**Project requirements**

|  |  |
| --- | --- |
| Name: | Md Rezaul Hoque (Reza) |
| Community & UN SDG(s): | SCWW Saskatchewan Community. UN SDG goal: 3; Good Health and Well-Being |
| Date: | 8-Feb-2025 |

|  |  |  |
| --- | --- | --- |
| **Project Name** | Bingo for Senior Citizens | |
| **Functional Requirements** | | |
| [This section should list the functional requirements for the project including any features or properties of the project’s outcomes.]  Generate and download the Bingo Card with unique serial number  **User and access management**  Secure password management and user authentication must be implemented.  **Role: Administrator**  **System Configuration:** Manage and configure system settings, including game rules such as winning patterns and card expiry date modify.  **User Management:** Create, remove, and assign roles to users.  **Role: Bingo Card Generator**  **Responsibilities:**   * **Generate Bingo Cards**: Create and download unique bingo cards for games. * **Distribute Cards**: Assign and distribute cards based on the orders from players/buyers. * **Manage Card Inventory**: Keep track of generated cards, their usage, and expiration dates.   **Permissions:**   * **Access to Card Generation Tool**: Ability to perform the responsibilities required for generating bingo cards. * **Report Generation**: Ability to generate reports on card usage, distribution, and inventory.   **Role: Bingo Caller**  **Responsibilities:**   * **Start Game**: Initiate a new game session. * **Call Numbers**: Draw and announce bingo numbers. * **Verify Claims**: Check and verify player claim for bingos.   **Permissions:**   * **Access to Win Detection Tool**: Ability to perform actions in the Win Detection tool.   **Bingo Card Generation**   * The system should generate unique bingo cards for each player in a game. * Cards must follow the standard 5x5 grid format with randomized numbers. * Download the Bingo Card with unique serial number printed on it. * Register the bingo cards with the player’s name. * Block the bingo card that has been claimed as bingo to prevent it from being reused in future games. * Bingo cards must have an expiration date to ensure they can't be used indefinitely.   **Win Detection**   * The system must detect winning patterns (e.g., row, column, diagonal) on players' cards. * Bingo caller can input the drew number * Immediate notification to the bingo caller when a win is detected. * Bingo caller can manually search a bingo card by its unique serial number and verify does that card contain winning pattern | |
| **Technical/Performance Requirements** | | |
| [This section should list the technical requirements for the project (e.g., the required technology infrastructure) and any performance requirements (e.g., the minimum response time).]  The final solution has 2 main tools   * **Bingo Card Generation tool** * **Game management/Win detection tool**   **Infrastructure:** Install the application any local machine - PC or laptop.  **Technology stack:**   * **Local Databases:** Use SQLite database to store data locally on the user's device. * **Application Frameworks:** JavaScript/Django.   **System Architecture**   * **Scalability:** The system must handle up to 10 concurrent users without performance degradation. * **Reliability:** Ensure 99.9% uptime to provide a seamless gaming experience.   **Security**   * **Data Encryption:** All user data, including personal information, must be encrypted * **Secure Authentication:** Strong password base user authentication.   **Performance**   * **Response Time:** The system must respond to user actions within 2 seconds.   **Accuracy**   * **Win Detection Accuracy:** 100% accuracy in detecting winning patterns and notify the bingo caller. * **Unique Serial Numbers:** Ensure that each generated bingo card has a unique serial number. * **Expiration Management:** Implement automatic expiration for bingo cards after a set period.   **User Interface (UI) and User Experience (UX)**   * **Responsive Design:** Ensure the UI is responsive and works seamlessly across various devices (desktop, tablet, mobile). * **Intuitive Navigation:** User-friendly interface and easy to navigate. * **Download Capability:** Enable users to download generated bingo cards in PDF format.   **Reporting and Analytics**   * **Usage Reports**: Generate detailed reports on card usage, and game outcomes.   **Compliance**   * **Regulatory Compliance**: Ensure the system complies with relevant regulations and standards (e.g., SLGA guidelines). | | |
|  | | |