MOODLE

Learning Management System

PRE_STUDY

STUDY

DESIGN

TESTING

DOCUMENTATION

Problem Observation

- Difficulty in sharing notes
- Difficulty in submitting assignments
- Difficulty in having a course related discussion
- There are other platforms available for sharing but there are IPR issues also so, we can't share it on social networks
- Then, How do students and Professors share their notes and slides?
- Answer is Picasa, Gmail, Webmail, drives, dropbox, moodle and so on.....

PRE_STUDY

STUDY

DESIGN

TESTING

DOCUMENTATION

Identification of the users

- Students: Access and share slides and notes
- Professors: Sharing of class notes, Clearing doubts
- Teaching Assistants: Updates of the classes, Clearing doubts

PRE_STUDY

STUDY

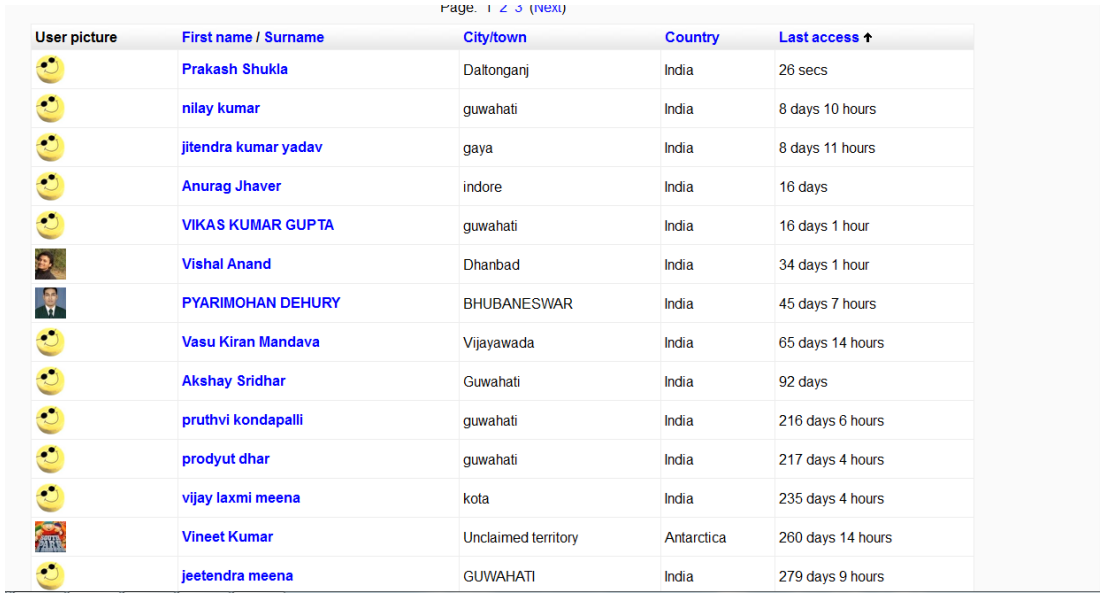
DESIGN

TESTING

DOCUMENTATION

Problem Observation

- It was observed that not many departments in IIT Guwahati use Moodle.
- Out of those using Moodle, very few of them were active.



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	jitendra kumar yadav	gaya	India	8 days 11 hours
	Anurag Jhaver	indore	India	16 days
	VIKAS KUMAR GUPTA	guwahati	India	16 days 1 hour
	Vishal Anand	Dhanbad	India	34 days 1 hour
	PYARIMOHAN DEHURY	BHUBANESWAR	India	45 days 7 hours
	Vasu Kiran Mandava	Vijayawada	India	65 days 14 hours
	Akshay Sridhar	Guwahati	India	92 days
	pruthvi kondapalli	guwahati	India	216 days 6 hours
	prodyut dhar	guwahati	India	217 days 4 hours
	vijay laxmi meena	kota	India	235 days 4 hours
	Vineet Kumar	Unclaimed territory	Antarctica	260 days 14 hours
	jeetendra meena	GUWAHATI	India	279 days 9 hours

PRE_STUDY

STUDY

DESIGN

TESTING

DOCUMENTATION

Problem Observation

- Data was collected from the users about how they access and share their notes.
- After the data collection it was clear that Moodle in IIT G is very inactive.
- It was found that only 1 out of 7 users used Moodle

PRE_STUDY

STUDY

DESIGN

TESTING

DOCUMENTATION

Studying the problem

- We started with **Heuristic Evaluation** of Moodle to find the usability bugs.
- Following Usability problems were common
  - Inconsistency, not properly organized and categorized,
  - Prone to error
  - Inefficient for the users to use.

PRE_STUDY

STUDY

DESIGN

TESTING

DOCUMENTATION

Studying the problem

- After Heuristic Evaluation, We went to the users asked them to perform 3 **tasks on Moodle**. This was followed by a **questionnaire** based on their **task experience**.
- The following data was noted:
  - Time taken for each task
  - No. of clicks for each task
  - No. of errors performed overall

PRE_STUDY

STUDY

DESIGN

TESTING

DOCUMENTATION

Studying the problem

- The 3 tasks that were given to the users were:
  - Access the course 'Introduction to Psychology', enroll yourself in it. Open 'Learning Slides'
  - Add a new blog entry, which has title 'Hello World!' and body 'This is my first blog'. Also, add a smiley of your choice after the text. Post your blog.
  - Open Calendar from the 'Introduction to Psychology' course and Export Calendar.

