

# CS4530 Final Project: Communal Spelling Bee

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## Our Feature

The class provided release of Covey.Town offers a great virtual meeting room platform, but currently lacks communal activities as it primarily offers games that players can join in pairs. Our feature the "Communal Spelling Bee", allows all Covey.Town users to participate in a persistent game which changes continuously as new players join the map and interact with it. The new Communal Spelling Bee, styled after the New York Times Spelling Bee, adds a modern & popular game to Covey.Town and introduces an educational yet entertaining activity that doesn't require other players to be present in the game. Unlike the New York Times Spelling Bee, our "Communal Spelling Bee" provides a more interactive experience where players can see the contributions of other Covey.Town users and contribute themselves by finding more words to solve the daily puzzle. This feature not only offers a novel way for users to connect and compete over longer periods of time but also enriches the virtual environment with a fun educational puzzle, making Covey.Town a more versatile and appealing platform for all users.

### Spelling Bee

WORD	POINTS	FOUND BY
emblem	6	belle
blew	4	belle
bowl	4	belle
blown	5	belle
blow	4	belle
belle	5	belle
bobble	6	belle

## Our Technology Stack & Design

We implemented our own communal version of the [NY Times Spelling Bee](#) in the existing Covey.Town codebase. We started by editing the map of Covey.Town and creating an Interactable Area that contains our Communal Spelling Bee. When a player enters the Interactable Area, they can press spacebar to open the modal and view the Spelling Bee UI. The Spelling Bee is persistent, and offers players the option to come and go from the game whenever they desire. The communal spelling bee score and words found by all players in the existing town are shown alongside the individual achievement level, score, and words found.

The frontend is deployed on Render.com, with the UI being rendered using React/Chakra. Our backend uses an object oriented approach and relies on Twilio, and Supabase which functions as our database for keeping track of all Spelling Bee related data from the current day and all previous days of the Spelling Bee.

Our integration pipeline runs an automated test suite and automatically deploys to our demo site if all tests pass.

## Future Work

Although the game play itself closely mimics the extent of the NYT Spelling Bee, we would like to implement more

- **Increasing Game Variability:** Adding additional challenges and difficulty levels to diversify gameplay and introduce special events for continuous engagement.
- **Implementing User Profiles:** Developing profiles for tracking achievements and participation to deepen community engagement.
- **Expanded Social Features:** Boosting social interactions within the game through messaging and teams to foster collaboration and competition.

Demo: <https://apiary-town.onrender.com/>

Source code: <https://github.com/neu-cs4530/spring24-project-team-103-apiary>