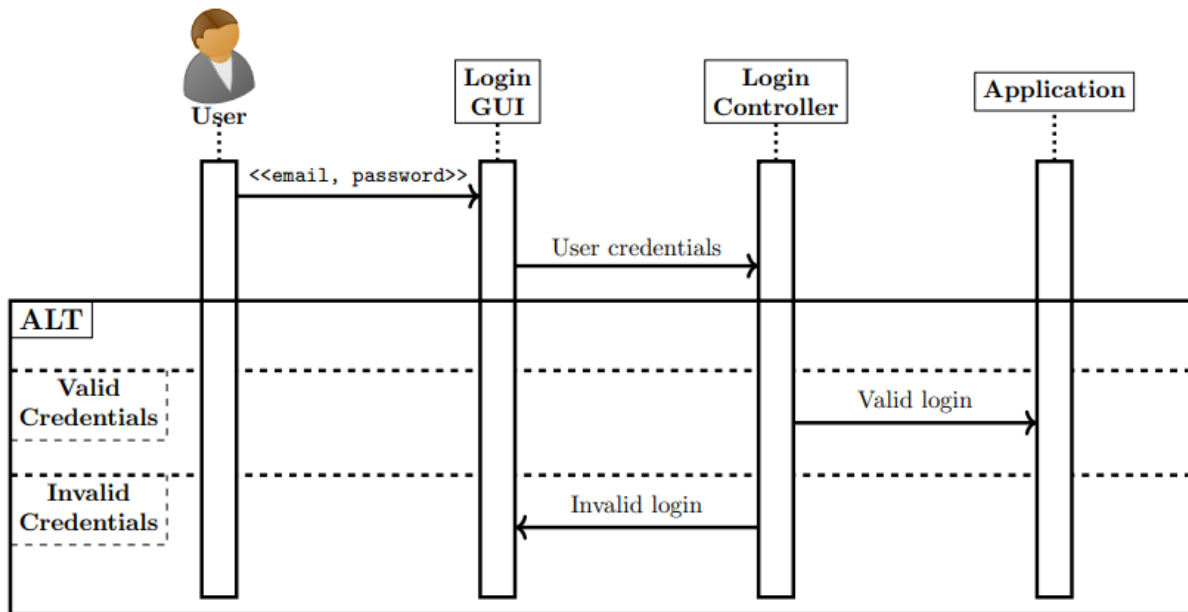
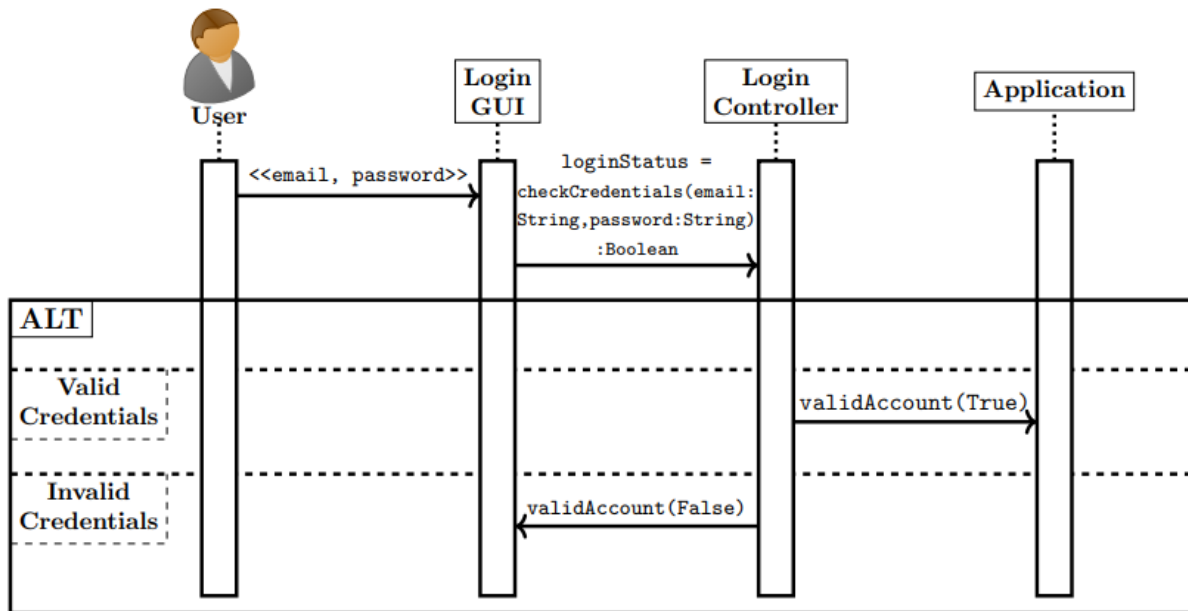


