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CPSC 441 G44 Project Proposal

Many games benefit from a transfer to a digital version, as actions in the game, enforcement of rules and moderator roles can be taken over by the computer. The common group party game Mafia is one such example. In the game, a group of informed mafioso must deceive and kill off a larger, innocent population until they outnumber the innocents. The mafioso are known to each other and can collaborate during the “night” phase of the game, when all players are supposed to have their eyes covered. During this phase, they must choose one of the innocents to murder. The innocent population are ignorant to who is a mafioso and must debate and reason with the whole group, eventually lynching someone during the “daytime” phase of the game. Ultimately they must lynch all of the mafia members before they are outnumbered. Due to deceit being a key element to the game, it is often difficult to facilitate the game in a face-to-face manner. Because of the nature of the two opposing sides, one player involved must act as a neutral moderator to convey information between the two groups, such as who has been murdered during the night. Likewise during the “night” phase, only the mafioso are active, but are obviously unable to speak with each other and can sometimes be given away by the sound of their movement or gesturing, or by dishonest players. Mafia is a game then that benefits greatly from being converted from a face-to-face party game to a networked online game. By having players interact from separate, distant access points, the game can be played without needing to be physically together and the possibility of someone’s actions giving them away is removed. Moreover, the ability to include a mafia only chat function allows for greater planning on the part of the mafioso. This also allows the computer to act as the moderator, meaning that all players can be involved in the actual gameplay. The objective for our project is to implement the very basic form of the game in command line, with the addition of computer-benefit functionality including pseudonyms and team chat. In this form, there will no special roles and the mafia comprise one third of the total population. All players will be able to:

- Connect to a common instance of the game
- Assume a pseudonym for the duration of the round
- Be assigned a role for the round
- Communicate via text with their pseudonym identifier with group
- Communicate via text with their pseudonym identifier with mafia only if mafioso
- Vote to “lynch” during the daytime
- Vote to “murder” during the nighttime if a mafioso

Because this seems like a basic implementation, the possibility always exists to expand the game by including the special roles. These roles give both the mafioso and the innocents expanded powers such as resisting murder, blocking other special abilities and revealing player affiliations. Therefore our development process will roughly follow this pattern:

- Establish common instance connection
- Establish text communication and pseudonyms
- Role assignment and voting

- Advanced roles (optional)

The work distribution will have to be looked at on a case-by-case basis per module. As all group members are interested in gaining as much knowledge and practical experience, work will likely be accomplished as a group or in pairs. To maintain a focus on the networking aspect of the game we will write the program in Java, as the group has little to no experience with C++ as a whole.