



Marwadi
University
Marwadi Chandarana Group





Major Project – II (01CE0807)
Review 1 (13/01/2024)

Learn Sync – Your Learning Companion
Team ID: xxxxx

Team Member 1: Aum Pitroda (92000103148) (TC3)

Team Member 2: Ravi Ajagiya (92000103139) (TC2)

Team Member 3: Kishan Songara (92000103090) (TC2)

Guided By

Internal Guide Name: Prof. Santushti Bergeri

External Guide Name:

Department of Computer Engineering, Faculty of Technology

1.0 Introduction to Project and Project Management

- 1.1 Project Summary
- 1.2 Purpose
- 1.3 Objective
- 1.4 Scope
- 1.5 Technology & Literature Review
- 1.6 Project Planning

2.0 System Analysis

- 2.1 Study of Current System
- 2.2 Features of LearnSync
- 2.3 Components of LearnSync

3.0 System Design

- 3.1 System Design & Methodology
- 3.2 Database Design

LearnSync: Revolutionizing learning with advanced techniques, gamified journeys, all-in-one hub, and a connected community for excellence.

Our Teams Moto :

Be Precise, on time, just meaningful!



Vast Syllabus

Motivation Hurdles



Time-Bound Revision

Objectives of LearnSync



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- ✓ **Empowering Aspirants:** Equip aspirants to conquer competitive exams, overcoming challenges with Learn Sync's innovative approach.
- ✓ **UI Excellence:** Craft a sleek UI for Learn Sync, balancing aesthetics and utility seamlessly for user satisfaction.
- ✓ **Cost-Free Advantage:** Provide Learn Sync as a cost-free gem, standing against market competitors, making learning accessible to all.
- ✓ **Accessible, Usable, Scalable:** Design Learn Sync for easy access, usability, and scalable adaptability, meeting diverse learning needs effortlessly.
- ✓ **Streak-Based Motivation:** Introduce Learn Sync's streak-based approach, turning challenges into achievements, fueling continuous motivation for users.



- ✓ **Optimize Learning Schedules:** Efficiently plan studies with Spaced Repetition, Task, and Time Schedulers.
- ✓ **Enhance Focus with Pomodoro Timer:** Boost productivity using Pomodoro Timer for focused study intervals.
- ✓ **Motivate Through Streaks:** Instill motivation with Task Streaks, fostering a consistent learning rhythm.
- ✓ **Build Collaborative Communities:** Foster connections through Friend's Activity Panel, Group Streaks, and Leaderboards.
- ✓ **Organize Information with Flash Cards:** Facilitate effective learning through Flash Cards, promoting information retention.



1. **How to Study Effectively Article**, National Library of Medicine—
[<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5673147/#>]
2. **UI Design and Specification**
[<https://m3.material.io/>]
3. **Dopamine Nation: Finding Balance in the Age of Indulgence – Anna Lembke**, American Psychiatrist
insights on processing of pain and pleasure by brain
4. **Research on “Snapchat Streaks: How Adolescents Metagame Gamification in Social Media”** by Europe PMC -
[<https://europepmc.org/article/ppr/ppr324038>]
5. **Using Gamification in Education: A Systematic Literature Review**, Research Gate Article -
[https://www.researchgate.net/publication/330093575_Using_Gamification_in_Education_A_Systematic_Literature_Review]