## Analysis Sequence Diagram 1: Signing in

- 1.1 User navigates to the login page
- 1.2 User adds input for their email and password
- 1.3 User hits submit button
- 1.4 The login page sends the credentials to the login controller
- 1.5 The login controller checks if they're valid credentials
- 1.6 If the credentials are valid, log the user in
- 1.7 Else, return an error message to the GUI



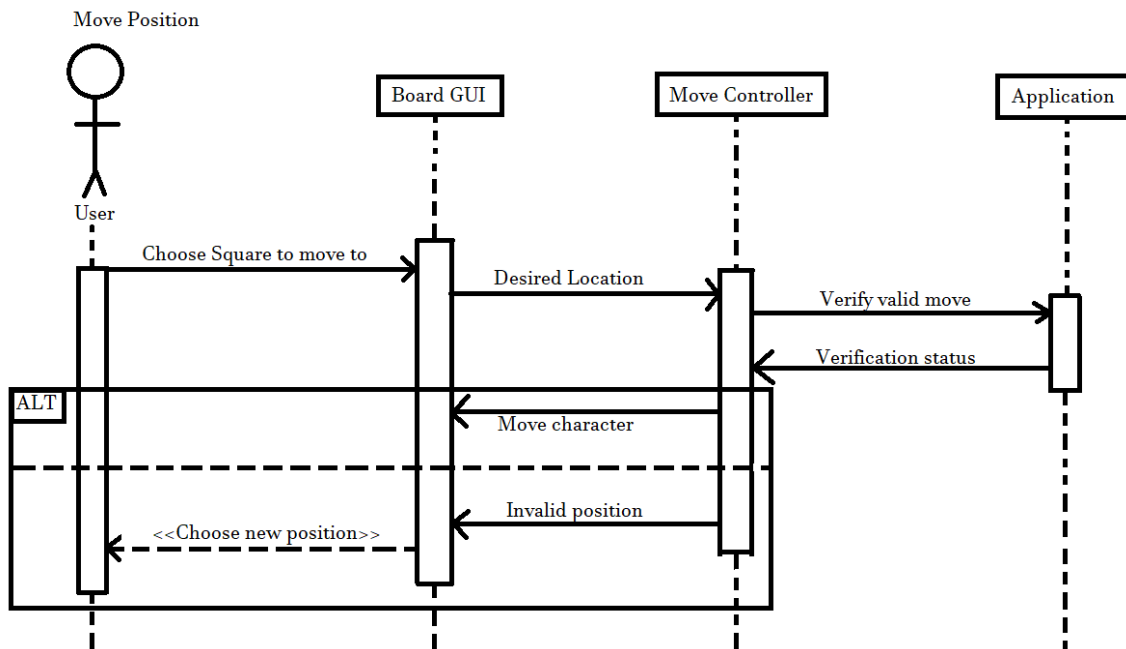
## Design Sequence Diagram 1: Signing In



