News Aggregators

Team Synapse

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TOOPLE
Discover Your Future

About the project

The problem statement

- A news aggregator app for a small community can be a powerful tool. It cuts through information overload by curating local news. It fosters community engagement by highlighting hyperlocal news, increasing visibility for local Topics, and potentially enabling discussions. Why is this project important?
- It can be a bit difficult to solve these problem but still it’s not unsolvable at all.
- We created a responsive news aggregation bringing college community updates in one place. This helped in enhancing access to information and updates to users easily and also increasing the faculty staff, student engagements.

Objectives

Objectives of the project

- **Development**
- **User-Generated Content.**
- **Verification System**
- **Deployment.**
- **Cost Savings**
- **Improved User Experience**

Deliverables

Deliverables

- Provide a single site for all news about the campus.
- Enable students and staff to publish their articles.
- Make sure that information is distributed accurately and on schedule.
- Maintain high-quality standards for published content.

Background

Background

- We’re building a website to bring all university news into one place. It will allow users to submit news, which will be reviewed and approved by admins before appearing on the site.
- There are many existing websites ,like TOI, which broad news coverage but the don’t focus on specific communities like colleges.
- Many colleges have news sections but they lack personalization and comprehensive aggregation.

Background

- Compare your work with other work
  - Functionality: Our site combines and approves news submissions, while many other solutions don’t have this feature.
  - Performance: We aim for fast load times and mobile-friendly design, which could be better than some existing options.
  - Approach: We’re using up-to-date technologies (React, Tailwind CSS, Sass) for a smoother user experience compared to older systems.

Project Research and Initiation

Project Research and Initiation

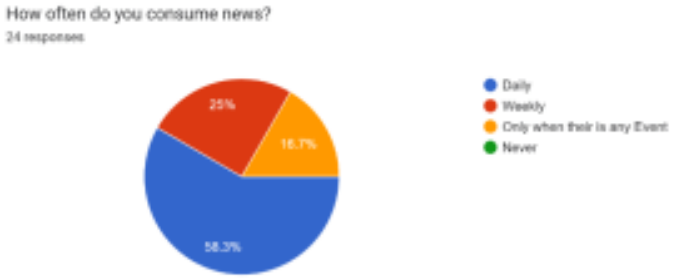
- Stakeholders
  - Students
  - Faculty
  - Parents
  - Alumni
  - College Administration
  - Content Providers/Publishers
- Data was Collected like User feedback on usability, Frequency and type of news shared, Admin approval times.

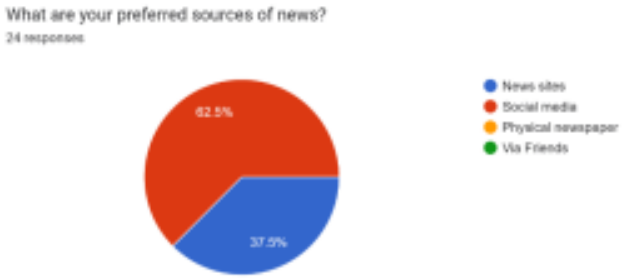
Project Research and Initiation

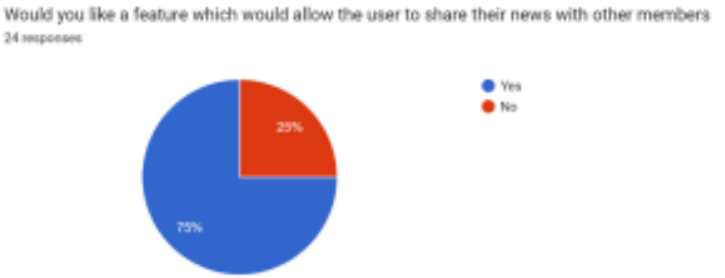
- All the Data was Collected using User surveys/questionnaires
  - Questionnaire Details
  - **Purpose**: To gather user feedback on the website's functionality and content.
  - **Content**: Questions on ease of use, satisfaction with news content, and suggestions for improvements.
  - Method: Online survey distributed to students and admins.