PRE_STUDY

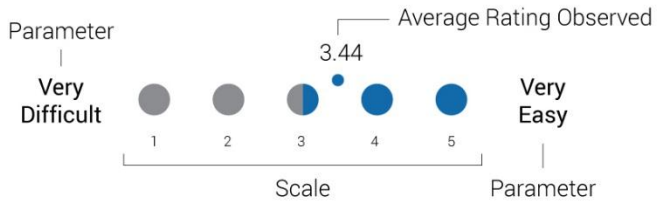
STUDY

DESIGN

TESTING

DOCUMENTATION

Studying the problem



1) Accessing the course materials/ slides was:

2) Performing different tasks was:

3) Writing a new blog was:

4) The options in the blog entry were:

PRE_STUDY

STUDY

DESIGN

TESTING

DOCUMENTATION

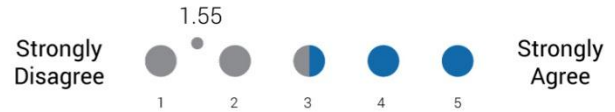
Studying the problem

5) Finding necessary links was:

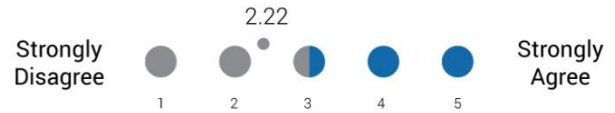
6) Using Moodle was:

7) Different types of information were clearly visible:

8) Moodle looks attractive:



9) Moodle looks organised:



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STUDY

DESIGN

TESTING

DOCUMENTATION

Benchmarking

- A benchmark is set for the design based on our interaction with users and studying the State of Art.
  - Adapt to several teaching and learning scenarios.
  - Notification of class announcement
  - Profile
  - Blog
  - Instant message
  - Group Discussion
  - Schedule
  - Notes

PRE_STUDY

STUDY

DESIGN

TESTING

DOCUMENTATION

Deciding on Grids and Colour pallet

- Following a user centered design methodology, every design decision was taken with consideration of the users' preferences and visual and cognitive perceptions.
- Users were shown and asked to rank six grid patterns, which were probable design solutions for our system, and four colour pallets which could fall into our visual design.

PRE_STUDY

STUDY

DESIGN

TESTING

DOCUMENTATION

Deciding on Grids and Colour pallet

- We intended to understand their perception of the context of the system and the initial psychological impact of the various designs.
- No knowledge of design was necessary to rank the visuals.
- This was undertaken not to be entirely biased by the users' preferences, but to give ourselves a bridge of safety, if at all there was a point in the design phase where we couldn't move forward.

PRE_STUDY

STUDY

DESIGN

TESTING

DOCUMENTATION

Deciding on Grids and Colour pallet

1

Gross Rank: **53**
Top Choice: **3**
Lowest Choice: **2**

2

Gross Rank: **57**
Top Choice: **2**
Lowest Choice: **0**

3

Gross Rank: **66**
Top Choice: **1**
Lowest Choice: **3**

4

Gross Rank: **67**
Top Choice: **3**
Lowest Choice: **4**

5

Gross Rank: **56**
Top Choice: **3**
Lowest Choice: **3**

★ 6

Gross Rank: **43**
Top Choice: **7**
Lowest Choice: **1**

PRE_STUDY

STUDY

DESIGN

TESTING

DOCUMENTATION

Deciding on Grids and Colour pallet

1 

Gross Rank: **37**
Top Choice: **6**
Lowest Choice: **2**

2 

Gross Rank: **44**
Top Choice: **4**
Lowest Choice: **4**

3 

Gross Rank: **51**
Top Choice: **1**
Lowest Choice: **7**

4 

Gross Rank: **37**
Top Choice: **4**
Lowest Choice: **1**

PRE_STUDY

STUDY

DESIGN

TESTING

DOCUMENTATION

Attributes

- Accessible
- Intuitive
- Easy to Use
- Efficient
- Simple
- Organised
- Enjoyable

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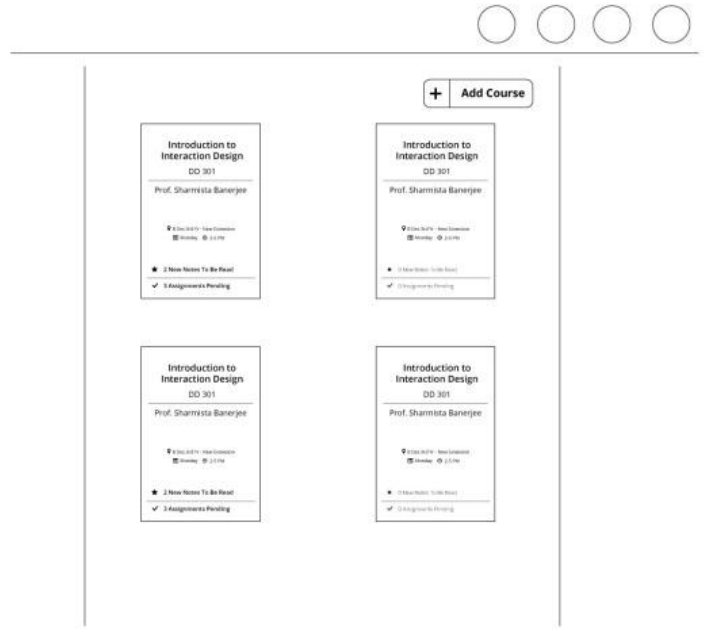
STUDY

