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Hmwk 8 Project Report
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The Werewolf of Millers Hollow Project Report

For this project, I designed a game called "The Werewolf of Millers Hollow". In this game there will be nine players, three werewolves, three gods, and three humans. gods include a hunter, a prophet, and a witch. Werewolves can kill one player each night, the prophet can check one player's identity each night, the witch can poison one player and save one player throughout the entire game, and the hunter can take someone out with him when he is out. For werewolves to win, they will have to get all the gods out or all the humans out. For gods and humans to win, they will have to get all the werewolves out.

Since my friends and I play this game a lot during our spare time, I am very familiar with its rules and procedures. Therefore, when I decided I am going to design this game for my project, the first thing I did to prepare was to write down the detailed procedures, such as writing down everything that is going to happen during the night and during the day, in which order will each session be implemented. Then I decided all the class I am going to write for my project, and the private data members for each of them. Finally, I thought about how inputting and outputting files can be a part of my game, since this game is all about interactions among all players, I decided to output each victim's last words and all alive player's comments into two different files, thus players are able to interact with each other by looking at their comments or last words.

I also wrote a code skeleton for my project. I think the skeleton is very useful. By writing the skeleton I was able to turn my written procedures into pseudocodes. Since the skeleton requires all classes and their private data members and functions, I was able to find an easier way to implement several parts of my game than what I originally planned. When I was writing the skeleton, it also reminded me about many details that I forgot to consider when designing the procedure. This is really helpful because it prevents the situation in which I only recognize my mistakes after I had written most of the code and would have to go back and change the code.

I think I completed this project as efficiently as possible, but one thing I think I could have done to make my project better was to start it earlier than I did. I didn't realize how

complicate this game could be, and when I was writing my code, more and more problems started to come up and I had to spend a lot of time go through my code and fix the problems. For example, when I was finalizing my code, I tried to use the clear function but didn't have time to put it in the right places in my code.

I designed this game in the simplest way possible, this game could have 12 to 16 players and there are many other special identities available other than hunter, witch, and prophet. But since I am very familiar with this game and spent a lot of time writing the procedure and the skeleton, I didn't really encounter any false starts. I think my work can progress so smoothly is not only because of what I did, but also because I can always get help from the TAs and the professor.