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APCS Final Project Report

All-In-One

What is All-In-One?

All-In-One is our name for our UML diagram generator as it completes the requirements of the final project in one go. Designed to make our lives easier, it parses through a directory, looking for .java files. From there, it creates a hierarchy of methods and variables, outputting appropriate modifiers and other forms of syntax.

How to use All-In-One?

To use All-In-One, run “java UMLDiagram <path to directory>”. An example would be running it on the directory UMLDiagram is housed in: “java UMLDiagram .” This will output a UML Diagram for our project.

How was All-In-One designed?

All-In-One was designed with the project requirements in mind. Because parts of the project did not absolutely demand those dictated in the requirements, we had to devise creative ways to implement them. We also decided to delve into various parts of computer science that were not talked about in class, such as regex. Through regex, we were able to accomplish most of the requirements that we set for ourselves in terms of data processing. All-In-One contains two different classes for the data that comprises a UML diagram, Variable and Method. It contains the “get” methods often used in class, as well as the “set” methods. Diagram.java was our interface for scalability, allowing us to implement other future diagrams if we so chose to. Filefinder.java was our utility class for methods that interacted with files. Structure.java provided two more methods that we required at one point. All of this works together in UMLDiagram.java, which outputs the diagram. On the next page is our UML diagram generated by our final project.