

# Peer Group Learning Finder

Software Engineering (CS 5150)

# The Design Team

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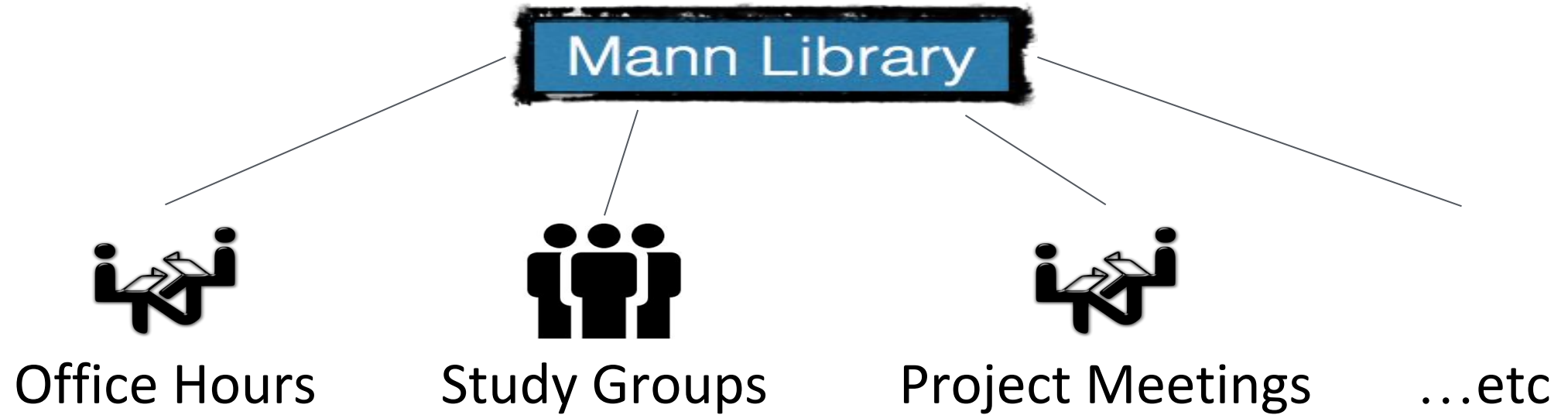
Zhou, Tao

