

BOUN SWE

SWE 544 – 2015 Fall

Project 2 – Requirements and Design Document

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Summary

This document is prepared for “Tombala Game” in Python, to clarify the requirements and design of the application.

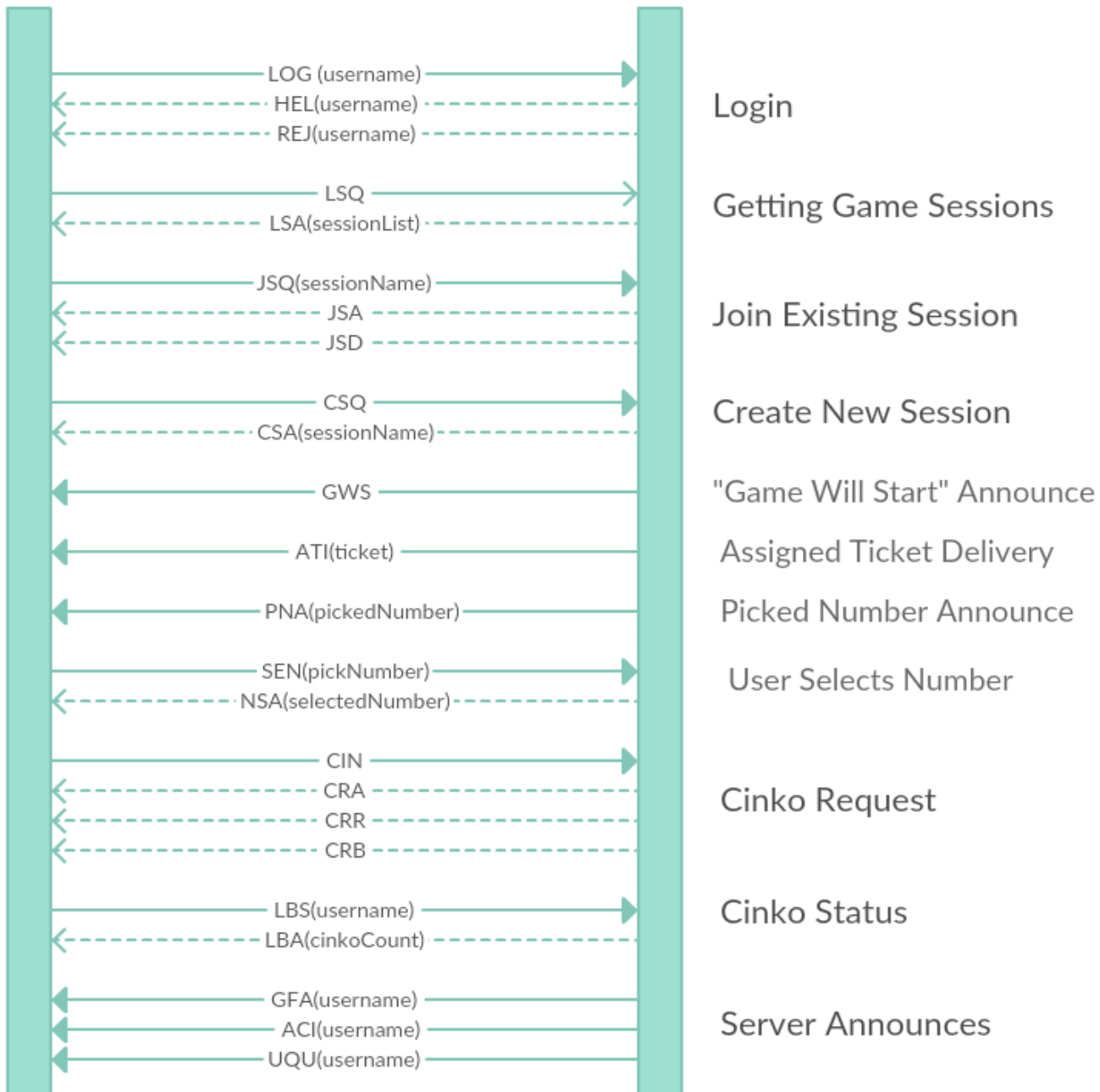
Requirements

These are the requirements for both client and server side of the application.

- 1) User logs in with a username
- 2) User gets the current game sessions list
- 3) User can create a new game session or can join an existing game session.
- 4) Game starts after 60 seconds of the first user enters the session (or creates the session) or the max number of players(5) is reached.
- 5) Game Will Start message will be delivered to the clients when 5 seconds left to the game start.
- 6) Every user gets a 5x3 numbers of ticket with random numbers.
- 7) Every 5 seconds, a randomly picked number between 1-99 is sent to the users.
- 8) User selects the number, the number should be sent to the server as it is signed.
- 9) User selects “Cinko” to sign a row is full with the picked numbers.
- 10) User gets a valid cinko information, if it is validated in the server, and an announcement has been made for other users.
- 11) User gets an invalid cinko information, if it can't be validated in the server.
- 12) If the user requests more than 3 invalid cinko, user is banned for the current session.
- 13) Users can see other users cinko statuses.
- 14) If the user checks all the numbers with the last cinko (in the server control), the game finished announce will be delivered to all users.
- 15) If a user makes a valid cinko, all other users will be informed.
- 16) If a user quits from the game, the other users will be informed.
- 17) Server should check every user in every 3 seconds with TIC-TOC messages if the user is still connected to the current session.

Client-Server Communication

The protocol and messaging rules of the client-server communication of the application is shown in the diagram which is below.



Protocol Summary

Request-response messages of the protocol are detailed in the table below.

Request	Parameter	Response	Parameter	Definition
LOG	username	HEL	username	User login
		REJ	username	User login rejected
QUI		BYE	username	User quit
LSQ		LSA	sessionList	List game sessions
JSQ	sessionName	JSA		Request to join a game session approved
		JSD		Request to join a game session declined
CSQ		CSA	sessionName	Create new game session approved
		GWS		Session ready, game will start
		ATI	ticket	User is getting the ticket
		PNA	pickedNumber	Randomly picked number announce
SEN	pickNumber	NSA	selectedNumber	User selects number
CIN		CRA		Cinko requested, cinko is valid
		CRR		Cinko requested, cinko is invalid
		CRB		Too many invalid Cinko request, user banned for the session
LBS	username	LBA	cinkoCount	Learn Cinko status of a user

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		GFA	username	Game finished, winner username is returned
		ACI	username	A user (username) has made a cinko
		UQU	username	A user has left the game
		ERR		Command error
TIC		TOC		Connection ping