DESIGN

TESTING

DOCUMENTATION

Initial concepts



PRE_STUDY

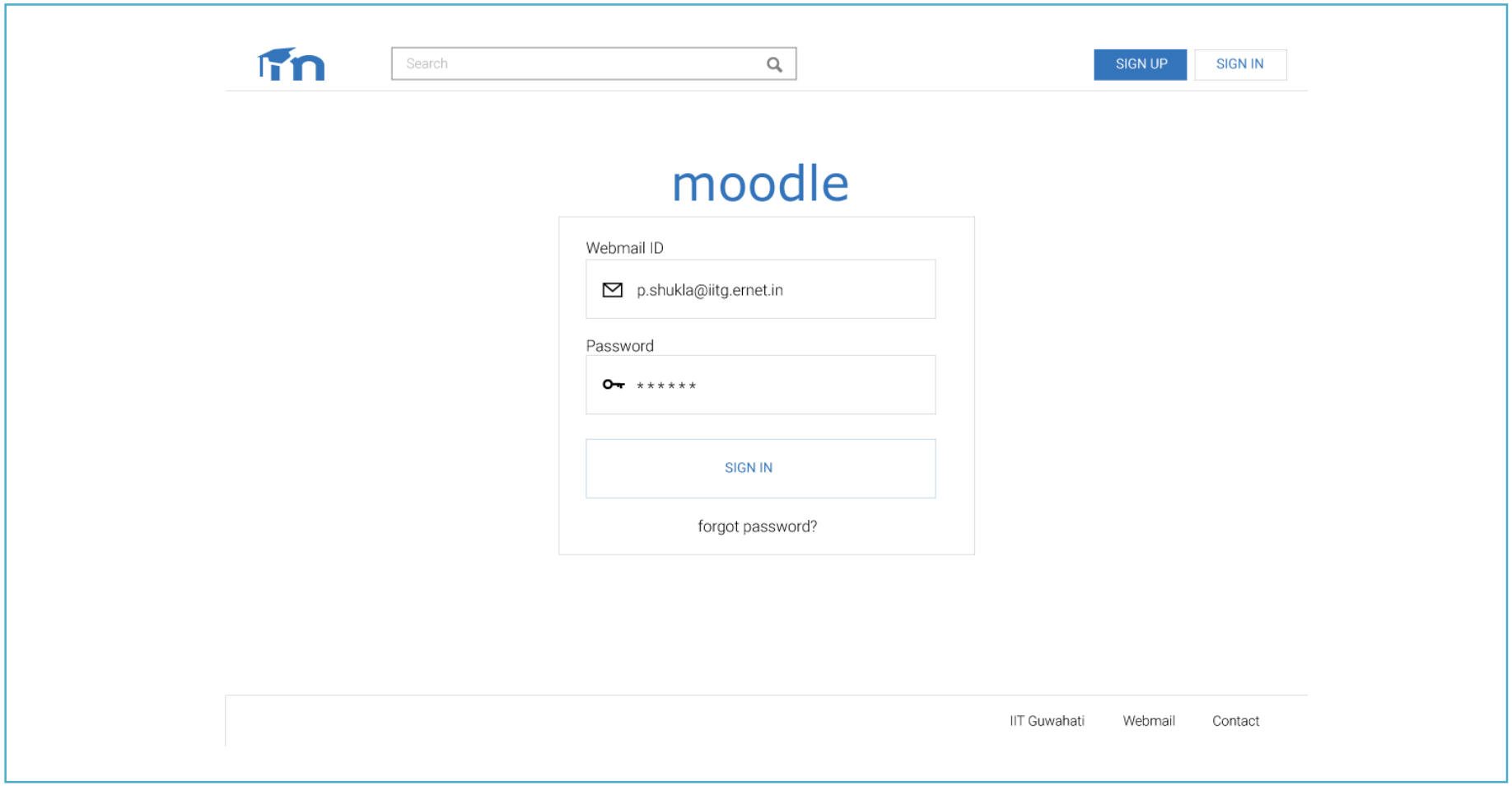
STUDY

DESIGN

TESTING

DOCUMENTATION

Screens



PRE_STUDY

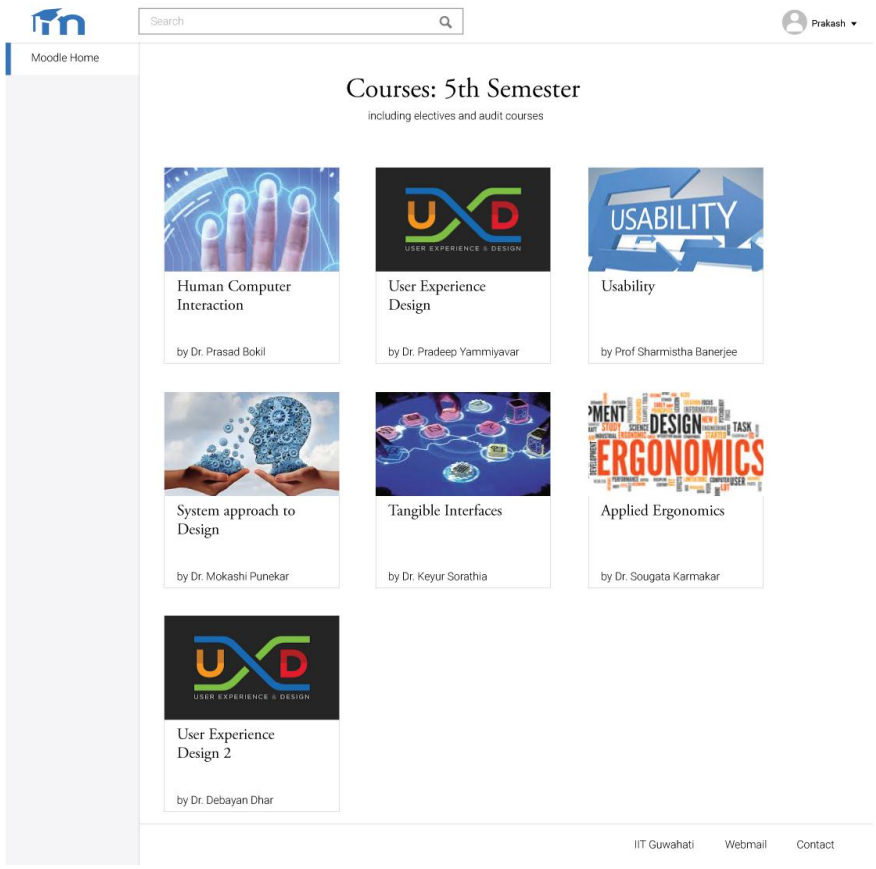
STUDY

DESIGN

TESTING

DOCUMENTATION

Screens



PRE_STUDY

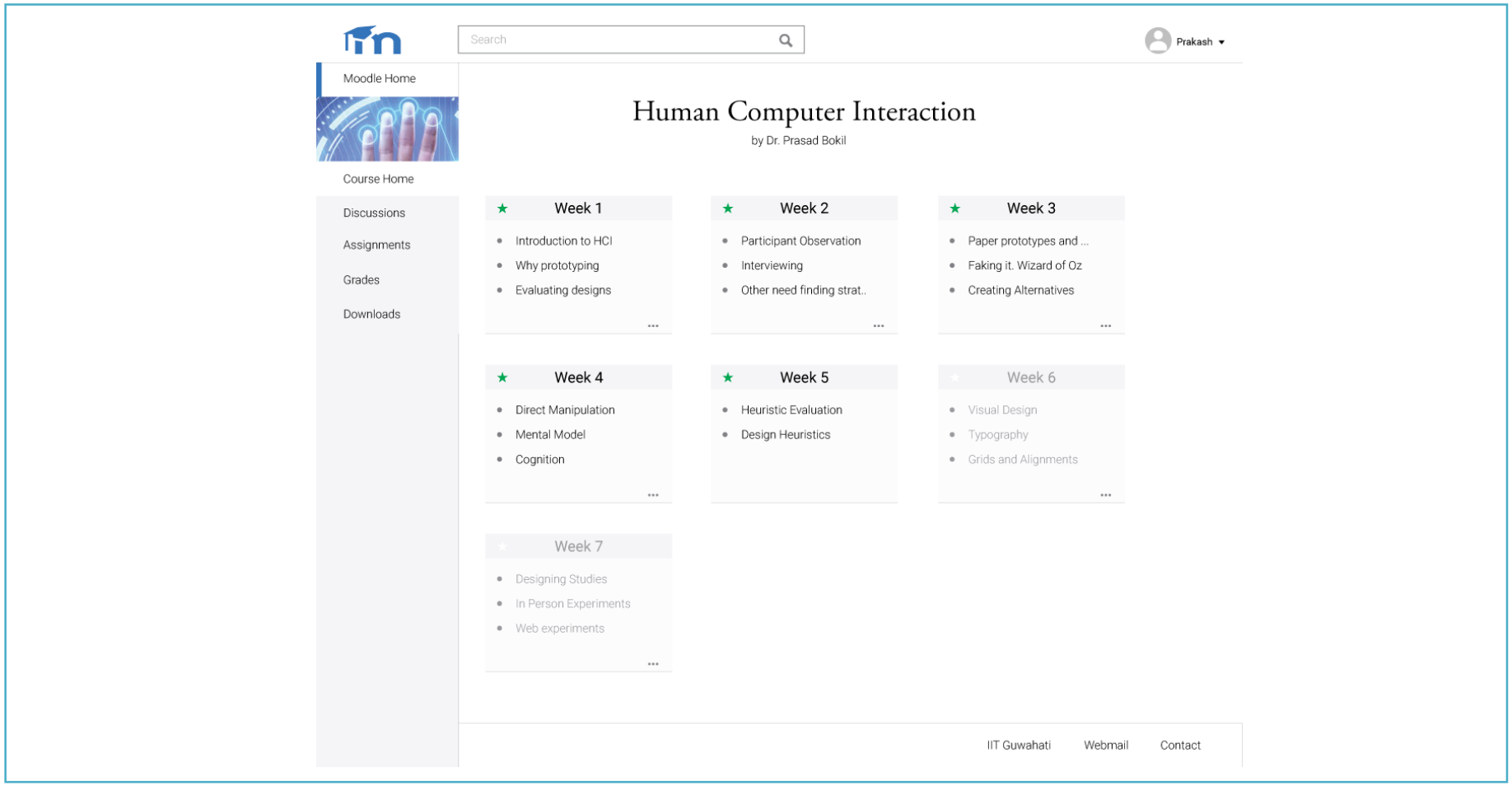
STUDY

DESIGN

TESTING

DOCUMENTATION

Screens



PRE_STUDY

STUDY

DESIGN

TESTING

DOCUMENTATION

Screens - Courses

Human Computer Interaction

by Dr. Prasad Bokil

User Experience Design