Project Planning for LearnSync – Agile Methodology



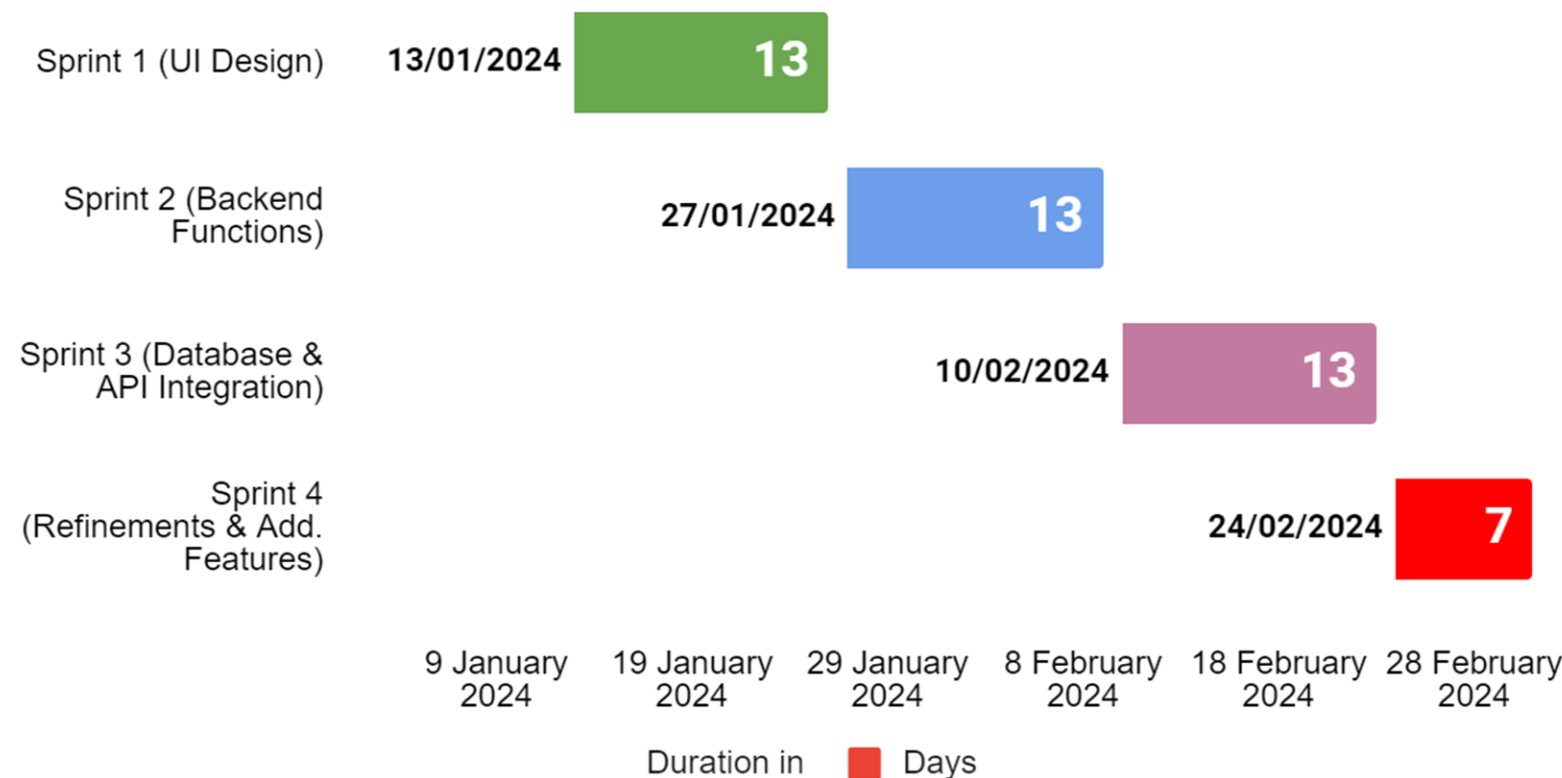
Agile Scrum is a flexible project management framework emphasizing collaboration, iterative progress in short sprints, and continuous improvement, providing adaptability for changing requirements and efficient team communication.

Why Agile -> SCRUM? Scrum is ideal for LearnSync's small team of three, ensuring clear roles, close collaboration, and efficient task distribution.

Sprint	Start Date	End Date	Goals/Tasks
Sprint 1	13/01/2024	26/01/2024	UI Design
Sprint 2	27/01/2024	09/02/2024	Backend Functions
Sprint 3	10/02/2024	23/02/2024	Database & API Integration
Sprint 4	24/02/2024	02/03/2024	Refinements & Additional Features



