**CS323 Documentation**

**Assignment 3**

1. **Problem Statement**

*For this assignment we are supposed to generate assembly code for a simplified version of RAT18S. The assignment also requires symbol table handling. So, the output would be the assembly code and a symbol table that are being generated. All identifiers used in the program will be placed in a symbol table and will be accessible by the symbol table handling procedures. In order to implement all these new features, we used our assignment 2 and modified it to generate the assembly code and the symbol table handling.*

1. **How to use your program**

*In order to use our code, the user needs to look for a.out which is our executable and is under the executable folder. in UNIX environments (Mac or Linux) the user needs to type ./a.out which is the command for execution of executable in Mac. The program will use the input files inside of the executable folder and will generate three output text files containing the symbol table handling and the assembly code. Therefore, the input files contain the input codes in Rat18s for converting them to the assembly code.*

***3. Design of your program***

*For this assignment we built upon our second assignment and made*

*the project to be able to generate the assembly code. Therefore we*

*made a new class called Assembly.h which is responsible for*

*generating assembly code and basically converts the rat18s code to*

*assembly code. The codes that are used as input are located in the*

*executable folder which is the same folder that contains the*

*executable for our program. To run the program, you would have to make sure you have the input files inside the same folder as the executable assembly which is located inside the executable folder.*

*Then type in ./assembly and if the program is ran correctly you should get this:*

*You can now open outputfile1.txt!*

*Completed inputfile2.txt*

*You can now open outputfile2.txt!*

*Completed inputfile3.txt*

*You can now open outputfile3.txt!*

*Then you can go check the folder for the three output files.*

**4. Any Limitation**

*NONE*

***5 .* Any Shortcoming**

*NONE*

*sample run:*

*/CPSC323Project/Assignment\_3/executable$ ./a.out*

*Completed inputfile1.txt*

*Completed inputfile2.txt*

*Completed inputfile3.txt*

*Now the output files have been generated and they contain the symbol table handling and the assembly code that was produced by the Rat18s code in input files.*