

2: Requirements Definition

Contact

1. Introduction and Context

There is a somewhat well known word game called Contact that exercises vocabulary and empathy, however it's commonly played in person. We intend to implement a version of the game that will allow players to connect to different games and play over the internet.

Game Cycle

1. Secret keeper starts by deciding on a word (secret word)
2. First letter of secret word is revealed
3. A guesser decides on a word that matches what's been revealed of the secret word (guess)
4. Guesser announces a clue that implies the guess and either:
 - a. other guessers infer the word and say contact
 - or
 - b. the secret keeper infers the word and if it does not match the secret word, can block by saying "it's not [guess]"
5. If the secret keeper can't block, they call and the two guessers compare guesses. If the guesses match, another letter of the secret word is revealed
6. Game continues until guess word is the secret word, or all the secret word is revealed

2. Actors and their Goals

- multiple (N) players
 - one secret keeper
 - Creates a secret word for players to guess
 - Can block player's guesses, or call after failing to block.
 - N-1 guessers
 - Attempts to guess the secret word by establishing contact with other players
 - Gives clues about their guess words
- game server
 - Manages contact game state data as a centralized authority, and enforces the structure and rules of the game
 - Receive messages from players, updates the game state, and broadcasts the game state back to the players
 - Enables communication between players
 - Manages players and player data

- Records data about the game
- Lobby
 - Serves list of games and related data to players
 - Allows players to connect to a game server
 - Allows players to create or join a game
 - Assigns each player a unique ID

3. Functional Requirements

This system should be able to:

- Maintain game state across player clients
 - Players know what active clues are
 - Players know when a contact has been made
 - Players know when a letter has been revealed
 - Players know what blocks have been attempted
- Allow players to create, join, and exit games using a lobby system
 - Players are able to see active games
 - Players know how many players are in a game
- Allow players to interact with an active game
 - Secret Keeper
 - Submit word
 - Block on a contact
 - Call on a contact
 - Guessing Players
 - Give a clue
 - Initiate contact
- Records history of clues and words
- Dictionary of valid secret words

4. Non-functional Requirements

This system will:

- Be written in Python
- Be extensively tested using automated unit tests
- Have good modularity, so that components such as the UI can be interchangeable and easily extended

5. Future Features

- Add web based interface for clients
- User messaging system (Chat)
- Add a game server monitoring program
- Data analysis on gathered game data
- Password protected games

6. Glossary

- Secret Keeper: a player chosen or assigned to submit the secret word.
- Guessing Player: player(s) who try and guess the secret word.
- Contact: if a player thinks they know another player's word based on their clue, they initiate contact. This allows the secret keeper to now block.

- Block: if a contact is made, the secret keeper tries to block this contact by guessing words that could fit the clue.
- Call: if the secret keeper no longer wants to try blocking, they may call on a contact. The contact players then reveal their words to see if there is a match.