

Assignment #7 - Project Constraints Essay

Team Members:

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Design Constraints for the NARLA Project:

Our project, NARLA: Apartment Co-Pilot, faces several key design constraints that influence our possible solutions.

Economic constraints play a major role since our team has limited funding and must rely primarily on free or student-licensed software such as AWS free tier, Firebase, and open-source libraries. Because our resources are self-funded, we must design an efficient system that minimizes hosting and maintenance costs while remaining scalable for future users.

From a professional standpoint, this project directly contributes to our development as software engineers by applying real-world practices such as agile development, version control, database management, and secure API design. We must ensure the product reflects professional standards in both performance and user experience.

Ethical and legal constraints are also significant, especially regarding data privacy and intellectual property. Since NARLA handles sensitive roommate and apartment information, we must ensure all data is stored securely and follow ethical practices that protect user consent and confidentiality. Additionally, we must avoid using copyrighted materials or APIs without proper licensing.

Security constraints guide our architectural choices as we must prevent unauthorized access, protect user data through encryption, and comply with best practices for authentication and cloud security.

Finally, social and diversity considerations shape how we design our interface and features. We aim to make NARLA inclusive for users from diverse cultural backgrounds by offering simple, intuitive design and flexible language options that promote accessibility.

Together, these constraints define the boundaries within which our team must innovate, ensuring our solution remains practical, ethical, secure, and socially responsible.