SMART INDIA HACKATHON 2024

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- **Problem Statement ID – SIH1720**
- **Problem Statement Title- Education & Awareness Effective Use of Technology for Dissemination of Anti-Doping Information**
- **Theme- Smart Education**
- **PS Category- Software**
- **Team ID- 1044**
- **Team Name- NERV**

NERV

Education & Awareness Effective Use of Technology for Dissemination of Anti-Doping Information

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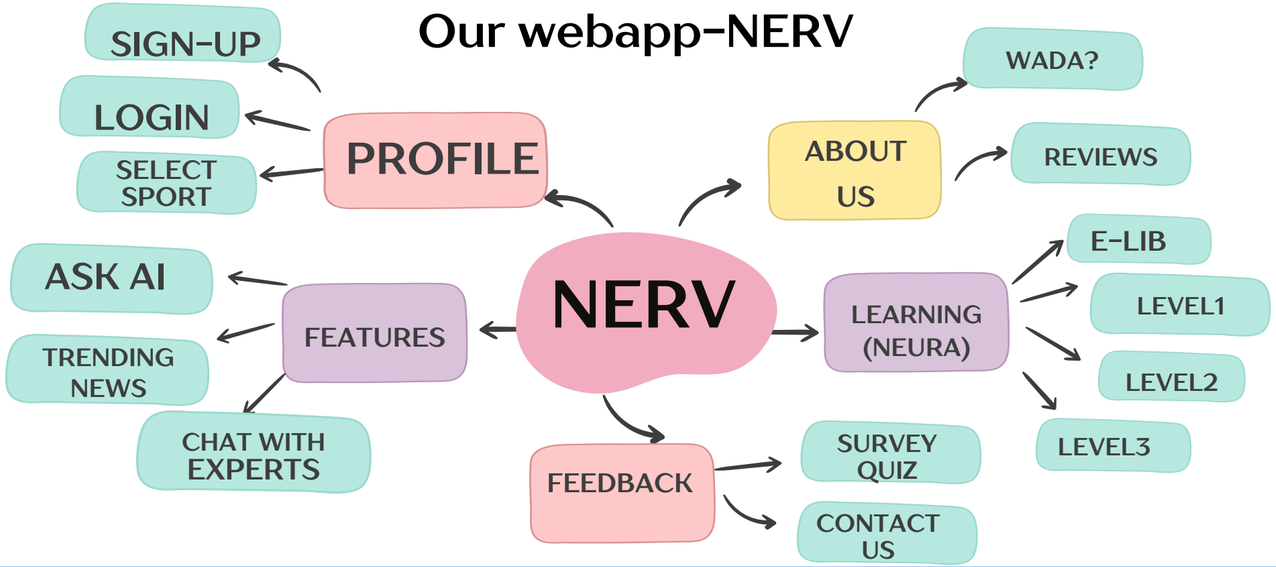
❖ Existing System

Existing doping detection strategies focus on biochemical measurements to detect banned substances.

❖ Proposed Solution

Our solution is comprehensive, interactive platform that disseminates anti-doping education through personalized, gamified quizzes, multimedia contents, real-time updates with sport specific filtering and accessible across devices.

Our webapp-NERV



❖ Need of NERV

Amid recent Paris Olympics 2024, doping scandals, our app “NERV” promotes essential antidoping education through interactive quizzes Athletes from rural areas, often lacking access to this knowledge, benefits from our platform which bridges the gap and fosters fair competition.

❖ Why NERV stands out

- Personalized sport filter
- Chat with expert
- Interactive quizzes and certification
- Real-time update
- E-library access
- AI-driven chatbot
- Feedback mechanism