# Introduction

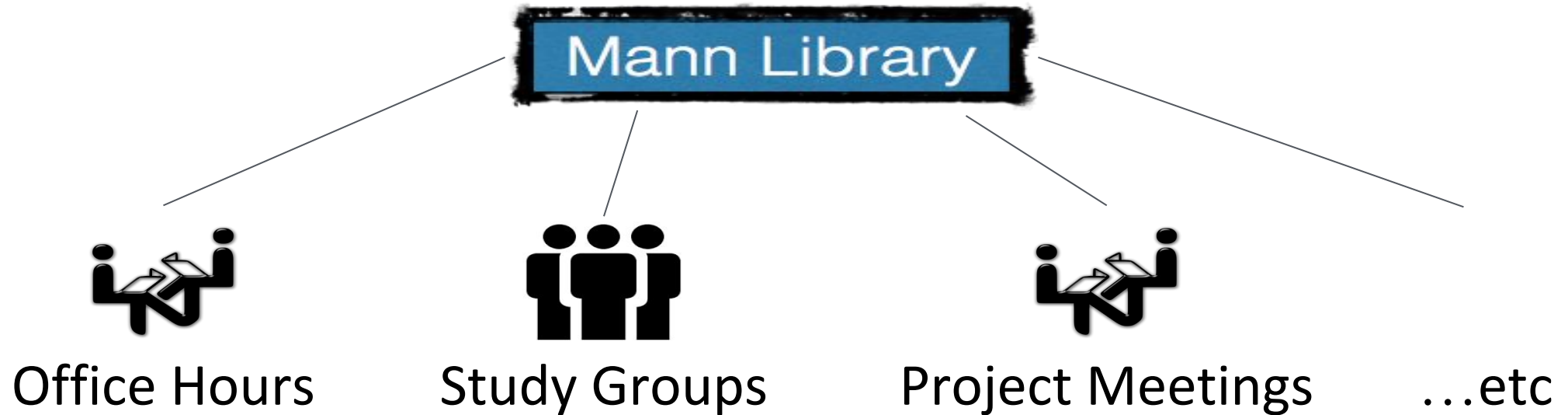
# Requirements

**Our understanding of the project requirements**

# The Concept



# The Concept



## Meeting



When



Where



What

etc.



## Mann Library

- Floors/Rooms
- Room Info
- Reserved Locs

# Scope and goals

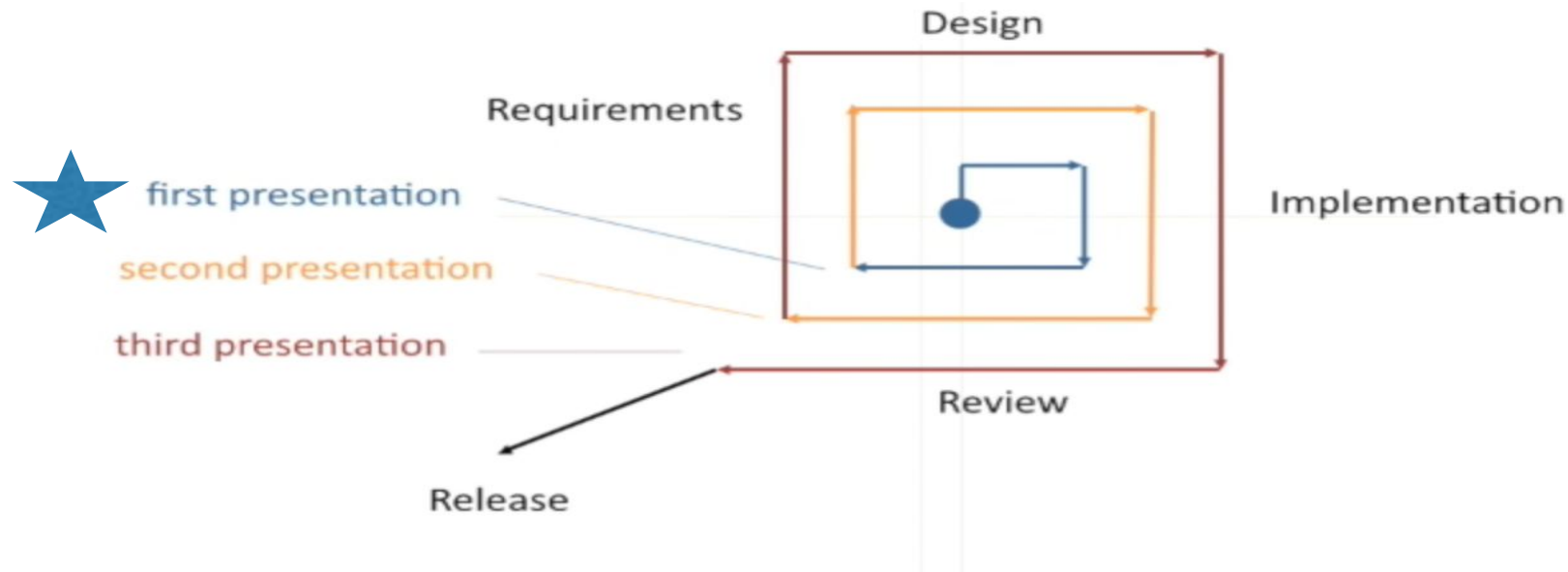
Primary functional components:

- View Statistics (Admin Interface)
- Meeting Creation
- Meeting Edit/Cancel
- Meeting View and Search

The team will provide an API and system documentation, which will include system requirements, database ER diagram, a list of available functionalities, and RESTful API specification sheet.