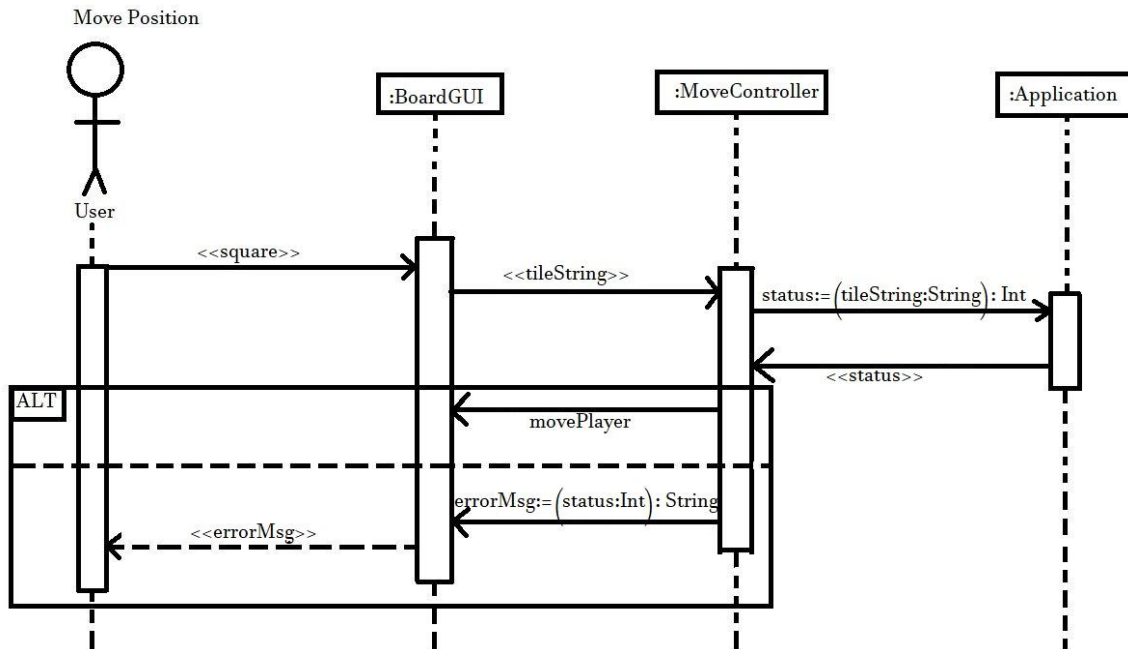
## Analysis Sequence Diagram 2: Move position

Subject	Action of Subject	Other Data/Objects	Object Acted Upon	id
User	picks	position	Board GUI	1
Board GUI	sends	position	Move Controller	2
Move Controller	verifies	position	Application	3
Application	sends	Verification status	Move Controller	4
If valid				
Move Controller	moves	character	Board GUI	5a
If invalid				
Move Controller	sends	error	Board GUI	5b
Board GUI	Asks for	New position	User	6b

## Analysis Sequence Diagram



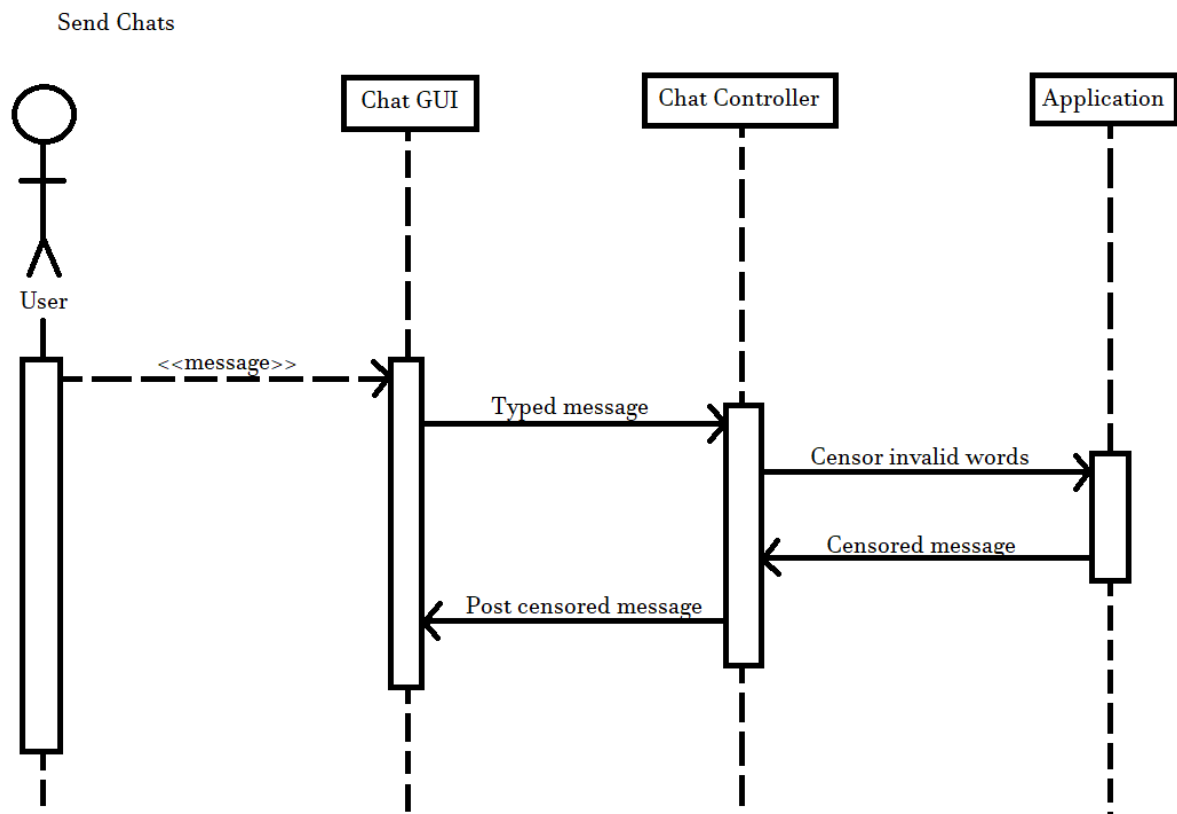
## Design Sequence Diagram 2: Move Position