by Dr. Pradeep Yammiyavar

Usability

by Prof Sharmistha Banerjee

PRE_STUDY

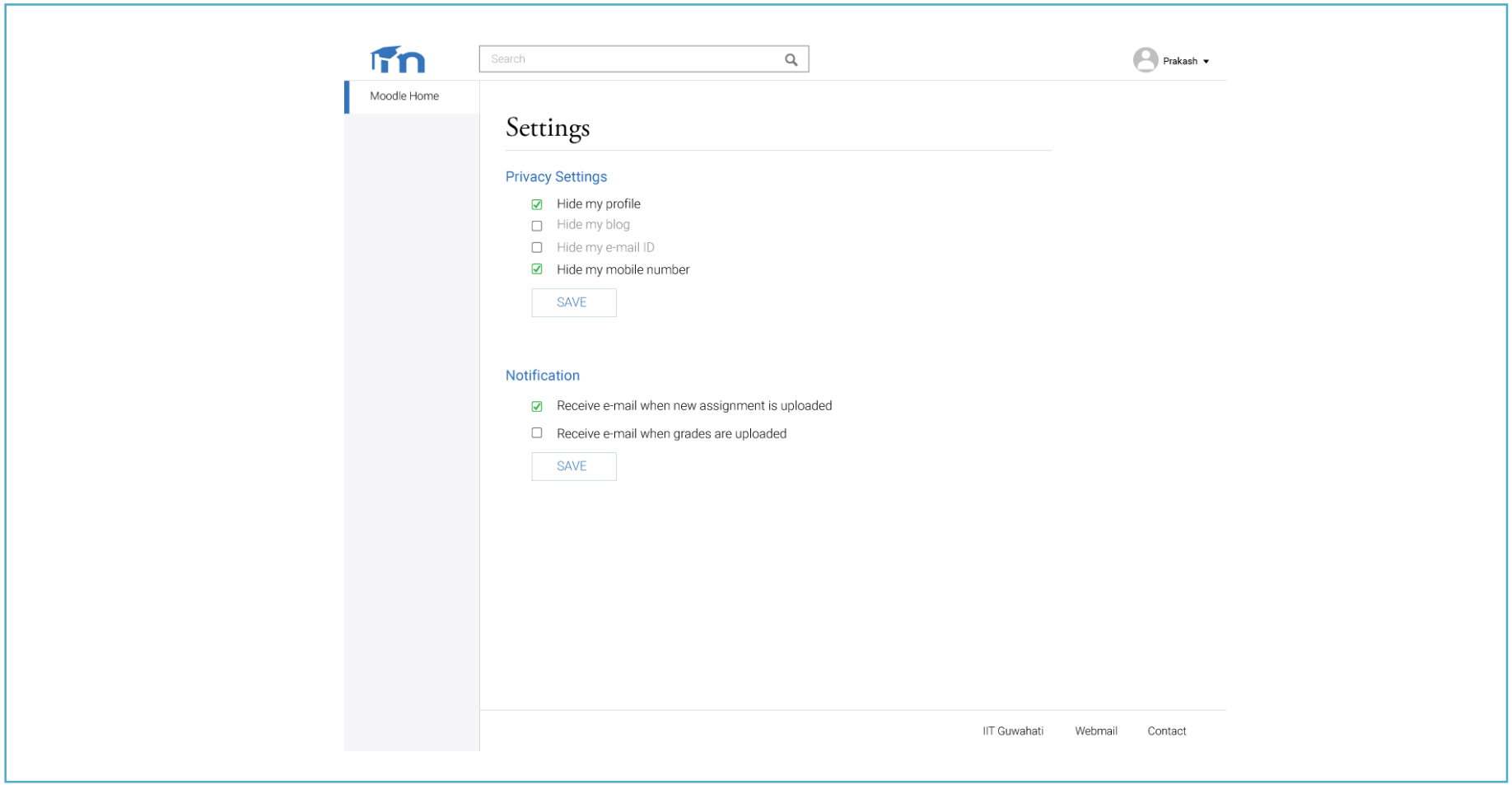
STUDY

DESIGN

TESTING

DOCUMENTATION

Screens



PRE_STUDY

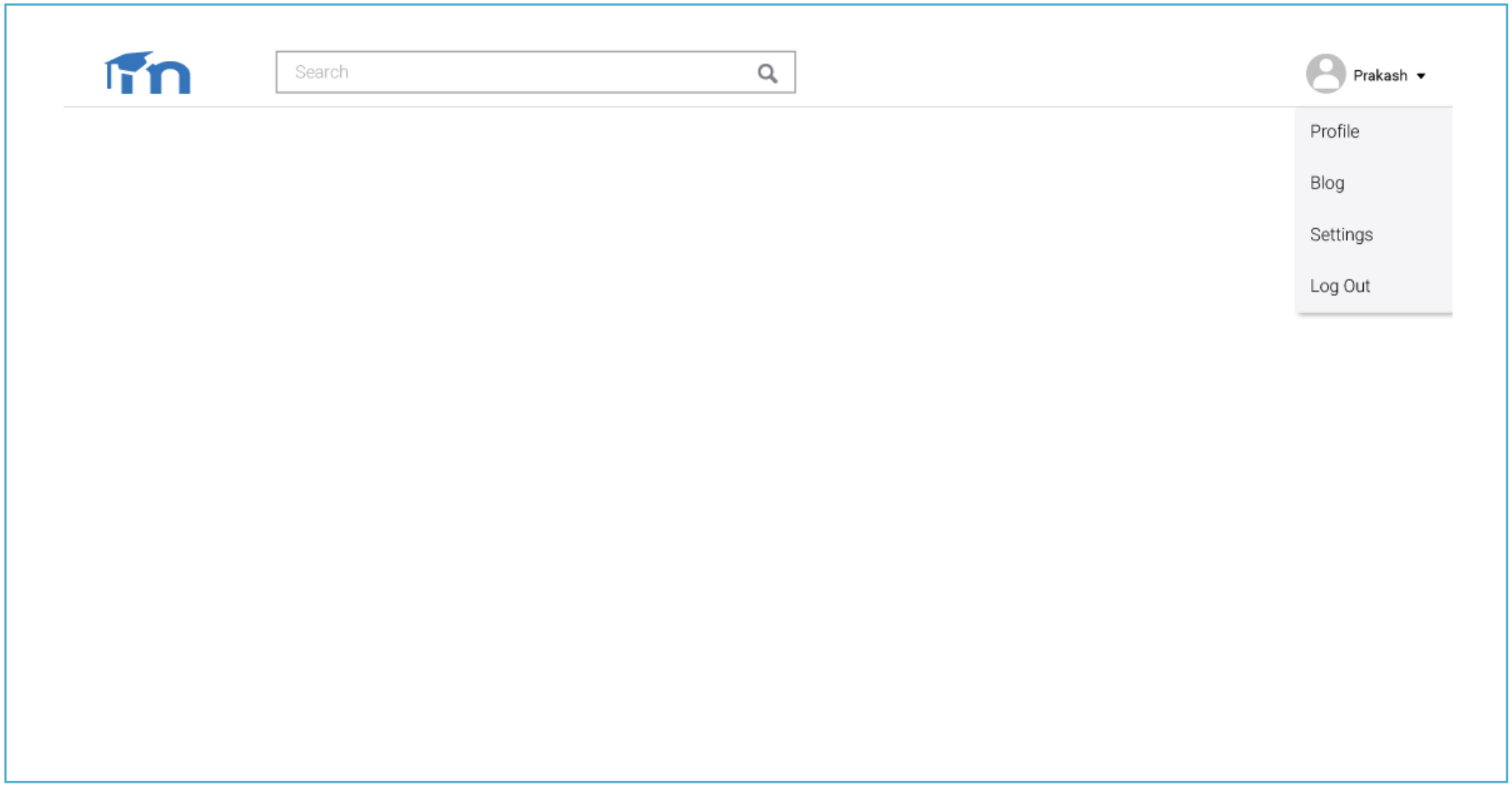
STUDY

DESIGN

TESTING

DOCUMENTATION

Screens



PRE_STUDY

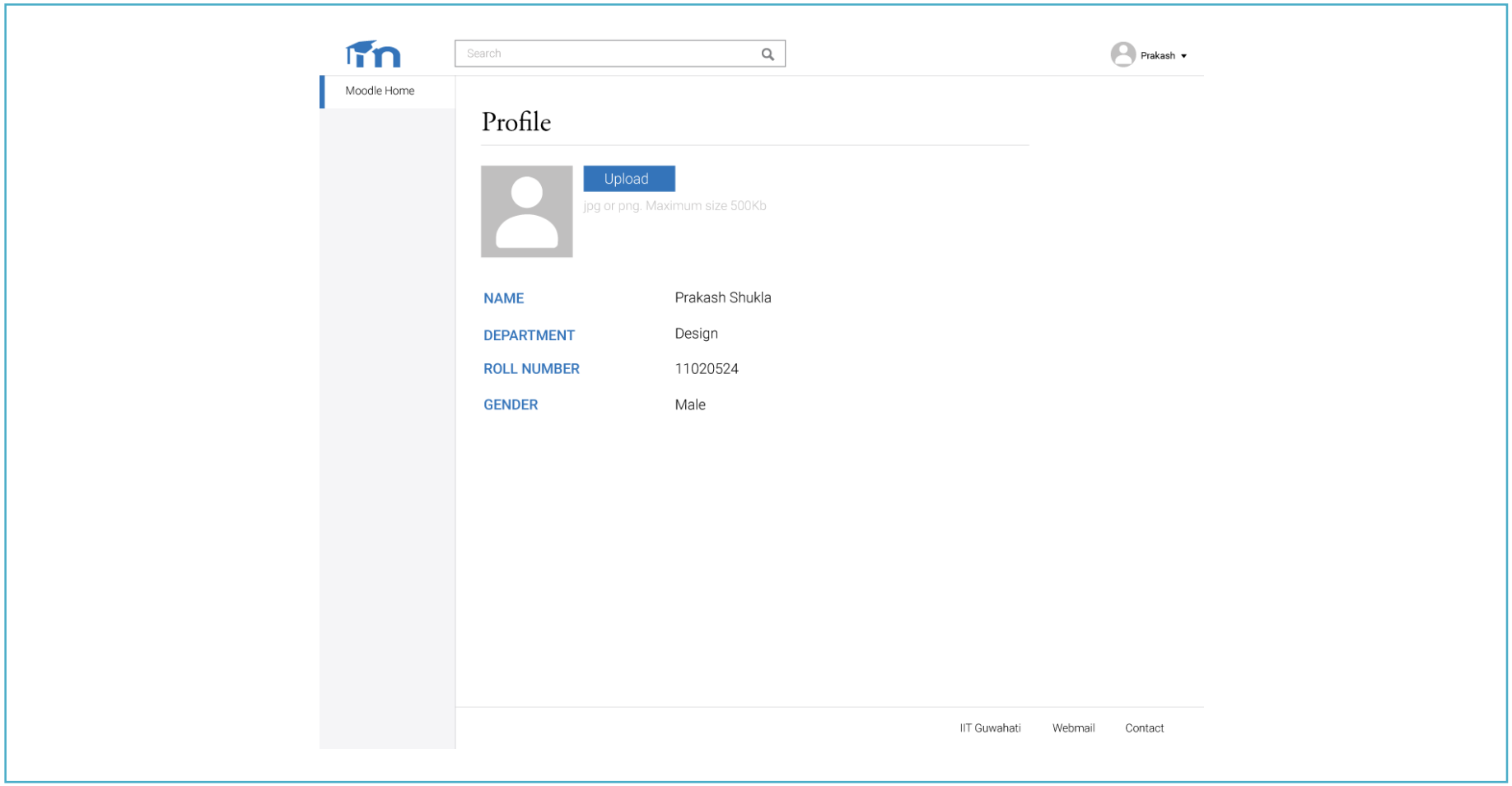
STUDY

DESIGN

TESTING

DOCUMENTATION

Screens



PRE_STUDY

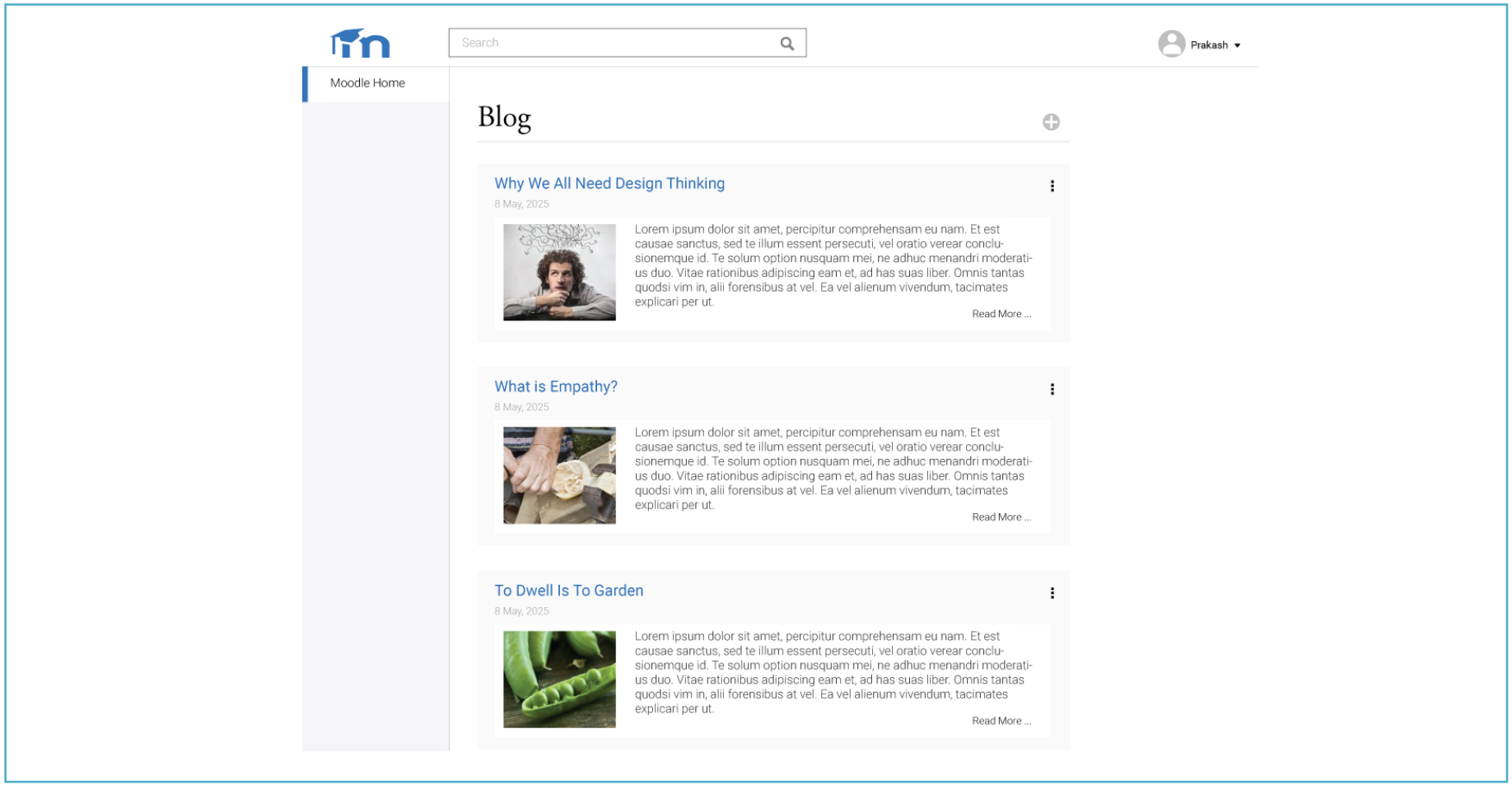
STUDY

DESIGN

TESTING

DOCUMENTATION

Screens



PRE_STUDY

STUDY

DESIGN