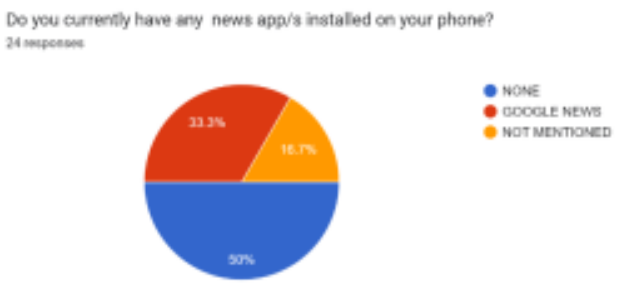
Project Research and Initiation

Questionnaire results



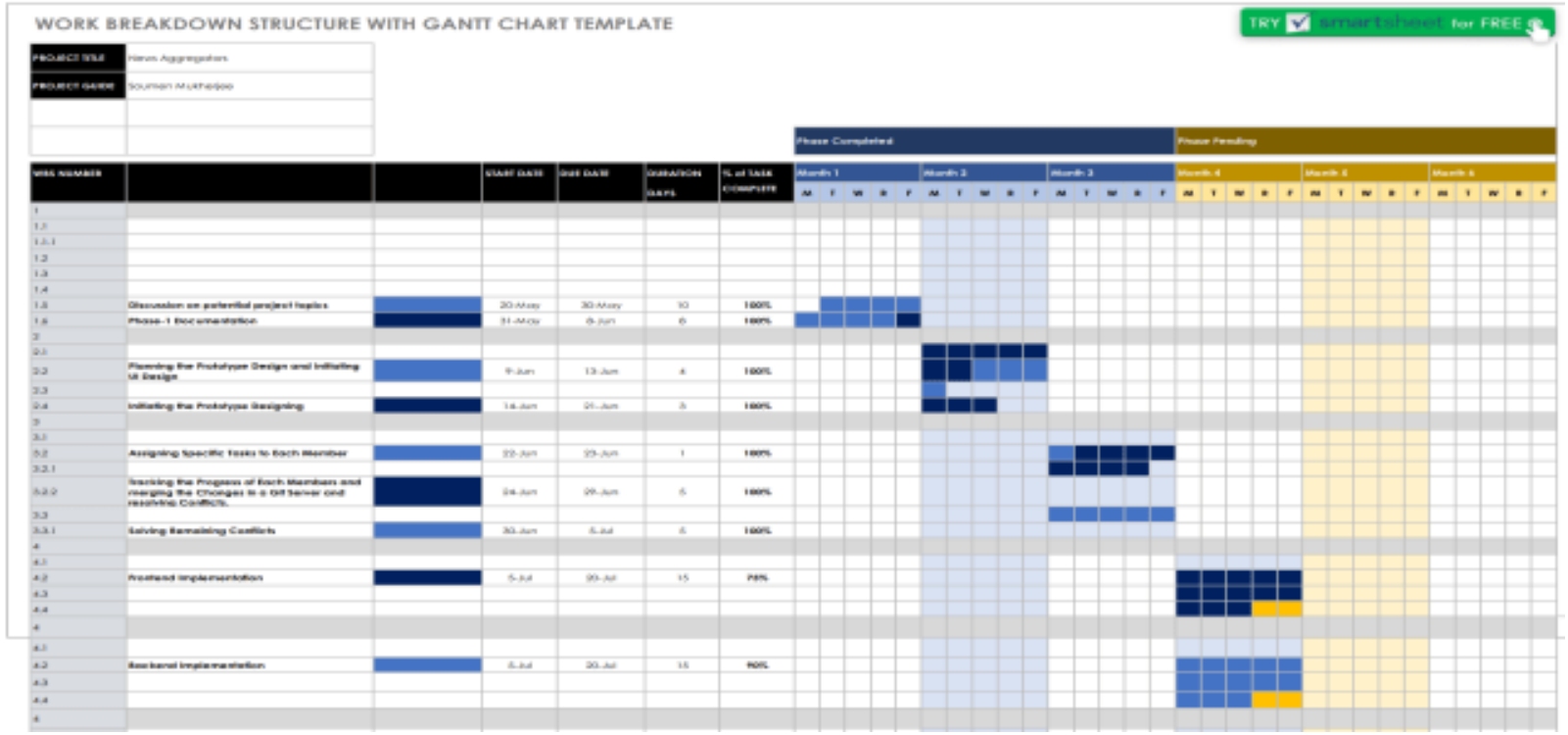






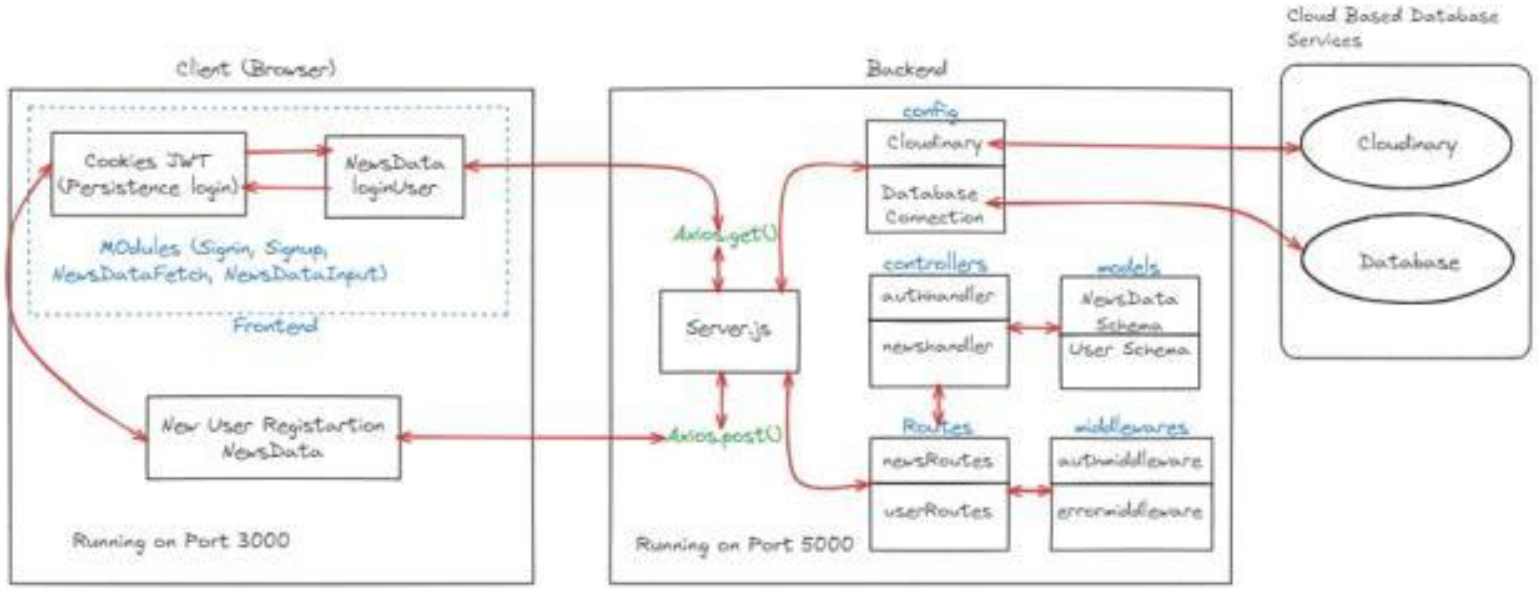
Project Research and Initiation

Project Research and Initiation-Planning and scheduling-Gantt Chart and Milestones



Project Development Cycle

Project Development Cycle- System Diagram



Project Development Cycle

Project Development Cycle- Technologies used

	Our Stack	*Alternatives*
Frontend	React (MERN stack) for building interactive user interface.	HTML, CSS, JavaScript (Vanilla or frameworks like Vue.js or Angular)
Backend	Node.js (MERN stack) for handling server-side logic and data processing.	Python (with frameworks like Django or Flask), PHP
Database	MongoDB (MERN stack) for storing news articles.	SQL databases (like MySQL, PostgreSQL)

Project Development Cycle

- *Technology Comparison*
  - **MERN stack**: Popular, well-documented, good for beginner projects.
  - **Alternatives**: Offer more flexibility for specific project requirements (e.g., SQL databases for complex data structures).

- *Justification for MERN*
  - **Beginner-Friendly**: Numerous learning resources and tutorials available.
  - **Full-Stack Development**: Interoperability with each other(front-end, back-end, database).
  - **Scalability:** MERN stack can handle growth with additional features.

Project Development Cycle

Project Development Cycle- Project execution

Modules and Tasks

- Planning Module: Defined what the project goals and scoped are. Created a timeline and created a Gantt chart and according to that the work were assigned.
- Design Module: First Designed a workable prototype to test the functionality. Then Developed wireframes and Frontend Design on Figma and after completion of design implemented the same on project with the help of SCSS.
- Development Module: Built the website using React and styled it with SCSS. Set up server-side functions with Node.js and Express.js. Configured MongoDB to store and manage data and used Cloudinary to store the images.