### Analysis Sequence Diagram 3: Send Chat

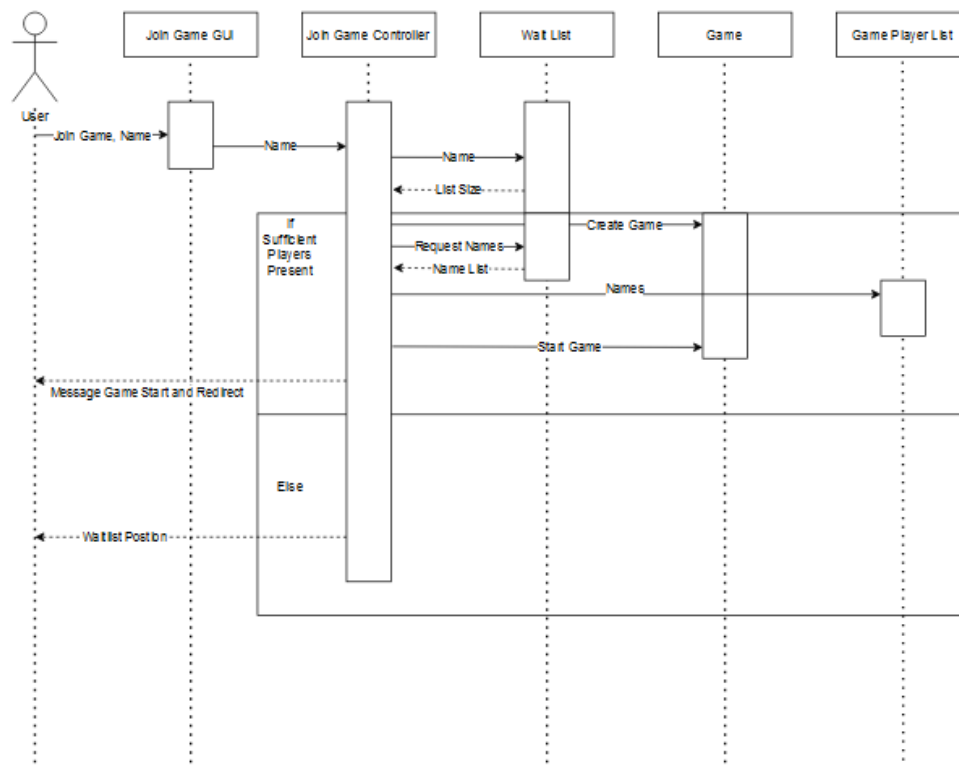
Send Chat

Subject	Action of Subject	Other Data/Objects	Object Acted Upon	id
User	enter	message	Chat GUI	1
Chat GUI	send	message	Chat Controller	2
Chat Controller	censor	Invalid words	Application	3
Application	send	Censored message	Chat Controller	4
Chat Controller	post	Censored message	Chat GUI	5



