

PlayHub!

Group 404
Flora Au, Paulina Acosta, Kaushal Jha, Rohin Patel

PlayHub! Is an online platform that aims to improve online connections between users by implementing social features that can create more community: a friend system, a 3+ multiplayer game of Pictionary, and a chatting system.

Website: <https://spring26-project-group-404.onrender.com>

Repo: <https://github.com/neu-cs4530/spring26-project-group-404>

Friend System

The Friend System interface includes several key features:

- Profile for Yāo:** Shows user details, member since, and buttons for Accept, Decline, and Message.
- FRIENDS:** A section to look and search through users' friends and mutual friends.
- FRIENDS' ACTIVITY:** Shows what games your friends are playing, such as "A game of Pictionary" by Sénior Dos.
- FRIEND REQUESTS:** A section to handle friend requests, with buttons for Accept and Decline.
- STATUS:** Know when your friends are active (e.g., Sénior Dos is Offline).

Pictionary

The Pictionary game interface includes several key features:

- Game Lobby:** Invite your friends to game lobby.
- Guessing mode in chat:** Shows chat messages like "The Knight Of Games set difficulty to Medium" and "user1 guessed it — diamond".
- Difficulty Levels:** Play with different difficulty levels (Easy, Medium, Hard).

Chat System

The Chat System interface includes several key features:

- MESSAGES:** Search messages... and Start a new conversation.
- MESSAGE REQUESTS:** Separate section for message requests from non-friend users.
- Chat History:** Search through chat history and start chats by looking up users.
- Message Actions:** Message users individually or in a group chat.
- Chat Management:** Be able to leave chats and delete your messages for yourself and others.
- Reactions:** React to messages with emojis.
- Status:** Know when messages are sent and when others have read your message.

Technology Stack & Design

- Frontend: React, TypeScript, Socket.io, CSS
- Backend: MongoDB, TypeScript, Node.js, Express, Socket.io
- Testing: Vitest, Playwright

We implemented real-time social and multiplayer features into our PlayHub codebase, utilizing a Node.js backend and WebSockets to sync direct messages, live online statuses, and game states across all connected clients. Friends, conversations, and games are stored in key-value repositories on the server. In addition, Pictionary uses server-side stroke buffering and real-time drawing sync. The platform site is deployed on Render with MongoDB as the database.

What's Next?

For next steps, it would make it more accessible for on the go gaming if we were to make a **mobile app** version of PlayHub. We can also add **more multiplayer games** and have **leaderboards** for friends to expand upon the social aspect of our site.