

# Student Companion — Initial Presentation

## Chaotic Programmers

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# Introduction and Motivation

## Introduction

*Online semester made us realize the importance of group studies. Also, students who do distance learning or take any online course find it difficult to keep phase with the course and leaves little time for revision. We propose a website which will keep students motivated by checking their phase with friends and do timely revision.*

# Introduction and Motivation

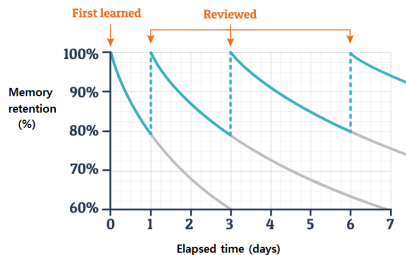
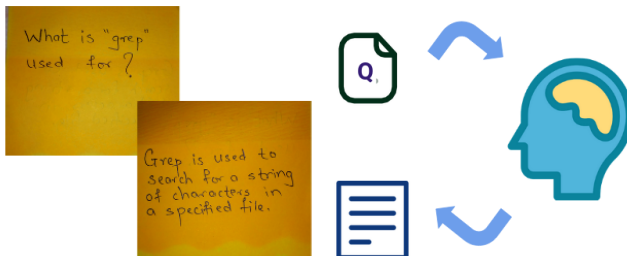
## Introduction

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## Motivation

*Flash cards are used as a self-testing technique and the efficacy is determined by the amount and timings of practice. [Wis12]*  
*The pandemic has affected academic delivery and collaborative learning. A tool for revision and sharing flashcards can enhance the learning process and a leaderboard provides a virtual competitive environment and enhances learner's motivation.[SP21]*

# Introduction and Motivation



[Chj18]



# Problem Statement

Building a website to create a study tool which uses flashcards and timed revisions for learners and help them cope up with online education by providing a competitive feel with their friends along with sharing their flashcards to give them feel of a virtual group study environment.

# Methodology

- Use of Flash cards to help capture points to remember.
- Revision of flashcards, facilitating "Active Recall".
- Timely repeated revisions using "Spaced Repetition" strategy to retain information in memory longer.
- Allow users to share Flash cards with friends, creating a virtual "Group Study" like environment.
- Provide leader boards to encourage friendly competitions among students.

# Technologies Used

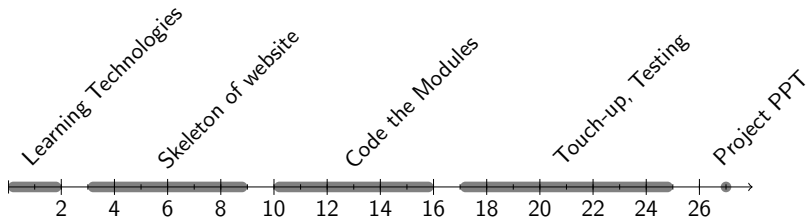
- 1 Django - Framework to be used for Backend.
- 2 AngularJS - For making responsive GUI.
- 3 MySQL - For storing data.
- 4 Github - For Version Control
- 5 L<sup>A</sup>T<sub>E</sub>X- For Presentation
- 6 Sphinx - For Documentation



Figure: Web Technologies [Dja][Ang][MyS]



# Timeline



Oct 3	Learning Technologies
Oct 10	A skeleton of the project (front end+backend+database design)
Oct 17	CRUD Flashcards [Bhavana] Scheduling and Leaderboard [Sakharam] Sharing and Friends [Abisek]
Oct 25	Touch-ups, Testing


# Testing Criteria


- The Site should run on local servers and should be compatible across modern browsers.
- Creating, Editing and Deletion of Flashcards should be seamless.
- Users must have a login facility.
- Users should have the ability to share Flashcards with their friends by specifying their email.
- Users must be able to compare their progress against the leader board.
- Users must have automated, dynamic revision of flashcards scheduled to them, based on past performance.


# Deliverables


- 1 Login page for user to login
- 2 Facility to create, edit and delete flashcards
- 3 Spaced Repetition of flashcards
- 4 Adding friends and sharing cards among friends
- 5 A leaderboard among friends
- 6 Decks to organize cards
- 7 Creating a custom decks from existing cards for custom revision
- 8 An internal timer to keep cards in front next time during revision if recalling too longer
- 9 Show current progress of cards for the user and user's friends


# References


 AngularJS, *Logo*, <https://angularjs.org/>.

 Bo Ae Chun and Heo hae ja, *The effect of flipped learning on academic performance as an innovative method for overcoming ebbinghaus' forgetting curve*, 01 2018, pp. 56–60.

 Django, *Logo*, <https://www.djangoproject.com/community/logos/>.

 MySQL, *Logo*, <https://www.mysql.com/about/legal/logos.html>.

 Sangkyun Kim PhD Sungjin Park, MEng, *Leaderboard design principles to enhance learning and motivation in a gamified educational environment: Development study*, JMIR Serious Games, 2021.

 Rawson K. A. Pyc M. A. Wissman, K. T., *How and when do students use flashcards?*, Memory, Hove, England, 2012.