Project Development Cycle

Project Development Cycle- Project execution

- Testing Module: Conducted functional and usability testing. Fixed bugs and improved based on test results.
- Deployment Module: Deployed the Both Frontend and Backend part on the Vercel.

Execution Steps

- Initial Setup: Gathered requirements and planned the project and studied and added the features based on the responses of circulated questionnaire.
- Design Creation: Developed the visual design and user experience.
- Development: Implemented features and integrated components.
- Testing: Verified functionality and performance.
- Deployment: Made the platform available to users and ensured stability.

Project Development Cycle

Project Development Cycle- Risks, challenges and mitigation

- Major Challenges that could be faced
  - **Data Gathering**: Manually collecting news articles is time-consuming and inefficient.
  - **Data Updates**: Keeping the news articles fresh requires constant manual effort.
  - **Scalability:** Handling a large number of news sources and articles can be difficult with a basic structure.
  - **Personalization:** It may be challenging to personalize the news feed for individual users without user data.
- Development of Risk Register helped us go through major challenges and risks that could have been faced.

Project Development Cycle

Project Development Cycle- Change management

- During the phase of development, we had encounter to change certain things as compared to our proposal that were:
  - Removal of Text to Speech Feature
  - Removal of AI Tools Integration
- We removed these features because of time and integration complexity.And we changed our Frontend Stack from Tailwindcss to SCSS for better controllability over the code and compatibility with the other code.

Project Development Cycle

Project Development Cycle-Testing

- **Functional Testing:**
  - User Registration: Verified that users can register with valid data.
  - Login/Logout: Ensure users can log in and out successfully.
  - News Data: Tested the fetching of data correctly according to the mapping of users.
  - Admin Approval: Tested that only admin have right to approve the data and checked whether the data is getting approved or not.

Project Development Cycle

- **Usability Testing:**
  - Navigation: Tested the ease of navigation through each page.
  - Accessibility: Ensured that platform is accessible to users with disabilities.
  - Readability: Crosschecked the Cross-platform supportability of the Font Size and Font Style on different Browsers.
- **Performance Testing:**
  - Load Testing: Tested the load by sending the response to a single service.
  - Response Time Bounce Back Time calculated to avoid the delay of the response sent to the server.
- **Security Testing:**
  - Authentication: Test robustness of user authentication.
  - Data Security: Ensure data is encrypted and secure.

