over each element in list and calls the addLast() method to add it to the current DLL.
47         addLast(tmp.data);
48         tmp = tmp.next;
49     }
50 }
51
52 //soal 4
Codeium: Refactor | Explain
53 boolean containsAll(DLL list){
54     Node2P tmp = list.head;
55     while (tmp != null) { // It uses a loop to iterate over each element in list and checks its existence in the current DLL using the contains()
56         // helper method.
57         if (!contains(tmp.data)) { // It checks if all the elements from the given list DLL exist in the current DLL.
58             return false;
59         }
60         tmp = tmp.next;
61     }
62     return true;
63     // If any element is not found, it returns false; otherwise, it returns true.
64 }
65
Codeium: Refactor | Explain | Generate Javadoc
66 boolean contains(int value) {
67     Node2P tmp = head;
68     while (tmp != null) {
69         if (tmp.data == value) {
70             return true;
71         }
72         tmp = tmp.next;
73     }
74     return false;
75 }
76

77 //soal 5
Codeium: Refactor | Explain
78 void removeAll(DLL list){
79     // It removes all the elements from the current DLL that also exist in the given list DLL.
80     Node2P tmp = list.head;
81     while (tmp != null) { // It uses a loop to iterate over each element in list and calls the deleteByData() method to remove the corresponding
82         // elements from the current DLL.
83         deleteByData(tmp.data);
84         tmp = tmp.next;
85     }
86 }
87 }
```

Result :

```
(zharsuke@asus-vivobook) - [~/College/Semester_2/Data_Structure_and_Algorithm_Practicum/uas]
$ /usr/bin/env /usr/lib/jvm/java-17-openjdk-amd64/bin/java -XX:+ShowCodeDetailsInExceptionMessages f1da50744e032ea38f728380efd6/redhat.java/jdt_ws/uas_267c1de3/bin DLLMain
Picked up _JAVA_OPTIONS: -Dawt.useSystemAAFontSettings=on -Dswing.aatext=true
Initial data :
10-100-34-20-200-75

Display data from toArray() function :
10 100 34 20 200 75

Display data from sublist() function :
100-34-20

Display data from addAll() function :
10-100-34-20-200-75-212-212-212

Display data from containsAll() function :
true

Display data from removeAll() function :
10-20-200-75

(zharsuke@asus-vivobook) - [~/College/Semester_2/Data_Structure_and_Algorithm_Practicum/uas]
$
```