TECHNICAL APPROACH

NERV

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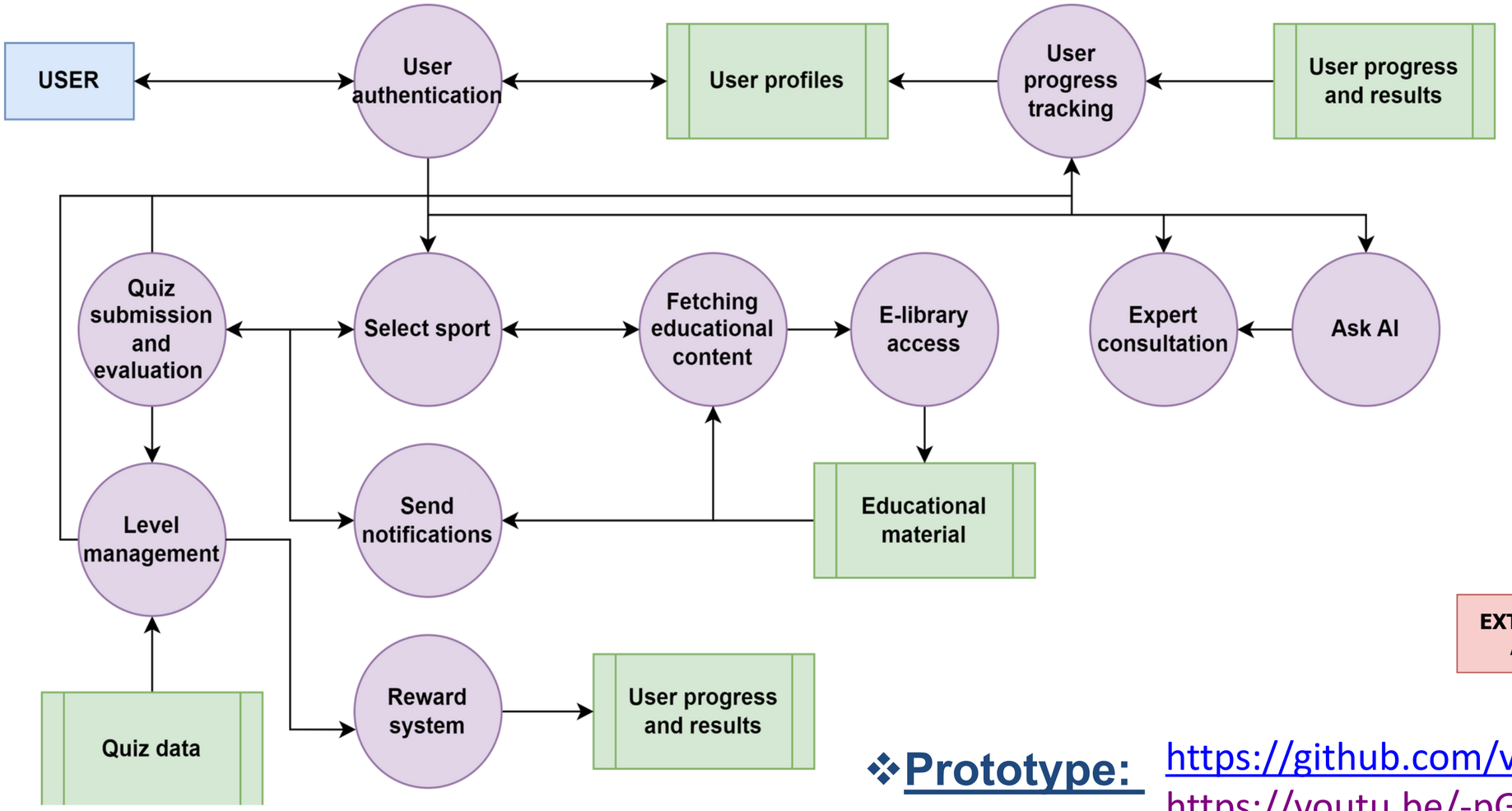
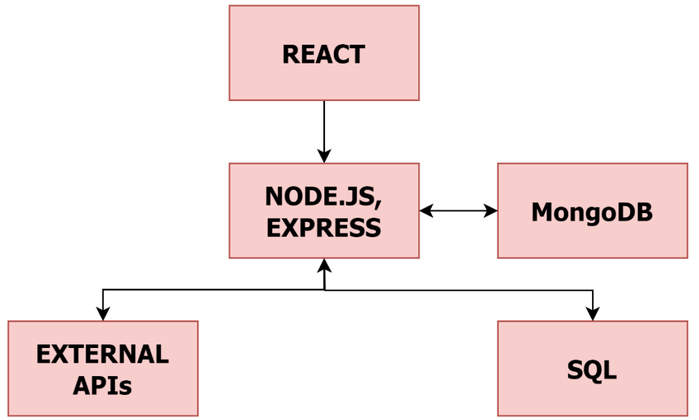
❖ User Flow of NERV:



❖ Technology Stack:

❖System Architecture:



❖Prototype:

https://github.com/vaishnavi2499/NERV.git
https://youtu.be/-pGjch2BDto?si=sHe3vWpCLnbyTAb6

FEASIBILITY AND VIABILITY

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❖ Feasibility Analysis

- **Technology Feasibility:** Necessary tools and open-sources are widely available and supported.
- **Financial Feasibility:** By using open-source tools and cloud infrastructure the project minimizes operational and development cost.
- **Content Feasibility**: The content will be accurate, unbiased and up-to-date sourced from credible references and anti-doping agencies.
- **Demand:** Growing awareness of doping regulations and underserved athletes from rural region.
- **Sustainability:** Continuous engagement through real-time updates, personalized content, gamification and certifications

Challenges	Solution
Accessing accurate information	Integration with official anti-doping agencies
Reaching remote areas	Lightweight webapp
Cultural and linguistic barriers	Multilingual support with real-time translation
API Integration	Use of modular architecture and well documented APIs

IMPACT AND BENEFITS

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MODULES	EXTERNAL API USED
Chat with Expert	Twilio API
Authentication	Firebase Authentication
Badges and certification	jsPDF, Firebase storage
Real-time updates	NewsAPI
Feedback Notification	Firebase cloud messaging
Analytics	Firebase analytics
Multilingual support	Google cloud translation API
E-library search	MongoDB native search

❖ Potential Impacts

- Increases awareness, among young athletes from rural areas.
- Promotes fair competition
- Enhances athlete's integrity
- Reduces doping incidents
- Fosters global collaboration
- Empowers future generation

❖ Benefits

- "NERV" provides personalized learning course NEURA according to specific sport.
- Gamified quizzes captures athlete interest and makes learning process more enjoyable and effective
- Athletes contributes to a fairer sport environment by engaging in global initiative against doping
- Earning certificates and badges enhances athletes reputation among peers and fans.
- Access to resources from our E-library

NERV

RESEARCH AND REFERENCES

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- Petroczi, Andrea, et al. "Understanding and building clean (er) sport together: community-based participatory research with elite athletes and anti-doping organisations from five European countries." Psychology of sport and exercise 55 (2021): 101932.
- McLean, Scott, et al. "From Anti-doping-I to Anti-doping-II: Toward a paradigm shift for doping prevention in sport." International Journal of Drug Policy 115 (2023): 104019.
- Rodek, Jelena, Mate Brekalo, and Stanislav Dragutinović. "Analysis of Sociodemographic–and Sport-Factors as Correlates of Doping Tendency in Professional Handball Players." Sport Mont 22.2 (2024): Ahead-of.

❖NERV Prototype: