

Homework 5

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1) Completed

2) Completed

| Statement | Variable Values |
|--|-----------------------------|
| List<Integer> list = new SomeListImplementation<>(); | |
| | list = <> |
| list.add(7); | |
| | list = <7> |
| list.add(-12); | |
| | list = <7,-12> |
| list.add(3); | |
| | list = <7,-12,3> |
| int x = list.size(); | |
| | list = <7,-12,3> x = 3 |
| x = list.get(1); | |
| | list = <7,-12,3> x = -12 |
| x = list.remove(0); | |
| | list = <-12,3> x = 7 |
| x = list.remove(1); | |
| | list = <-12> x = 3 |
| x = list.size(); | |
| | list = <-12> x = 1 |

3)

If a developer is creating their own implementation, optional operations allow for more flexibility, and they don't have to provide a method body for a class they will not use.

The drawback of this is that it'll be hard to decide what method really is optional when planning. A developer may want to have a strict set of rules because they have a clearer picture of what they are working with, and optional operations make it harder to realize that.

- 4) The drawback of this is it restricts the flexibility of the implementation, and developers would not be able to have the full capacity to have whatever element they want in a list.

The benefit is that it gives definite guidelines which allows for better and clearer implantation of the code, making the code operate correctly.