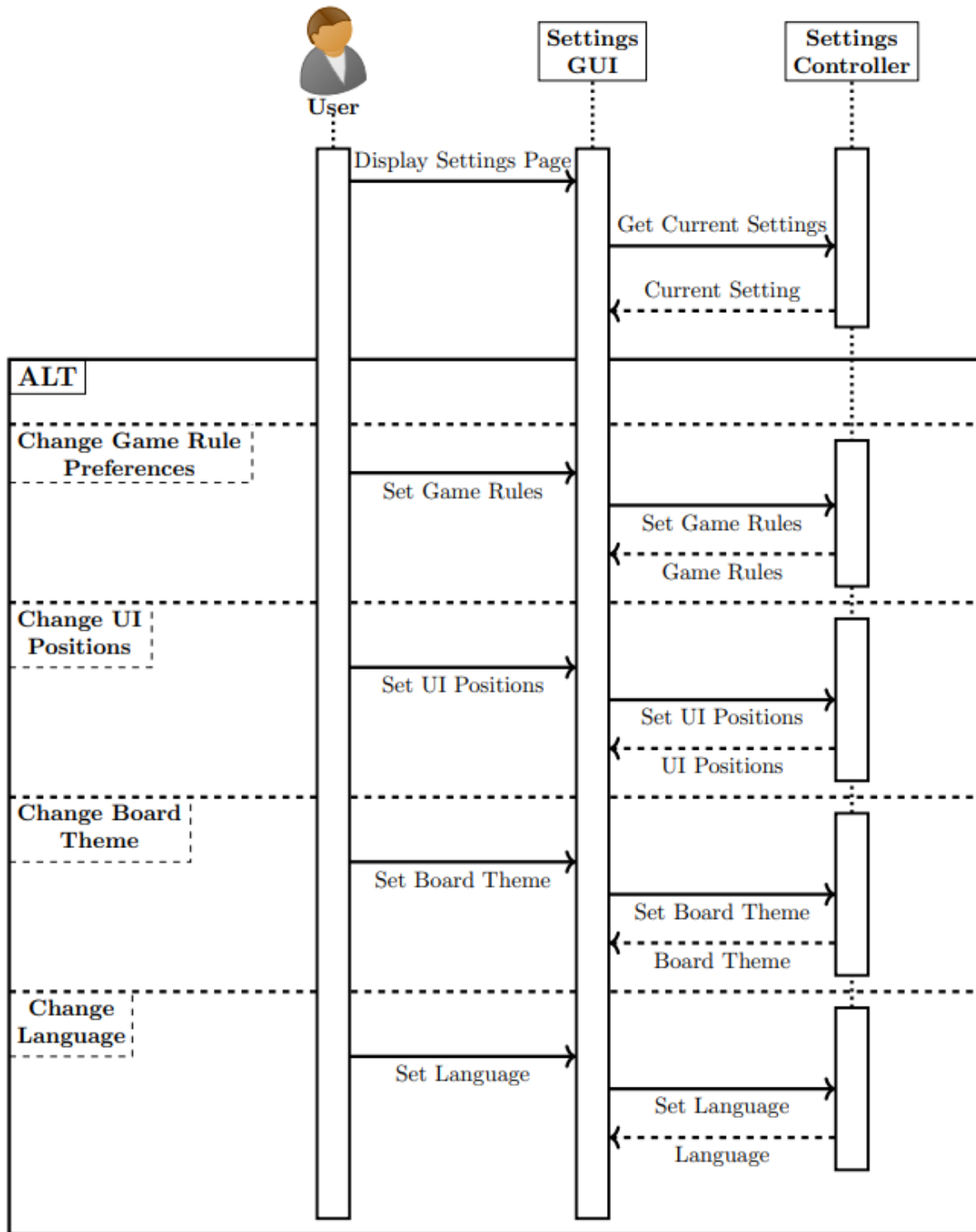
## Analysis Sequence Diagram 4: Joining a game

- 1.1 User navigates to the join game page
- 1.2 User presses the join game button
- 1.3 The join game page sends their player name to the join game controller
- 1.4 The join game controller sends their name to the back of the wait list
- 1.5 The join game controller checks if the wait list has enough players to start a game
- 1.6 If there are enough players, a game is created
- 1.6.1 The join game controller moves player names from the front of the wait list to the game player list
- 1.6.2 The join game controller repeats the moving of player names until a sufficient number has been moved
- 1.6.3 Once a sufficient number of player names have been moved, the game is started
- 1.6.4 Once the game has started, the players are informed and navigated to the game page
- 1.7 Else, send a message to the user detailing their place in the waitlist



