ChroniCalc

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CHRONICALC
NARRATES SPACE KNOWLEDGE

Project Proposal

A Website that acts as a Chronical Calculator That Narrates Space History and Tests Your Knowledge through Quizzes

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Idea Description

In our region, people always say, “What happened before us teaches us today.” With that spirit, we are developing ChroniCalc, a creative and educational web application that shares space history through storytelling and quiz interaction.

Each time a user visits the site, ChroniCalc shows a real astronomical event that happened on that same date in history — for example, maybe the Chandrayaan-1 launch or the discovery of a planet. Instead of just reading plain facts, the user will hear or read the story as a narrated experience, with visuals or 3D scenes that make it more interesting.

After the narration, users will attend a short 3-question quiz, which helps them remember what they learned. If they give the right answers, planets and satellites will animate or “unlock” in a beautiful 3D space scene. It’s not only fun, but also educational.

ChroniCalc is like a modern digital teacher that blends science, storytelling, and smart design. It makes space history more personal — because every day has a cosmic memory.

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Aim and Motive

- ChroniCalc is an interactive web app that narrates space events from history.
- Each day, users learn about a real astronomical event that occurred on that date.
- Narration is followed by a 3-question quiz for engagement and learning retention.
- Correct answers unlock 3D space visuals (planets, satellites, star animations).
- It's like a space tutor that teaches through storytelling and interactive visuals.

Planned Technologies and Tools

Frontend and Visuals

React.js, Tailwind CSS, Framer Motion,React Drei, GLTF models.

Backend

Node.js, Express.js

Database

MongoDB Atlas

Narration

Web Speech API, react-speech-kit

API

NASA API, Wikipedia API

Hosting

Vercel (Frontend), Render (Backend)

Impact on Users

Solid foundation

- Quiz system reinforces learning immediately.
- Daily stories encourage habitual space learning.

Hypothesis development

- Storytelling improves memory and engagement.
- Narration supports younger and visually impaired users.
- 3D visuals make learning fun and interactive.

Approach

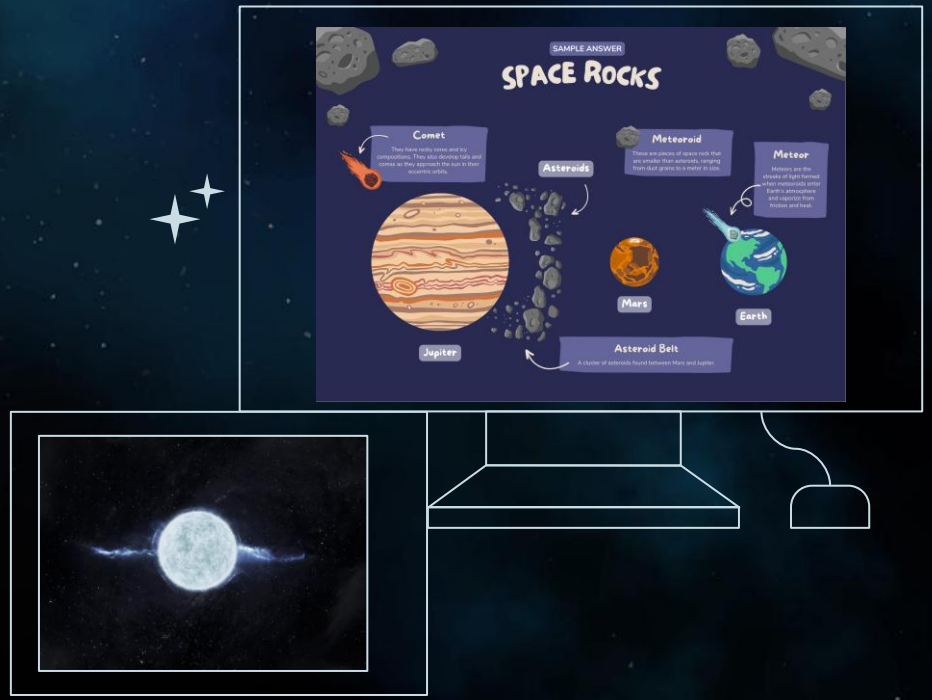
Towards Development

- The development of the project will be carried out in five structured phases to ensure smooth execution and timely completion.

- **Phase 1 (June 21–23):** Set up the MERN stack and backend APIs.
- **Phase 2 (June 24–26):** Create 3D space visuals using Three.js.
- **Phase 3 (June 27–29):** Add narration and interactive quizzes.
- **Phase 4 (June 30–July 2):** Polish UI, ensure responsiveness, and test.
- **Phase 5 (July 3–5):** Deploy frontend to Vercel and backend to Render.

Complete Roadmap

- **June 21–23:**
  Setup backend, MongoDB, sample data
- **June 24–26:**
  Build 3D galaxy scene, models
- **June 27–29:**
  Narration, quiz integration
- **June 30–July 2:**
  Testing, responsiveness, polish
- **July 3–5:**
  Final deployment and submission



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Resources

- NASA API – Daily facts, mission data, images
- Wikipedia REST API – Event data by date
- Tailwind CSS – Styling and responsiveness
- React-Three-Fiber – 3D scenes
- MongoDB Atlas – Free cloud DB
- Vercel + Render – Free deployment platforms

Summary

Main features

ChroniCalc blends storytelling, education, and interaction

Space Themes

Venus has a very beautiful name and is the second planet from the Sun

History & Theory

Quiz and 3D visuals enhance engagement and retention and a daily step into space learning for students and enthusiasts.

Resource

Code used fully with MERN stack and open resources

Final

Conclusion

ChroniCalc is not just a quiz platform. It is a **story-based journey through space and time**, where history is spoken to the user, and their knowledge is tested in an enjoyable and interactive way.

As South Indian students passionate about science and web development, we are putting together all our skills to build something unique, useful, and fun. We believe ChroniCalc can become a small step in education, but a giant leap in curiosity and cosmic learning.

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Thanks!

AstralWeb Innovates..!

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