**Meeting Minutes**

**Date:** March 17, 2014

**Start Time:** 10:00am

**End Time:** 1:00pm

**Members Present:** Drew Aaron, Michael Beaver, and Travis Hunt

**Members Absent:** Clay Boren, Chad Farley, and Andrew Hamilton

**Topics** **Discussed**

* Backend Detailed Design
* Frontend Development

**Decisions and Actions Taken**

Travis and Michael worked on the Backend Translator pseudocode. They were able to describe the pseudocode necessary for most of the functionality of the Pass 1 Translator of the Assembler. They were also able to outline the data members and methods necessary for the first pass. The final details of Pass 1 will need to be decided at the next meeting. In addition, the details of Pass 2 will be discussed at the next meeting, including the interface between the Assembler and the Pass 1 and Pass 2 Translators. See the attached design particulars.

Drew continued development of the Frontend user interface. He has updated the Source Code Editor to include tab support and has added temporary hardcoded line numbers. He also implemented additional functionality, including file import and export support. The user interface also will support hotkeys, such as Ctrl+N to create a new project. The Frontend team will soon finish implementing the main user interface functionality. At that point the Frontend team and the Backend team will determine the interfaces and will be folded into one core team.

The next team meeting will be Tuesday, March 18, 2014 at 3:30pm in the Commons building.

**Supplementary Information**

**Pass 1 Translator Data Members**

int locationCounter;

string errorStream[][];

string filename;

string label;

string line;

string opcode;

string params;

SymbolTable symTable;

**Pass 1 Translator Methods**

public ProcessLine(string inputLine)

assign line to inputLine;

if line[0] is “\*”, then ignore the line because it is a comment and continue

assign label to substring of line from 0 to 8

if line[9] is not blank, then throw error

assign opcode to substring of line from 10 to 14

if line[15] is not blank, then throw error

assign params to substring of line from 16 to 79

private ValidateInput()

ValidateLabel()

ValidateOpcode()

ValidateParams()

private ValidateLabel()

check for invalid characters or character sequences (such as invalid spaces)

check if the label already exists in symTable

if it exists, then throw error

else, add the label and location to symTable

private ValidateOpcode()

check if opcode is in machine op table

if it is not, then throw error

else, continue because opcode is valid

**Potential Use of Translator in Assembler**

string intermediateFile;

string objectFile;

intermediateFile = Pass1.Translate(sourceCode);

objectFile = Pass2.Translate(intermediateFile);