# The Process

Driven by an evolving user experience



3 stage iterative development model  
driven by usability testing



# User Roles

## **Functionality**

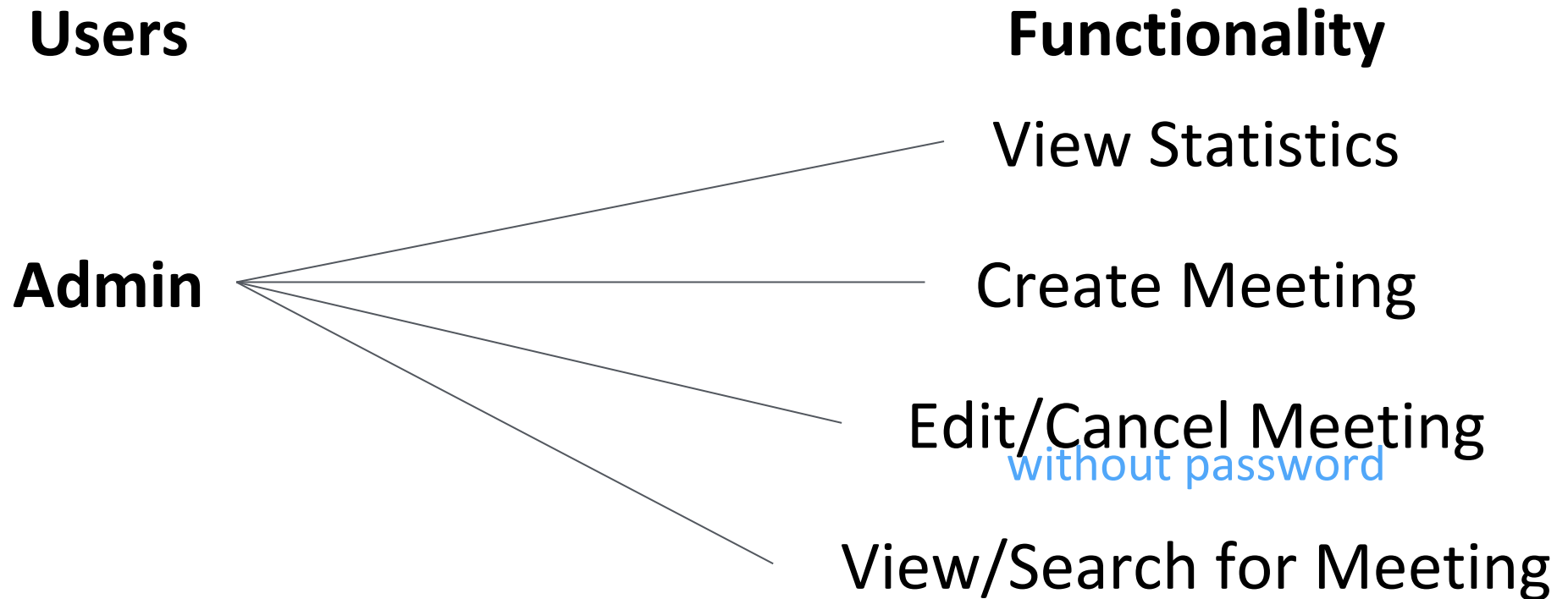
View Statistics

Create Meeting

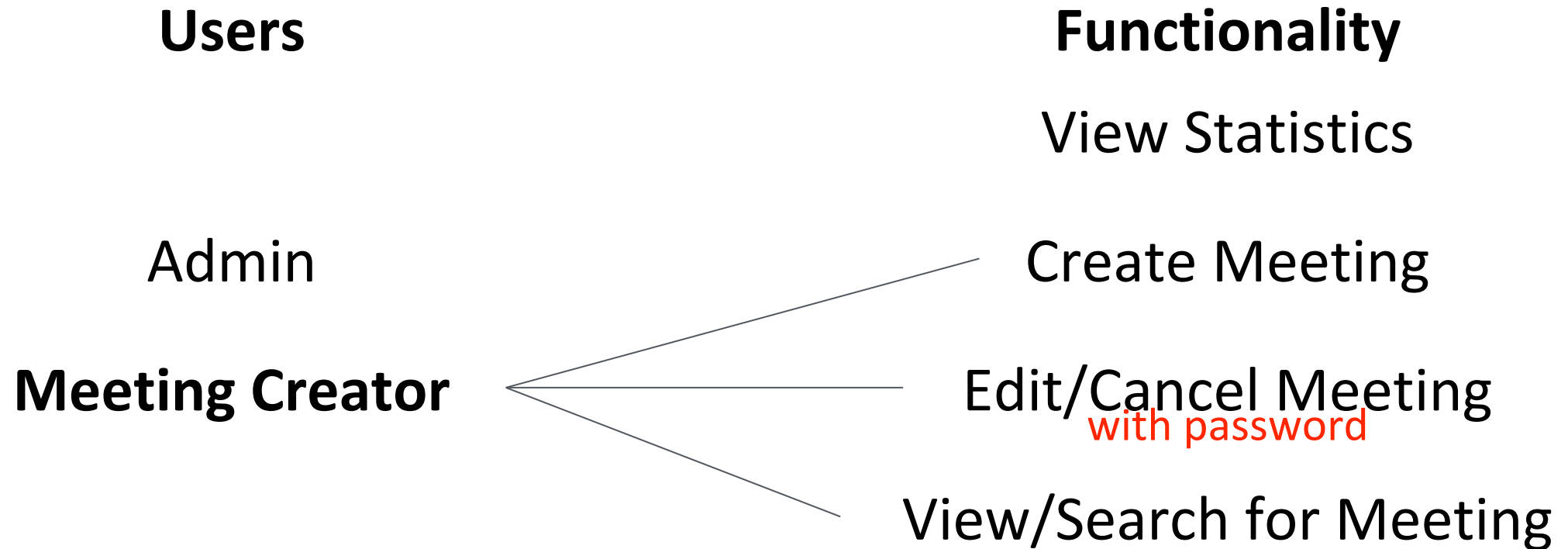
Edit/Cancel Meeting

View/Search for Meeting

# User Roles



# User Roles



# User Roles

## Users

## Functionality

View Statistics

Admin

Create Meeting

Meeting Creator

Edit/Cancel Meeting  
with password

**Visitor (Anon. User)**

View/Search for Meeting



# User Roles

## **Users**

## **Functionality**

View Statistics

Admin

Create Meeting

Meeting Creator

Edit/Cancel Meeting

Visitor (Anon. User)

View/Search for Meeting

# Feature: View Statistics

Designed to give admins insight to understand system and room usage, bigger picture meeting details, glances of past/present/future meetings.



Under development now, will always be flexible.

# Feature: Meeting Creation

Key information:

- When: date and time range
- Where: floor or room in Mann Library, additional directions
- What: title, description, meeting type

Details:

- Meeting password
- Privacy options: meeting open to the public?
- Creator information (private, for password reset)

# Feature: Meeting Creation

## Experience:

- Quick → strong back-end, cleverly integrated
- Intuitive → many cycles of usability testing
- Secure → focus on authentication



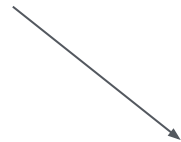
# Feature: Meeting Edit/Cancel

Given proper authentication, a user can:

- Edit details of the meeting (location, time, etc.)
- Cancel the meeting

Only admin users can:

