

Champlain College – Lennoxville.

Course: Transactional Web Applications 2

Objective: Create a multiplayer quiz app with real-time features using JavaScript frameworks and WebSocket.

Analysis Requirements:

1. **Mock-ups:** Provide visual mock-ups of each view.
2. **React Components:** List and specify details of all components, including props, state variables, actions on load, interactions, and WebSocket events.
3. **WebSocket Events:** List and detail each event, including name, emitting and listening parts, and required actions.
4. **HTTP Requests:** If used, list routes, methods, payloads, and required actions.

Design Requirements:

Teacher's Point-of-View:

- **Creation of a New Room:** Create quizzes, set timers, select difficulty and number of questions, and generate a unique code for users.
- **Monitoring the Quiz:** View progress without interference.
- **After the Quiz:** View scores and winner.

Player's Point-of-View:

- **Joining a New Room:** Enter quiz code and name.
- **While the Quiz is Running:** Participate simultaneously, real-time synchronization, interactive countdown, intuitive UI, and view results after each question.
- **After the Quiz:** View scores and winner.

Scope:

- No persistent leaderboard or ability to interrupt a launched quiz.
- Backend server to keep data on current quiz rooms. Data persistence is not required.