CSC 413 Project Documentation

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413.02

https://github.com/csc413-SFSU-Souza/csc413-p2-pragati-e

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1 Introduction

1.1 Project Overview

In this project, we will create an interpreter for the hypothetical language X. X is a compressed version of Java. The interpreter oversees interpreting byte codes generated by code files. To run the program, the interpreter and the Virtual Machine will collaborate with each other.

1.2 Technical Overview

The interpreter is the program's primary function, and it will call the BytecodeLoader to load the bytecodes from the file into a program object, which is just an arraylist. The parameters are sent into the appropriate bytecode. After loading, the virtual machines execute () function is invoked, which does the processing. In this procedure, there is a while true loop that executes each bytecode. If the loop is broken, the execution stops.

1.3 Summary of Work Completed

Firstly, I executed all the methods in the RunTimeStackClass. The ByteCodeLoader class came next. For each bytecode, I generated a java class and coded the methods in it. Following that, a virtualmachine class is required for execution, and all the implemented methods here are addressed by the specific bytecode class.

2 Development Environment

A development environment is a set of tools used to create, test, and debug an application or software. IntelliJ was the IDE I used to create this project.

3 How to Build/Import your Project

The very first thing I did was clone my git repository. Then, in IntelliJ, I built a java project and copied the source into it. A file is required to launch the main. As a result, I added the file's name as an argument.

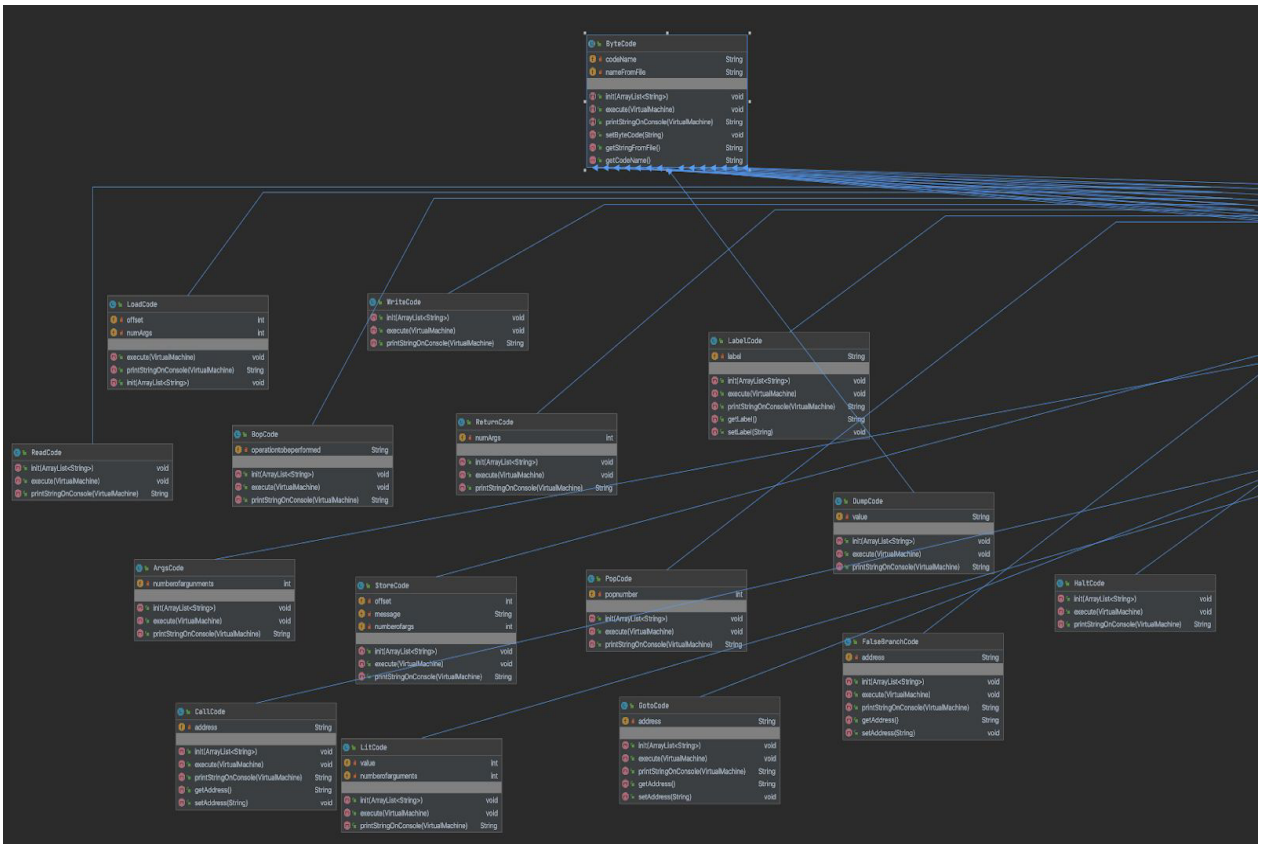
4 How to Run your Project

Any project should not have compile time errors to execute. So, however try to finish the job, I repaired such errors.

