Create digital version of Resource management game (RMG-1)

↳ [RMG-4] Dealer View Created: 2024-09-18 Updated: 2024-09-30

Status:	To Do
Project:	Resource Management Game
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Create digital version of Resource management game

Type:	Sub-task	**Priority:**	Major
Reporter:	Shilpa Ramisetti	**Assignee:**	Shilpa Ramisetti
Resolution:	Unresolved	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Attachments:	🖼 image-20240923-141747.png 🖼 image-20240923-142207.png 🖼 image-20240923-142441.png 🖼 image-20240923-142503.png

---

Description

Provide a page for the dealer to assign player and projects to role

Backend

- For REST API endpoint implementation details, see https://itdesign-de.atlassian.net/browse/RMG-1
- Implement a REST API endpoint to get all players in the game
- Use the endpoint from https://itdesign-de.atlassian.net/browse/RMG-3 to patch the player role (set/reset)
- Implement a REST API endpoint to patch the project plan with owner info (set/reset)
- Implement a REST API endpoint to reset game to the initial state
- Implement a REST API endpoint to end game to calculate the score

- **Frontend (React.js)**
  - **Layout**:
    - **Player List**: Display a list of all 5 players on the left side.
    - **Project List**: Display a list of 6 projects on the right side.
    - **Role Tiles**: Place 5 role tiles (3 Project Managers and 2 Resource Managers) in the center.
  - **Assign Functionality (Moderator Only)**:
    - Allow the Moderator to drag and drop players into the role tiles to assign roles.
    - Allow the Moderator to drag and drop project tiles into Project Manager tiles to assign projects.
    - Display the "Start Game" and "Reset" buttons for the Moderator - These buttons must not be visible in 'Read-only' mode.
  - **Unassign Functionality (Moderator Only)**:
    - **Player Unassignment**: Drag and Drop the Project Manager from the Role tile to the Project Manager List to Unassign the Player from the Role.
    - **Project Unassignment**: Drag and Drop the Project from the Role tile to the Projects List to Unassign the Project from the Role.
  - **Read-only Mode for Players**:
    - Display the same view for the 5 players but in a "Read-only" mode.
    - Players can see the assignments as the Moderator makes them but cannot interact with any elements (no drag-and-drop functionality).
    - Ensure the UI reflects updates in real-time for the players as the Moderator assigns roles and projects.
  - **State Management**:
    - When a player is assigned a role, update the UI to show the player's name in the role tile.
    - When a project is assigned to a Project Manager, display the project name in the Project Manager tile.
    - Track assignments in the frontend state for the Moderator.
    - Update the view for both the Moderator and players in real-time to reflect current assignments.
  - **Buttons (Moderator Only)**:
    - **Start Game**:
      - Finalize the assignments of players to roles and projects to Project Managers.
      - Trigger a backend call to save or prepare the game state for player view.
      - Re-label to "End Game"
    - **Reset**:

- Unassign all players and projects from their roles.
- Reset the frontend state to its initial state with no assignments.
    - **End Game:**
        - Calculate Scores
        - Re-direct to scoring page
- **Real-time Updates**:
    - Implement WebSockets to push updates to all players as the Moderator makes assignments.
    - Ensure that real-time updates are sent to all connected clients, with the players receiving updates in read-only mode.
- **General**
    - **Validation**:
        - Ensure that roles and projects can only be assigned within the constraints (e.g., a player can only have one role, and each Project Manager can only have 2 projects).
    - **Security**:
        - Ensure that only the Moderator has the ability to make changes (assign/unassign roles, start the game, reset assignments).
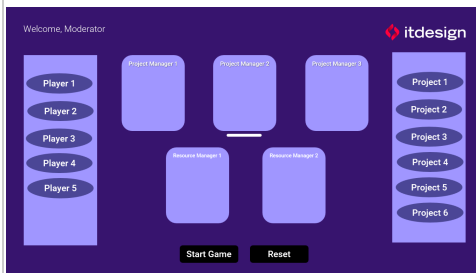   - Players should have no ability to interact with the view other than to observe updates.
    - **Error Handling**:
        - Provide feedback if an invalid operation is attempted (e.g., assigning more than 2 projects to a Project Manager, starting the game without all roles assigned).

Mock-ups:

Moderator (Edit) View:

Initial View:

Editing View:

Player (Read-only) View:

The 'Read-only' (Player View) pages must look exactly the same, except that in the Welcome message, it must be the Player Name instead of hte Moderator name and the 'Start Game' and 'Reset' buttons must NOT be available.