- Change the creator email



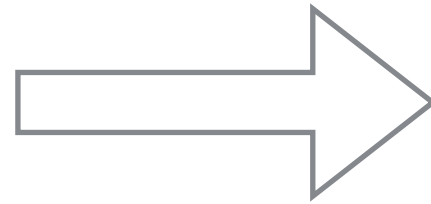
Help System:  
Contact an admin

# Feature: View and Search

## Design Decisions

### Devices:

- Desktop computers
- Laptop computers
- Smartphones
- Library devices



Web Application

### Locations:

- On user device
- Library technologies



API and  
Documentation

# Feature: View and Search

## Features

### View:

- Show meeting information (excluding creator email)
- Sharing options: show copiable link to meeting
- Edit button

### Search:

- Query titles and descriptions
- Add filters (meeting type, etc)

Requirements

Preliminary Design

Implementation and  
Design Decisions

Schedule

Usability Testing

# Preliminary Design

## User Experience

# User Interface: Meeting Creation

Cornell Meeting Finder @ Mann Library

Click to Create a Meeting!

Current Meetings    5 to show: 5 

[Day](#) | [Week](#) | [Customize](#)

<a href="#">Machine Learning Study Group</a>	-8:-31:-23 GMT-4:56:02--8:-31:-23 GMT-4:56:02@Floor 2-Individual Study Room 272
This is the best ML study group you can find, we will help each other and enjoy the fun and joy of machine learning!! Come and join us!!!	
<a href="#">Software Engineering Presentation</a>	-8:-31:-23 GMT-4:56:02--8:-31:-23 GMT-4:56:02@Floor 1-Current Periodicals Area
<a href="#">Database Homework Study Group</a>	-8:-31:-23 GMT-4:56:02--8:-31:-23 GMT-4:56:02@Floor 3-Large Group Room 370
The due is on next Monday!!!!	

# User Interface: Meeting Creation

Cornell Meeting Finder @ Mann Library

Enter a meeting title	
We're excited to post your meeting!	
*indicates a required field	
Contact Information:	
*Email:	<input type="text" value="example@123.com"/>
Location:	
Choose:	<input type="button" value="Choose Location"/>
Directions:	<input type="text" value="Go to big table near the window"/>
Details:	
*When:	<input type="text"/> <input type="text"/> to <input type="text"/> <input type="text"/>
*Type:	<input type="button" value="— Select a Meeting Type — ▾"/>
Public: <input type="checkbox"/> Open to the Public?	
Meeting Password:	
You can reset this password using the email you provided above	
Password:	<input type="text" value="Something you'll remember"/>
Meeting Description:	
<div><div>Underwater basket weaving club meeting! We would love to have you!</div><div></div></div>	
Remember, the info you submit will be public.	
<input type="button" value="Done"/>	

# User Interface: Meeting View


Cornell Meeting Finder @ Mann Library

**Title: Machine Learning Study Group**

This is the best ML study group you can find, we will help each other and enjoy the fun and joy of machine learning!! Come and join us!!!