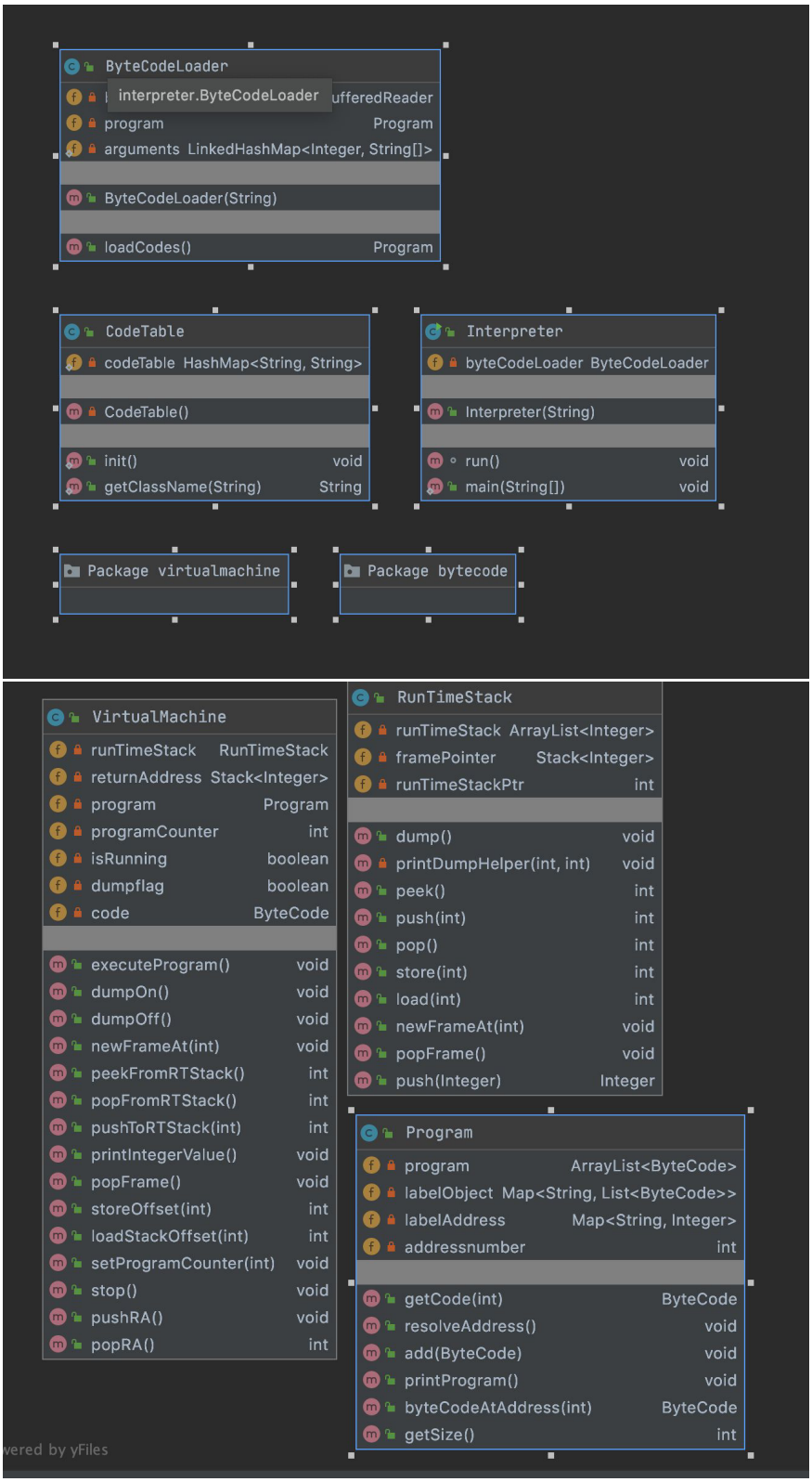
5 Assumption Made

None

6 Implementation Discussion (Mapping)



6.1 Class Diagram



7 Project Reflection

This effort improved my grasp of how an interpreter works. This assignment also taught me to think more logically because I spent a lot of time considering how to approach the issue.

8 Project Conclusion/Results

Finally, I realized that solving an issue requires work and rational thought. I was successful in obtaining the intended result.