### **Analysis Sequence Diagram 5: Settings Customization**

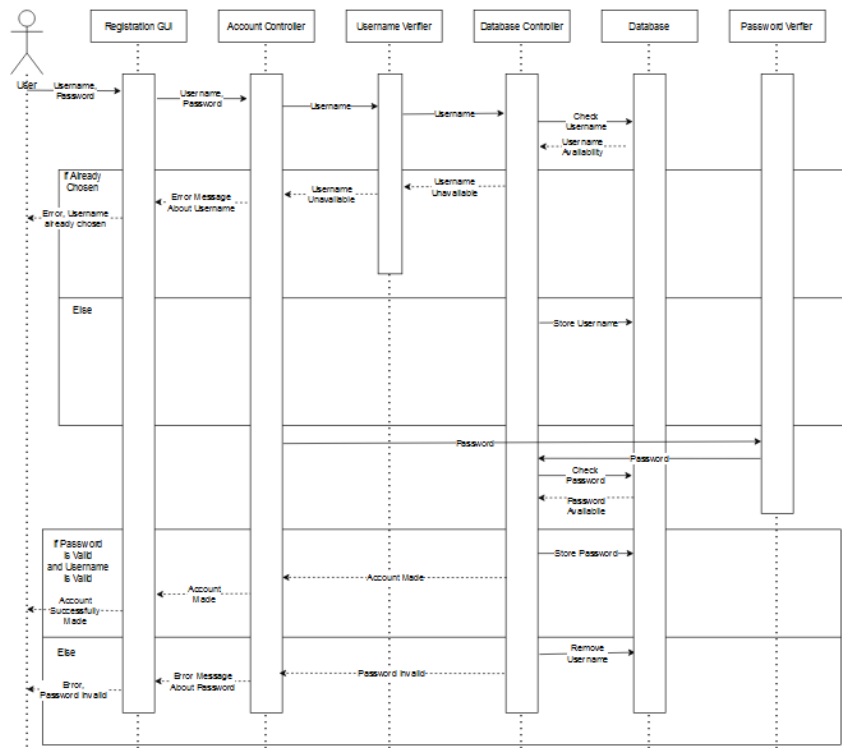
- 1.1 User navigates to the settings page
- 1.2 The settings GUI gets their current settings
- 1.3 User is presented with their current settings
  - 1.4.1 The user changes their preferred gamerules
  - 1.4.2 The settings GUI sends the new settings to the settings controller
  - 1.4.3 The settings controller sends the updated settings to the settings GUI
- 1.5.1 The user customizes their UI
  - 1.5.2 The settings GUI sends the new UI to the settings controller
  - 1.5.3 The settings controller sends the updated UI to the settings GUI
- 1.6.1 The user changes their preferred board theme
  - 1.6.2 The settings GUI sends the new board theme to the settings controller
  - 1.6.3 The settings controller sends the updated board theme to the settings GUI
- 1.7.1 The user changes their preferred language
  - 1.7.2 The settings GUI sends the new language to the settings controller
  - 1.7.3 The settings controller sends the updated language to the settings GUI





## Analysis Sequence Diagram 6: Registering

- 1.1 User navigates to the registration page
- 1.2 User enters their username and password into the appropriate fields and presses the create account button
- 1.3 The username and password are sent to the account controller
- 1.4 The account controller sends the username to the username verifier
- 1.4.1 The username verifier sends the username to the database controller
- 1.4.2 The database controller checks the database to see if the username has already been chosen
- 1.4.3 If the username has already been chosen, then the account controller sends an error message to the user
- 1.4.4 Else, the database controller stores the username in the database
- 1.5 The account controller sends the password to the password verifier
- 1.6 If the password fits the valid criteria and the username was valid, then the password is sent to the database controller
- 1.6.1 The database controller stores the password in the database
- 1.6.2 The account controller sends a message to the user saying the account was successfully created
- 1.7 Else, the database controller sends an error message to the user
- 1.7.1 The database controller removes the username from the database



## **Analysis Sequence Diagram 7: Purchasing Items in Store**

- 1.1 User navigates to store
- 1.2 Store manager fetches list of available items and items already purchased by user
- 1.3 Store GUI displays available items to user
- 1.4.1 User selects available item
- 1.4.2.1.1 If the user selects a board theme, display a window with a theme description, “preview” option, and purchase option
- 1.4.2.1.2 If the user selects the preview option, display the SQUARED game interface with the theme applied
- 1.4.2.2 If the user selects a power-up or other item, display a window with a description of the item and a purchase option
- 1.4.3 User chooses to purchase the item
- 1.4.4 Window appears asking user if they are sure they want to purchase the item
- 1.5 If user inputs “yes,” bring up item purchasing interface
- 1.5.1 Complete transaction
- 1.5.2 Return to store GUI
- 1.5.3 Display pop-up window saying, “Purchase successful!”
- 1.6 If user inputs “no,” return to store GUI.