Project Development Cycle

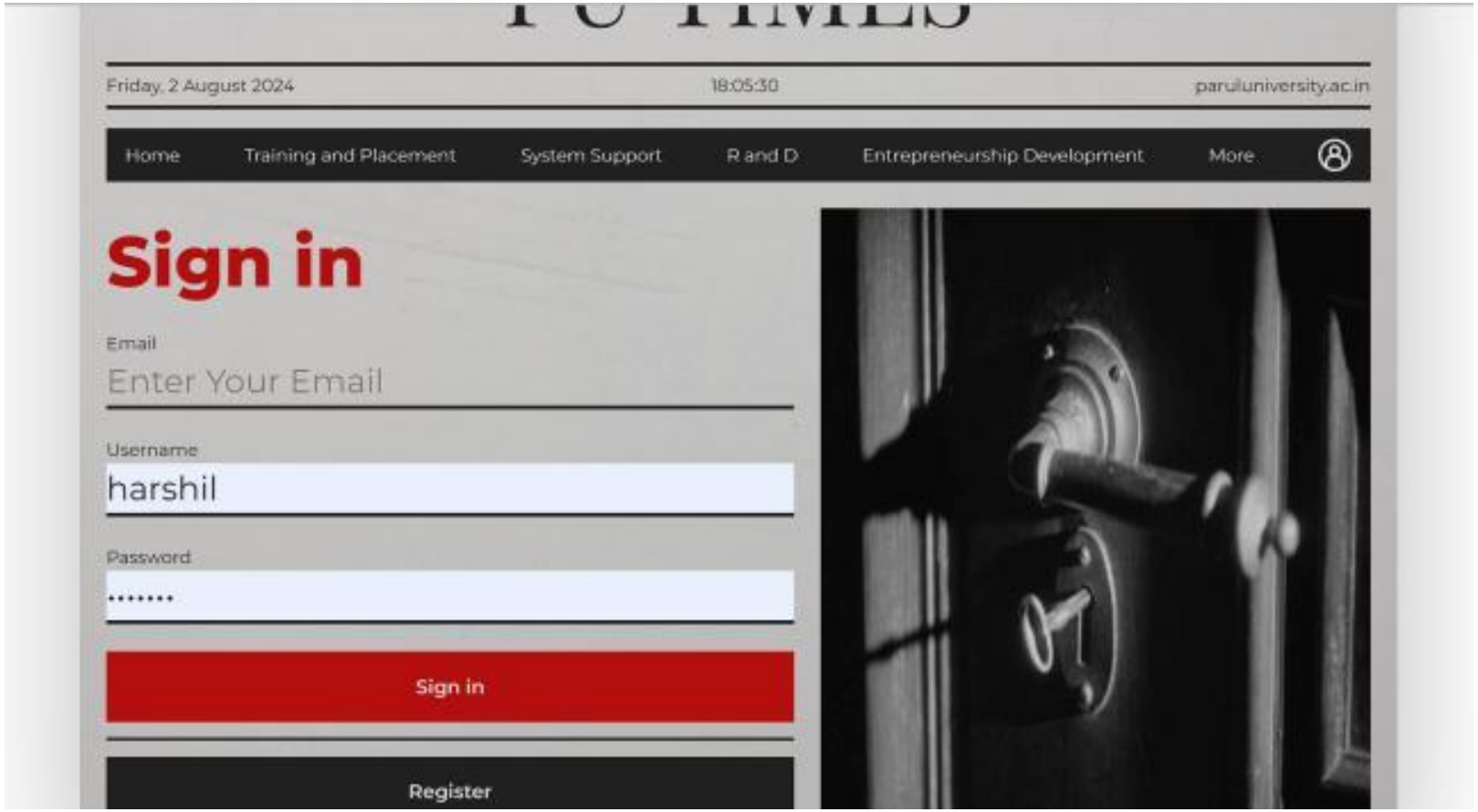
Project Development Cycle- Screenshots

newsInput Module

Project Development Cycle

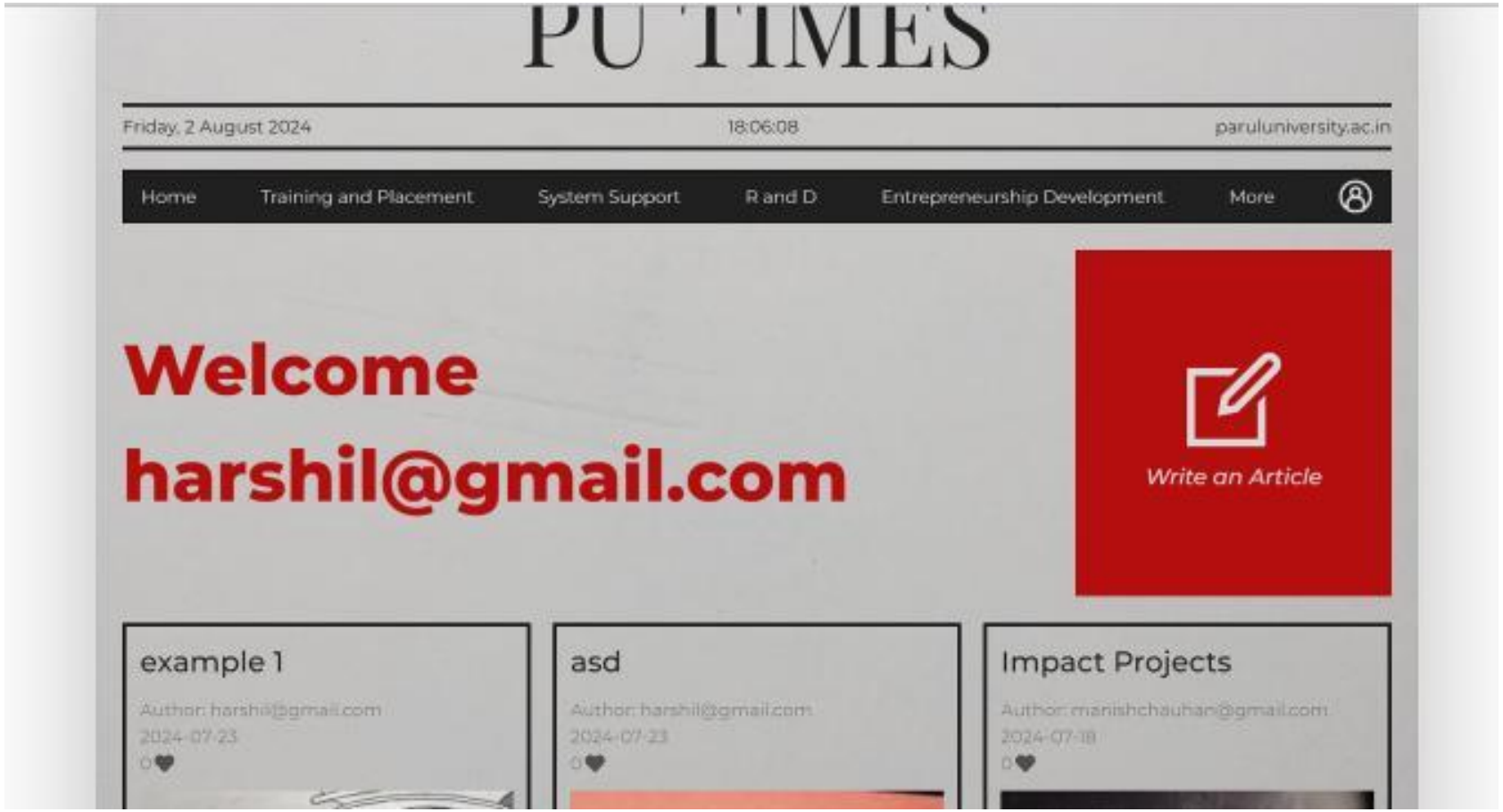
Main Dashboard Module

Project Development Cycle



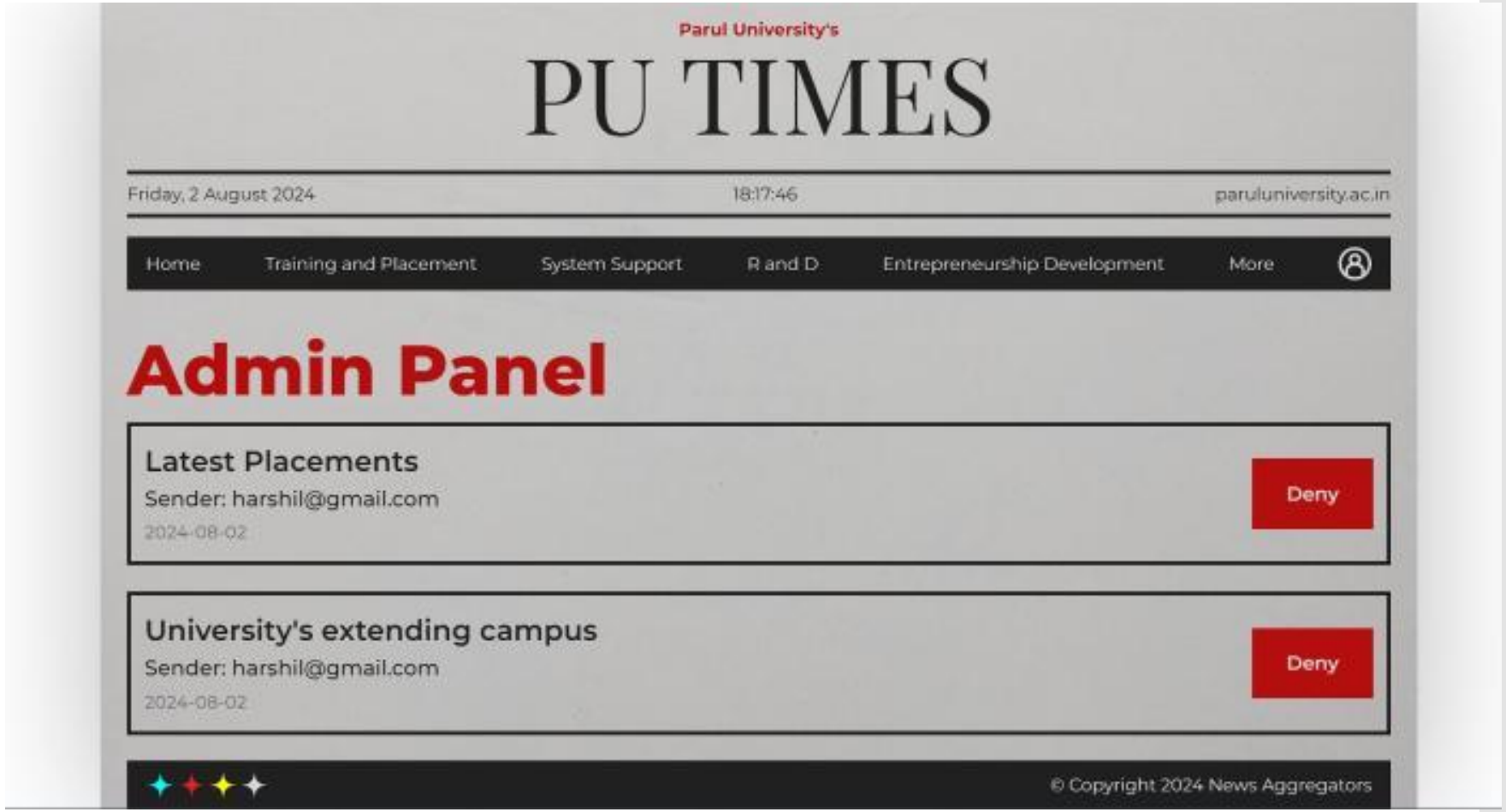
Signin Module

Project Development Cycle



UserProfile Module

Project Development Cycle



Admin Panel Module

Project Development Cycle

Project Development Cycle- Success

- Users readily recommend your product to others.
- Sending surveys to gauge users' satisfaction with different aspects of the product.
- Monitoring teams' progress towards goals throughout the project. (meeting the deadlines of work and achieving specific checkpoints)
- Monitoring how the app is being discussed and used within the university community to get more insights about the user.

Project Development Cycle

Project Development Cycle- Recommendations for future work

Follow-up activities

- Conduct workshops and provide tutorials.
- Implement and review user feedback regularly.
- Schedule updates and security checks
- Promote the platform within the university community

Recommendatons

- Communication is Key: We realized that regularly talking to each other and our mentors made a big difference.
- Managing Time Well: Planning our work and sticking to a schedule helped us a lot. Breaking the project into smaller tasks with deadlines kept us organized and on track.