Gantt Chart for LearnSync



1. Study of Current Systems their Major Problems & Weaknesses

2. Requirements of New System

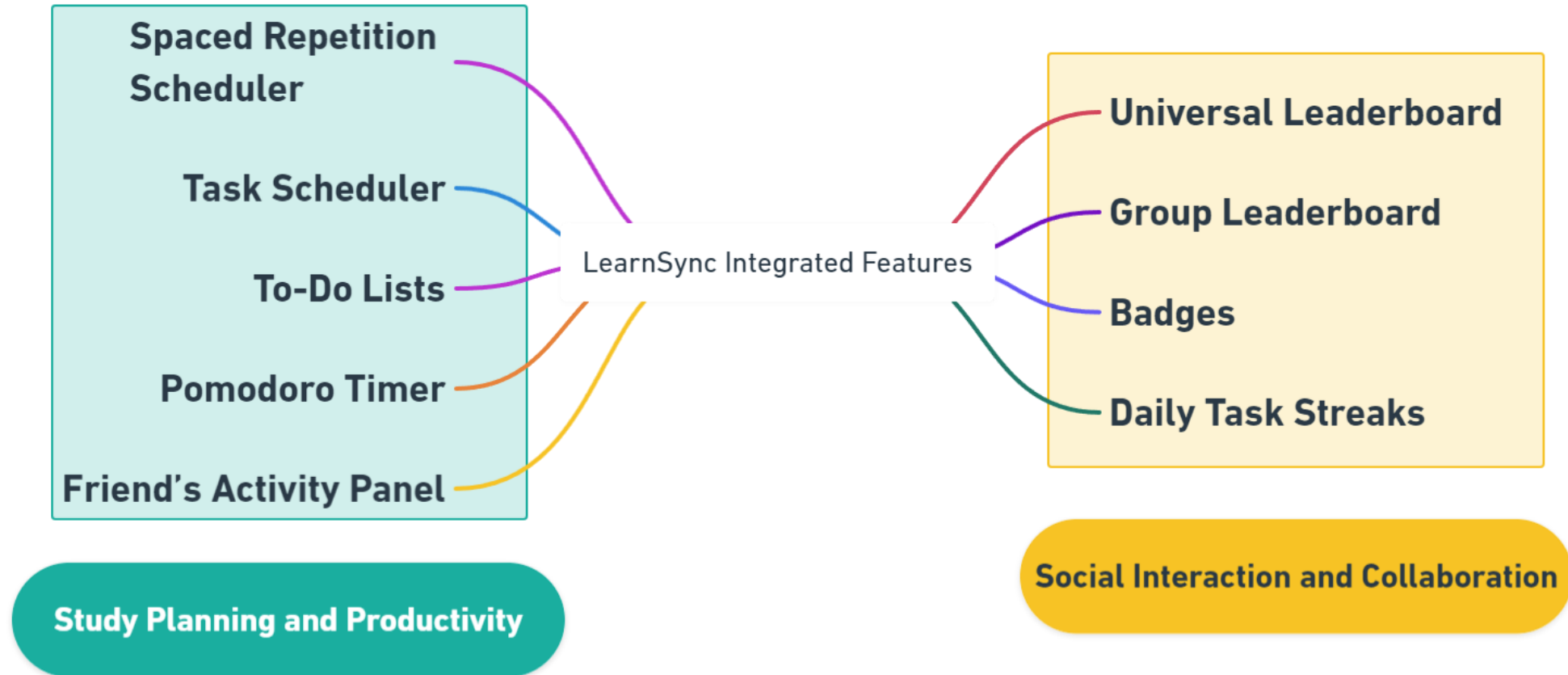


- I. **Fragmentation** hampers seamless learning, **requiring navigation** across **multiple scattered tools**.
 - ✓ **Unified Platform:** Integrate various tools into a cohesive, unified learning platform.
- II. **Gamification lacks immersion**, missing opportunities for a motivating learning experience.
 - ✓ **Immersive Gamification:** Implement engaging and motivating gamification for a truly immersive experience.
- III. **Overlooked techniques** like spaced repetition limit memory retention enhancement .
 - ✓ **Comprehensive Techniques:** Prioritize memory enhancement techniques in to design.
- IV. Social platforms **lack the** warmth of a **real community for learning**.
 - ✓ **Vibrant Community Integration:** Foster a warm and vibrant community atmosphere for collaborative learning.
- V. Some tools suffer from **unfriendly user interfaces**, hindering the learning journey.
 - ✓ **Sleek User Interface:** Design a modern and user-friendly interface for a smooth learning journey.

Features of LearnSync : Activities + Easy Integration with Native Tools



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Components of LearnSync (Overview of Modules / Pages)



Introduction & Support	User Interactions	Social Interaction	User Account
Home/Welcome Page	Dashboard	Friend's Activity Panel	Profile
Login/Registration		Domain Leaderboard	Integration
About Us	Modules Accessible on Dashboard	Group Leaderboard	Leaderboard
Contact Us	I. Study Planning	Badges	Streaks and Challenges
FAQs	II. Spaced Repetition Scheduler	Daily Tasks Streaks	Settings
	III. Task Scheduler	Group + Task Streaks	Error Pages
Terms and Conditions	IV. To-Do Lists		
Privacy Policy	V. Pomodoro Timer		
	VI. Links to Other Pages		

API Integrations

Google Calendar & Email API: Seamless scheduling and reminders for enhanced study planning.

Google OAuth API: Secure user authentication, leveraging Google's trusted authentication system.

MongoDB: Efficient, scalable, and flexible NoSQL database for robust data management.

