



Swami Keshvanand Institute of Technology, Management & Gramothan, Jaipur

Title of the Project

2nd INNING (Games, Apps, etc. for the elderly)

Abstract of the project

The proposed project aims to create an interactive platform that rejuvenates the cognitive abilities of elderly individuals as with advancing age and time, the reasoning skills, cognitive capabilities, reactive skills, etc. tend to diminish and deteriorate. To address this insidious concern pertaining the senior most class of the society, the platform involves friendly & interactive mind games like Sudoku, Wordle, Flip Card, Tic-tac-toe, etc.

The project harnesses capabilities of tools & technologies such as HTML, CSS, JavaScript & React for Graphical frontend development, Node.js for backend API service, and Firebase to provide Backend-as-a-service. The platform uses technology to craft an accessible and enjoyable solution for a prevalent problem.

Keywords

Generic Keywords

Databases, Graphical UI, Cognitive Health, Social Outreach

Specific Technology Keywords

React, MySQL, Firebase, Node-Js

Project Type keywords

Design, Implementation, Game Library, Graphical User Interface, Feedback & Support

Functional components of the project

Users of the system: Elderly people majorly are the intended users.

Functionality:

When the user opens the Website, he'll be directed to the homepage: Hola! The page will contain the description of the project along with other tabs that'll take the user to other pages such as Arcade (List of games), Buy (Subscriptions), Add (Suggestions), Review (Feedback), Register (User login), Our Contact links.

Landing page should contain following screens

- Hola! (Homepage)
This page will contain description which will introduce the user with the intentions of the Website, along with options to redirect the user to other pages listed below.



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- **ARCADE**

This page will contain games & apps like Wordle, Sudoku, Flip Card, Tic-tac-toe, Othello, etc. which will be directly accessible by the users.

- **REGISTER**

A page that'll ask the user to Sign-up with us by providing basic info such as Name, Gaming Name, Email, Age, Sex, Location.

- **BUY**

This page will be the payments page for users to buy paid games and/or premium subscriptions for selected games & apps.

- **ADD**

This page shall provide the users with an opportunity to work with us by suggesting a new game. They shall provide an outlook to their suggestion which if liked upon evaluation by our core team, will be developed & deployed on the Arcade page.

- **REVIEW**

User satisfaction being the priority of the project, this tab shall allow the users to provide their valuable feedback.

- **KIDS**

This page will contain a dedicated library of some junior level games intended mainly but not solely for kids.

- **GET IN TOUCH**

A feature on the homepage that'll contain redirectable links to the Website's social media handles & accounts like Instagram, Facebook, Twitter, etc. for the users to be stay updated about any new updates or news regarding the site.

Steps to start-off the project:

HTML, CSS, JavaScript, and React.js: The tools & technologies employed to design an intuitive and interactive GUI, facilitating easy navigation and user engagement.

MySQL: MySQL is utilized as the back-end database to store, manage & manipulate data efficiently & effectively.

Firebase, Node.js: Node.js for providing the backend API services while Firebase used for Backend-as-a-service to facilitate developers with variety of tools and services for their assistance.



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The following steps will be helpful to start off the project

- 1) Define Requirements
- 2) Get a firm grasp on the above technology.
- 3) Design the system based on the identified requirements.
- 4) Implement the user interface components according to the system design.
- 5) Help should be user friendly

Requirements

Hardware requirements

Number	Description	Alternatives (If available)
1	PC with min 30 GB hard-disk and 8 GB RAM	A dedicated GPU if available

Software requirements

Number	Description	Alternatives (If available)
1	Windows 11	Windows 8
2	HTML, CSS, JS	Not Available
3	MS-SQL server	Oracle
4	Firebase	Parse

Manpower requirements

2 to 4 students can complete this in 4 – 6 months if they work fulltime on it.

Milestones and Timelines

Number	Milestone Name	Milestone Description	Timeline Week no. from the start of the project	Remarks



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1	Requirements Specification	Clearly define the requirements and objectives of the Elderly Gaming platform. Identify the specific feature and functionalities needed.	2-3	Attempt should be made to add some more relevant functionalities other than those that are listed in this document.
2	Technology familiarization	Understanding of the technology needed to implement the project.	4-5	The presentation should be from the point of view of being able to apply it to the project, rather than from a theoretical perspective.
3	System Design	Create a system architecture and design based on the identified requirements. Plan the database schema and GUI layout.	6-7	The scenarios should map to the requirement specification
4	Database Setup	Set up the MySQL database. Define tables for storing user data, Game data, etc.	7-8	It is important to finalize on the database at this stage itself so that development and testing can proceed with the actual database itself.
5	GUI Design	Design the JS based GUI. Implement the interface components according to the system design.	9-11	The goal is to create an interface that not only meets the functional requirements of the Gaming platform but also exceeds user expectations for usability and overall joy & satisfaction.
6	User Authentication	Implement user registration and authentication Mechanisms. Ensure secure access to the system.	11-12	The user authentication phase is a cornerstone of system security, ensuring that access to personal data and functionalities is restricted to authorized individuals.



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7	Integrate Firebase for BAAS	Implement & integrate Google Firebase as Backend-as-a-service	13-14	The Firebase environment to facilitate backend infrastructure & NoSQL database program.
8	Integration Testing And Final Review	Provide training sessions for administrators and users. Issues found during the previous milestones are fixed and the system is ready for the final review.	15-18	Another 2 weeks should be there to handle any issues found during testing of the system. After that, the final demo can be arranged. During the final review of the project.

Guidelines and References

<https://www.w3schools.com/html/> (HTML tutorial)

<https://www.w3schools.com/css/> (CSS tutorial)

<https://www.w3schools.com/js/> (JS tutorial)

<https://firebase.google.com/> (Firebase tutorial)

<https://www.mysql.com> (SQL tutorial)