

# **MSO Lab Assignment 2: Programming Learning App**

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## **Software Design & Patterns**

Below you will find a Class diagram to show the structure of the application. We have used multiple pattern's 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 reapeat and how many times. Because one of the repeated commands can be another reapeat command, we use the Composite pattern. This makes a tree like structure where non-repeat commands are leafs and other repeat commands are nodes. This way it is possible to call the Execute function of the root command and that will automaticly execute every command in the tree.

An other pattern is the Factory pattern that we use to construct commands bla bla

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**