Basic Technologies & Integrations Used:

Technologies Used

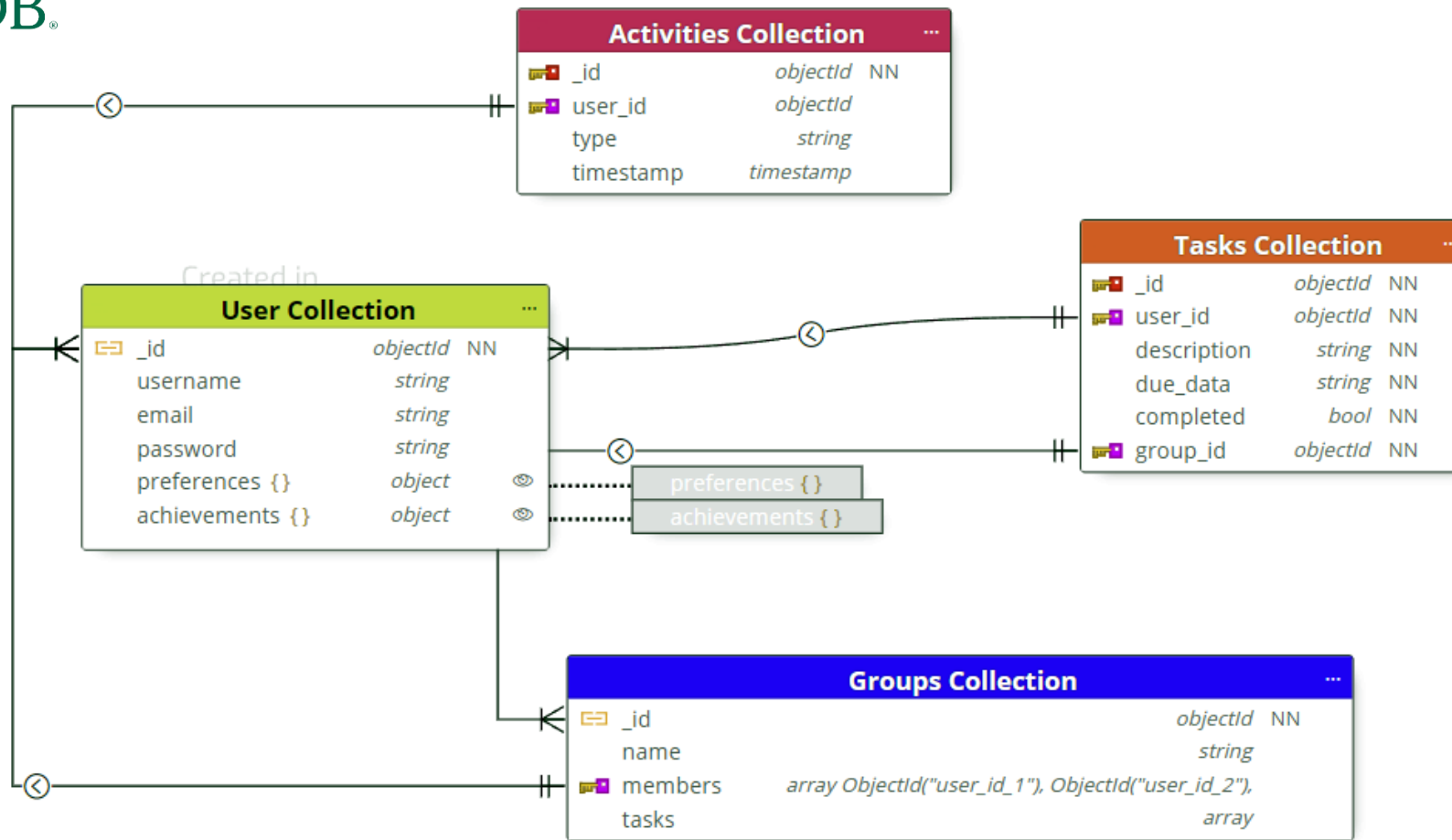
Front-End: HTML, CSS, JS: Modern, interactive, and responsive user interface for an engaging experience.

Backend Framework: Flask, Python: Python's simplicity and Flask's flexibility for efficient backend development.

Database: MongoDB: NoSQL advantage, offering scalability and adaptability for LearnSync's data.

User Authentication: Flask Login, Google OAuth V2.0: Secure user login, combining Flask simplicity with Google's authentication reliability.

No-SQL Database : MongoDB Design For LearnSync



THANK YOU

