Project Status report

Name:	Md Rezaul Hoque
Community & UN SDG(s):	Senior Citizens/SCWW Saskatchewan Community. UN SDG goal: 3; Good Health and Well-Being
MVP #	3
Sprint cycle dates:	25-Mar-2025 to 07-April-2025

Project Name	Bingo for Senior Citizens
Blurb	Develop a bingo game for senior citizens to play from home. Our project aligns with UN SDG goal: 3; Good Health and Well-Being. The game we plan to develop will foster collaboration, enhance social interaction, and provide mental stimulation for seniors, thereby helping to overcome isolation and feel part of a community. Our initial plan was to develop this game for the Seniors Center Without Walls (SCWW) program. However, we decided to step back from that specific client due to their intention to use this game for fundraising purposes. This raises regulatory concerns from the Saskatchewan Liquor and Gaming Authority (SLGA) regarding the operation of remote bingo gaming with monetary involvement. Now, we will focus on developing a bingo game for seniors and community members who need brain-stimulating activities, such as those suffering from dementia.
For Week Ending	7- April -2025
Project Status	Green
Status Description	In this sprint, we planned to deliver our last deliverable 'Manual verification of winner's bingo card by serial number' (MVP#3) and successfully delivered it which was the last major feature to make our game fully functional. This why we are considering our project status as Green.

Deliverables	Status
Generate unique bingo cards with serial numbers	Delivered
Bingo caller can call drawn numbers	Delivered
Bingo player can open card from clickable link	Delivered
Bingo players can mark called number by clicking on the card at their end.	Delivered
Manual verification of winner's bingo card by serial number	Delivered
Download cards in PDF format	Discarded (We exclude the SCWW as client)
Paper Writing	Delivered

Activities—During the past sprint cycle

Backend Development (Django)

API Endpoint Creation:
- Developed the 'verify-bingo-claim/' & 'api/bingo-cards/<int:serial_number>/'endpoint to show a HTML form to collect serial number and fetch the marked numbers on the card clicking on fetch button.

Database Integration (sqlite db comes with Django framework):

- card = BingoCard.objects.get(serial_number=serial_int) **#Fetch marked numbers by players from db**
- **return JsonResponse({**
  'serial_number': card.serial_number,
  'player_name': card.player_name,
  'numbers': card.numbers,
  'marked_numbers': card.marked_numbers,
  'is_claimed': card.is_claimed
  })
  # API returns marked number on card as a JSON

Frontend Development (HTML + JavaScript)
UI Design:
- Created a HTML form to input card's serial number.
- Added a button to trigger backend API for fetching marked numbers from db.
- Added bootstrap to for designing of the page.

JavaScript Logic:
- Used fetch to send a POST request to the backend API('api/bingo-cards/<int:serial_number>/').
- Displayed the generated cards dynamically in the browser using JavaScript DOM manipulation.

Paper Writing:
- Completed the paper writing.

Project Issues

List any issues from the Issue Log that are significant and should be shared with the audience of this report. If any related work has been done or decisions have been made, a summary should be provided.

- When we fetch the card from backend DB Failed to highlight the marked number on the card. As a solution we showed the marked number on a bingo card as a list in the browser.
- We lack the direct interaction with the focus groups.

Project Changes

List any project changes that were approved since the last report/discussion.

- We introduced advanced HTML/CSS framework Bootstrap for responsive design and better accessibility. Such as Large, high-contrast visuals for easy readability.
- Downloading cards as PDF was discarded due to a change in the target client and concerns about fundraising regulations by selling bingo card.
- Registering cards with player names was also discarded. Initially, the plan included registering bingo cards with player names to maintain a record of which cards were sold to specific clients. This approach was intended to facilitate tracking and ensure accurate assignment of cards to participants. Although Professor (Tim) proposed to enhance the win verification process by incorporating both the bingo card serial number and the player's name which is considered as future work.
- Clickable link to view cards and players can mark called numbers on their digital cards by clicking on them. These functionalities were not the part of the initial plan. However, these were later developed to provide a novel way for the new target group to play the bingo game online, enhancing accessibility and user experience.
- We brought some changes in our actual look & feel of our application landing pages as in reality we need to do a lot of design work related to html, CSS and JavaScript. Which require an extensive learning curve may fail to complete the project within a month considering other major focus area related to main functionalities.
- Our initial plan was to develop this game for the Seniors Center Without Walls (SCWW) program. However, we decided to step

back from that specific client due to their intention to use this game for fundraising purposes. This raises regulatory concerns from the Saskatchewan Liquor and Gaming Authority (SLGA) regarding the operation of remote bingo gaming with monetary involvement.

Now, we will focus on developing a bingo game for seniors and community members who need brain-stimulating activities, such as those suffering from dementia.

Activities—Planned for Next Week

List all activities that the team members will work on during the next week of the project.

- Project completed and delivered.

Reflection

Do you feel "on track"?
- **Yes. All the features delivered, and the final product is functional now.**

What progress do you particularly feel good (great) about?
- **This project's experience reinforced the understanding that engineering work can and should be directed towards addressing societal needs and contributing to global goals like the UN SDGs.**

What barriers (if any) do you feel is/are a current impediment to success?
- **We have been going through an extensive paper reading and literature review regarding related work on the development of bingo game for dementia patients. Parallelly, continuing the development of the game. The debugging of different runtime issues during development was time-consuming. However, all of them were handled pragmatically and finally we achieved our goal by delivering the project with all the functional features.**

What help (if any) do you require to move positively forward?
- **Guidance on development.**
- **Feedback from stakeholders to improve further.**

What questions or concerns do you have (if any)?