

MSO Lab Assignment 2: Programming Learning App

Jan Huls (4699610), Arwin Moormans (4965957)

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Software Design & Patterns

Below you will find a Class diagram to show the structure of the application.

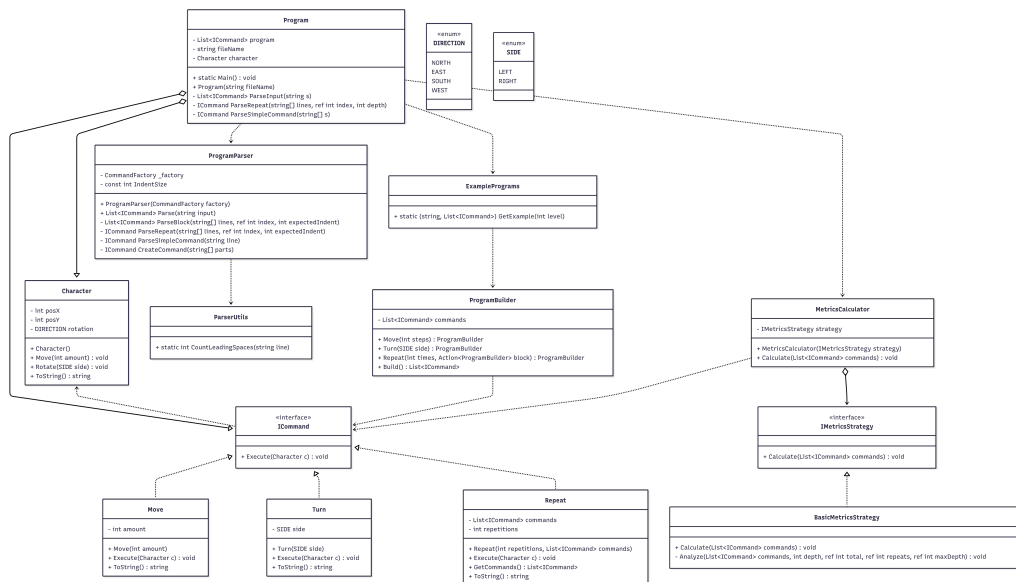


Figure 1: Class diagram of the Programming Learning App

We have used multiple patterns to structure our program.

The first pattern is the Composite pattern in the repeat command class. This class holds all the functionality of the repeat command, such as the commands it needs to repeat and how many times. Because one of the repeated commands can be another repeat command, we use the Composite pattern. This makes a tree like structure where non-repeat commands are leafs and other repeat commands are nodes, meaning **ICommand** is the component and **Repeat** is the composite. This way it is possible to call the Execute function of the root command and that will automatically execute every command in the tree.

For calculating different metrics we use the Strategy pattern. This ensures that it is possible to add more

At last we have used the Builder pattern to create the example programs. This way it is possible to create

Evaluation

Work Distribution & Retrospective