RE Project

Play, Learn & Protect: Technology for Childhood & Youth

The proposal Play, Learn & Protect aims to create a single software platform that addresses three pressing needs for children and youth: (a) fostering imagination and social skills through playful games; (b) delivering impactful learning experiences; and (c) providing tools that ensure digital safety. Many of the digital experiences available to children today are imported and reflect values or aesthetics that do not resonate with local contexts like Egypt. This platform will be built with cultural sensitivity and user-centered design, embedding local language, history and family structures into games and educational content while prioritizing online safety and well-being.

The platform should target age groups (3-5), (6-8), and (9-12) years old. The games must be family friendly games.

You are the requirement engineer for this project, and you are required to develop the requirements, specifications, and acceptance criteria for the platform modules. The requirements should be put in the format of a user story. You should use IEEE requirement engineering template. You are also required to develop the frontend for the project using vibe coding or low code / no code platforms such as lovable or cursor. Bonus points on developing a working backend and DB.

1. The frontend should provide child friendly interface and dashboard. It should be accessible to children, teachers, and parents. It should have gamified experience such as leadership board, earning points, achievements, awards, competitions….etc.
2. The children should be able to play serious games (formal learning / curricula based learning). Those games should be things to introduce topics such as physics, chemistry, math, language, and coding.
3. The children should be able to apply knowledge learned in creative context.
4. The platform should have a monitoring module for both parents and educators to observe screen-time pattern and digital behavior such as cyberbullying, inappropriate content, and excessive gaming. Dashboards will visualize time spent,

types of content accessed and frequency of sessions. Algorithms that recognize online threats such as cyberbullying or explicit content and generate appropriate alerts for children. Alerts aim to teach safe behaviors rather than simply blocking content.

Deliverables

1. SRS (IEEE Template, sample available on CMS)
   - Including 3 different types of UML Diagrams (eg. Use Case Diagram, Activity Diagram, State Diagram, Sequence Diagram, Class Diagram)
   - Including 10-16 requirements (based on team members - 2 per member) represented as your system requires (User stories, diagrams, etc). Each requirement should have its detailed specifications and acceptance criteria.
   - Including a WRSPM model for at least 2 requirements.
2. Frontend Prototype (Vibe coding allowed)
3. **Bonus:** Working Backend and DB

Groups of:

- Minimum 5 and maximum of 8
- Cross labs allowed

Deadline for team formation submission: 25/11/2025 (till 11:59 pm). If you struggle to find a team contact your respective TA immediately. Failing to have a team and recognizing that near the end of the project will result in a ZERO grade.

- Team submission form: https://forms.gle/kyr4X8TDaKFRz8Ka9

Deadline for submission is: 15/12/2025
Evaluation: starts from 22/12/2025

Use of AI and Humanization is strictly prohibited. Any AI generated report will result in a ZERO grade. I need to see your analysis and thought process not that of GPT.