TESTING

DOCUMENTATION

Usability Testing

- Usability testing was conducted in consistent with the testing method used initially for Moodle
- The same users who were made to perform the evaluation of Moodle were asked to perform the tasks and evaluation
- Similar tasks were performed by users, followed by a questionnaire to measure ratings for user perceived web qualities

PRE_STUDY

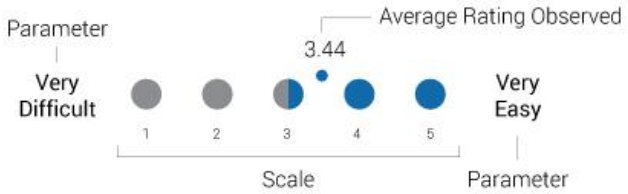
STUDY

DESIGN

TESTING

DOCUMENTATION

Usability Testing Results



1) Accessing the course materials/ slides was:

2) Finding and reading topics in Discussions was:

3) The instant Submissions feature was:

4) Finding necessary links was:

PRE_STUDY

STUDY

DESIGN

TESTING

DOCUMENTATION

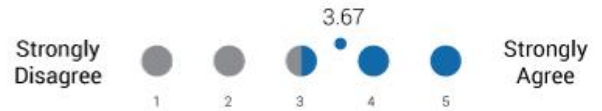
Usability Testing Results

5) Performing different tasks was:

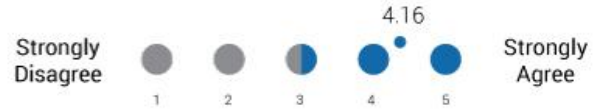
6) Using Bookshelf was:

7) Different types of information were clearly visible:

8) Bookshelf looks attractive:



9) Bookshelf looks organised:



PRE_STUDY

STUDY

DESIGN

TESTING

DOCUMENTATION

Usability Testing Results

- New Design (Bookshelf) secured a positive user experience rating (>3.5 on avg.) based on user perceived web qualities
- Course materials and required features were more accessible compared to earlier [Q. (1),(2),(4),(7)]
- Bookshelf was found to be easy to use [Q. (1),(2),(4),(5),(7)]
- Learnability and efficiency ratings were positive and reflected a balanced user experience system
  [Q. (5),(6),(8),(9)]

