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**Foundation of Computer System Software COSC 5331**

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**Project 1 Report**

1. **Contents of Directory**
   1. Makefile
      1. It automates compilation
   2. guish.cpp
      1. guish source code
   3. guish.l
      1. source code for lexical analyzer
2. **Estimated number of hours on this part**

45 hours

1. **Overview of how you solved.**

First of all, I started with prompt part which was easy part. Then, I started to implement external commands implementation therefore; I recover my information in chapter 2. After that, I implemented I/O direction commands. I searched them in the Internet and I found some documents then I understood the concept of I/O direction. Also, Dr. Katangur explained one more time in class time so it became more clear. After that I implemented history part which was not too hard to do. As a last part I implemented “r” and “r n” part that was the hardest part for me.

1. **Description of any major problems you encountered.**

It was difficult to find solution for “r n” part because there are so many combinations.

1. **Description of the testing procedures you employed.**

I tested guish after I completed each step. Also I tested when I finished entire project. It passed my all tests.