- Thinking About Users: Making sure the platform was easy and pleasant to use. Aka User Experience
- Keeping Good Records: Documenting everything as we went along was really helpful
- Valuing Feedback: Getting regular feedback from our mentors was incredibly valuable

Project Development Cycle

Project Development Cycle- Conclusions and Summary

In summary, the project's primary goal was to create a single application or platform that would enable users, or faculty and staff, to access the most recent news from the university campus as well as contribute to it by publishing original articles that would be validated by the platform administrator. The majority of the objectives were met, with the exception of a few minor issues with user interactions (likes, comments, shares), and module routing. The team may have finished developing the platform with a slightly more flexible time limitation. Therefore, the most important lessons would be to ask team members to work as quickly as possible and to push to be well-aligned with the submission dates.

Creation of Github Repository

- https://github.com/manishchauhan009/NewsAggregators
- Version control has been extremely helpful to the team in keeping track of changes made by other members without having to manually share entire files with one another. Git allowed us to work on the same directory at our own pace from home, and it was much simpler to manage a single directory without any problems. A few branches (frontend, backend, and additional) were made in the main directory, and team members with the appropriate skills worked on them. Once the changes were finalized, all of the major changes were combined with the main branch.
- Although we switched few repositories due to some uncertain technical problems, we were able to keep up with a final repository of the project.

Project Reflection

Project Development Cycle- Lessons learnt

- By introducing a centralized news platform, enhances communication and engagement within the college community.
- As a result, it shall have better information access, user satisfaction and news organization.
- The users will get all the college related news at a single site in an orderly and structured manner.
- The users will be able to post their articles through our project.
- This project will bridge the gap between the students, faculty, alumni, staff , parents.
- It encourages participation in college activities and enhances campus life.
- From this project, we learned effective team collaboration , strong project management , utilization of data insights and an emphasis on continuous improvement.

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