PRE_STUDY

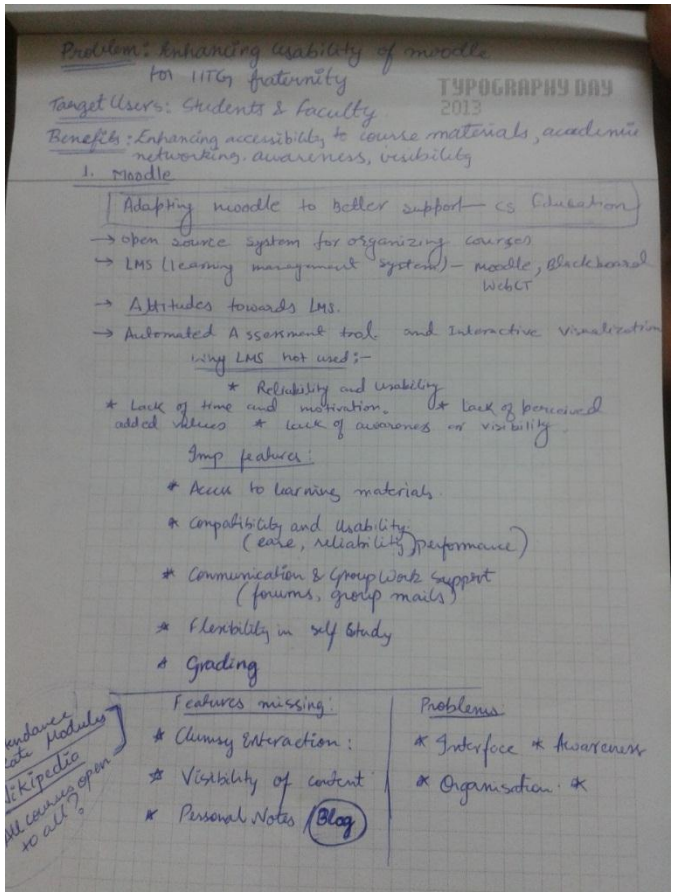
STUDY

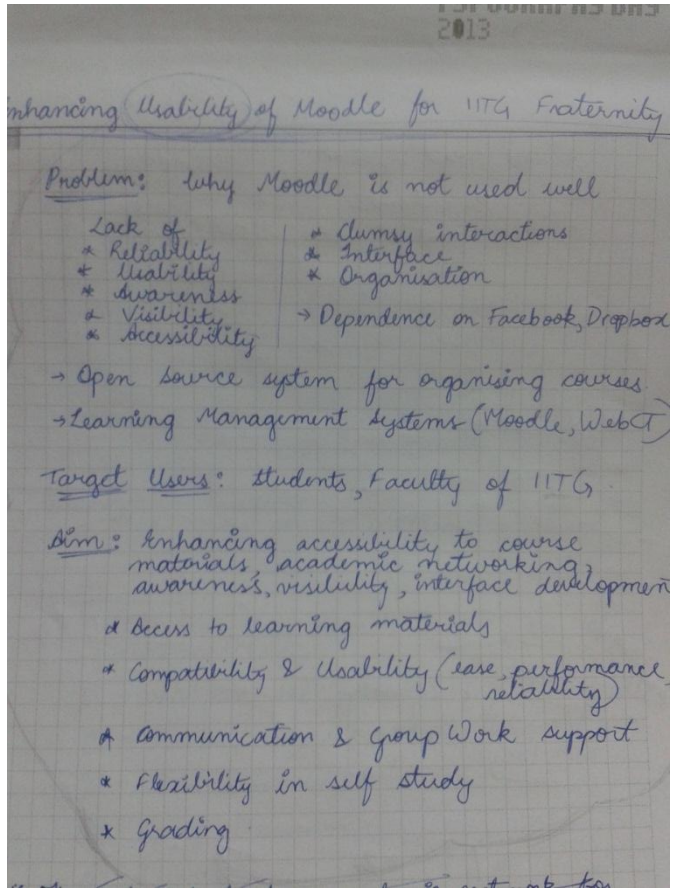
DESIGN

TESTING

DOCUMENTATION

Documentation





PRE_STUDY

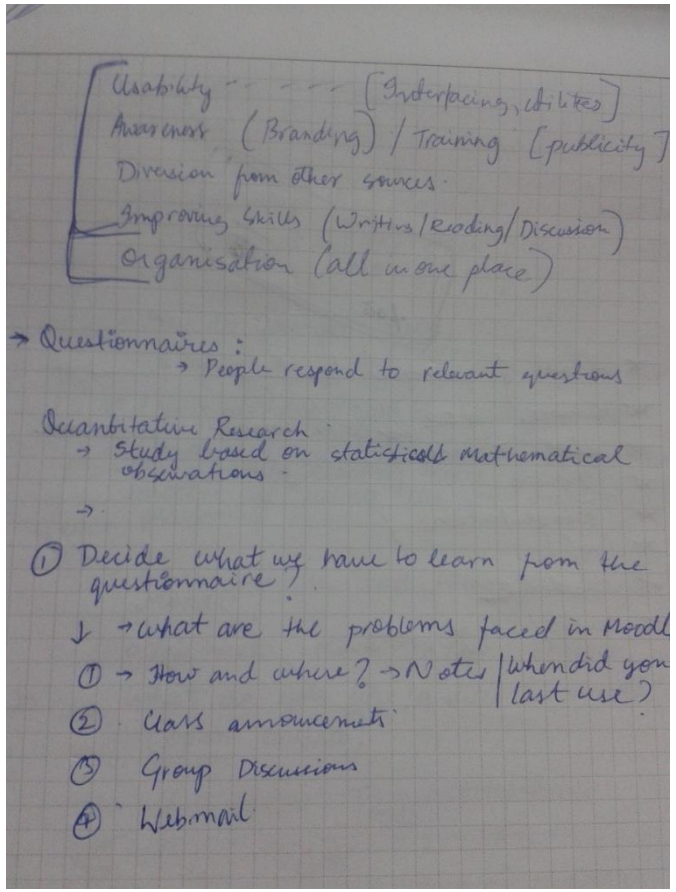
STUDY

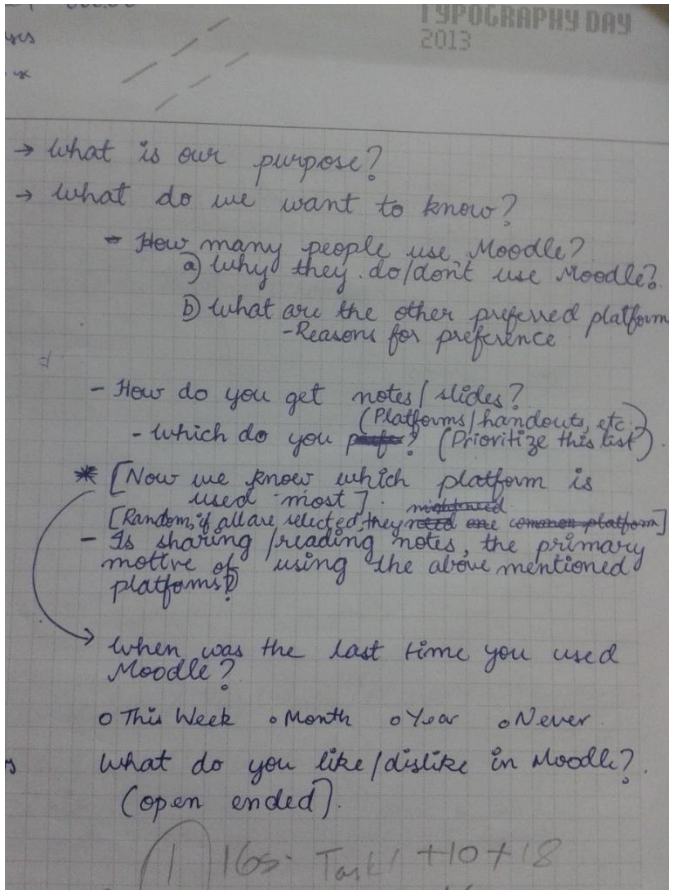
DESIGN

TESTING

DOCUMENTATION

Documentation





PRE_STUDY

STUDY

DESIGN

TESTING

DOCUMENTATION

Documentation