 **Location:** Mann Library Floor 2 Room 202A

 **Capacity:** 15

 **Time:** 2:20pm - 4:40pm, Oct 23rd

 **Type:** Study Group

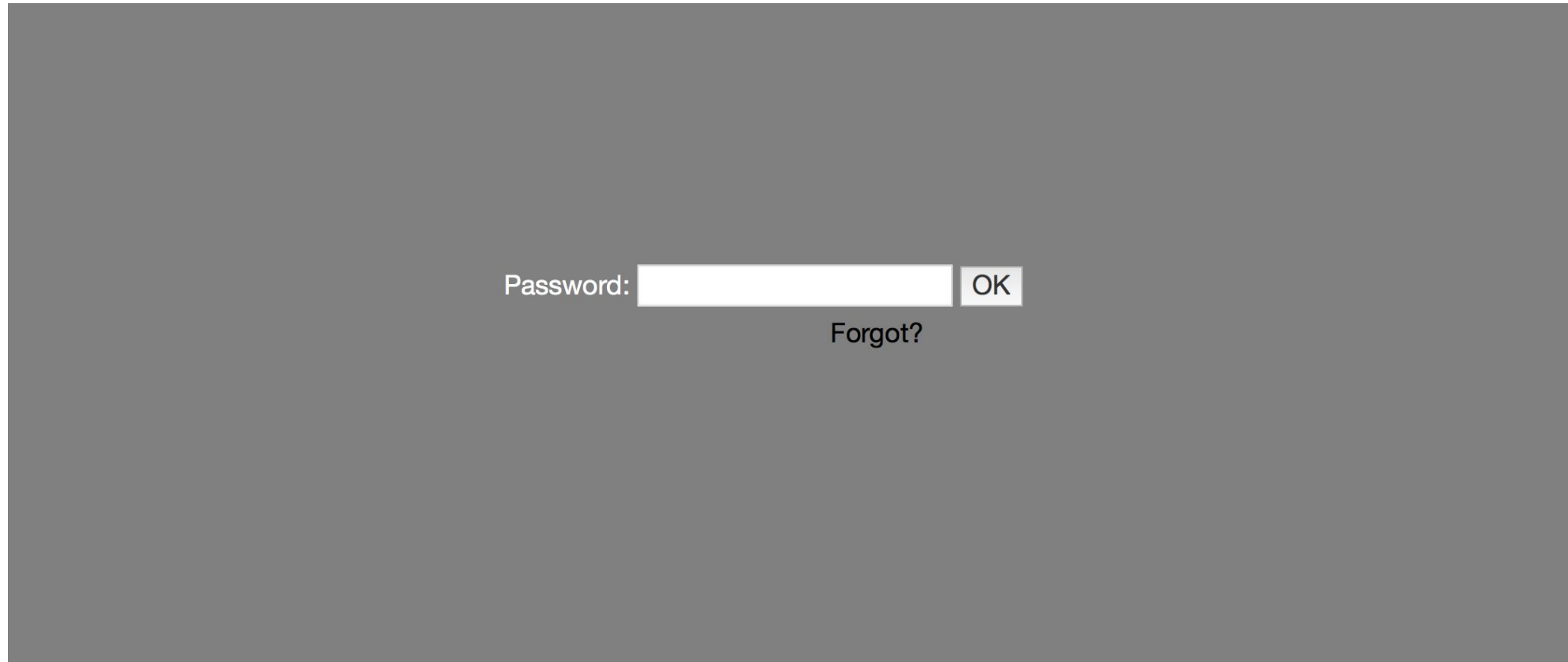
 **Privacy:** Open to the Public



Email Contact

Modify?

# User Interface: Meeting Edit



A user interface for editing a meeting, displayed on a dark gray background. The form consists of a label "Password:" followed by a white text input field. To the right of the input field is a white button labeled "OK". Below the input field is a link labeled "Forgot?".

Password:  OK

[Forgot?](#)



# User Interface: Meeting Edit

\*indicates a required field

*Contact Information:*

\*Email:

*Location:*

Choose:

\*Floor:

Room:

Details:

*Details:*

\*When:

\*Type:

*Advanced Options:*

\*Open to the Public?

*Meeting Description:*

# User Interface: Meeting Search

Search

Search Results:

5 to show: 5 

[Machine Learning Study Group](#)-8:-31:-23 GMT-4:56:02--8:-31:-23 GMT-4:56:02@Floor 2-Individual Study Room 272

This is the best ML study group you can find, we will help each other and enjoy the fun and joy of machine learning!! Come and join us!!!

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[Software Engineering Presentation](#)-8:-31:-23 GMT-4:56:02--8:-31:-23 GMT-4:56:02@Floor 1-Current Periodicals Area

---

[Database Homework Study Group](#)-8:-31:-23 GMT-4:56:02--8:-31:-23 GMT-4:56:02@Floor 3-Large Group Room 370

The due is on next Monday!!!!

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Requirements

Preliminary Design

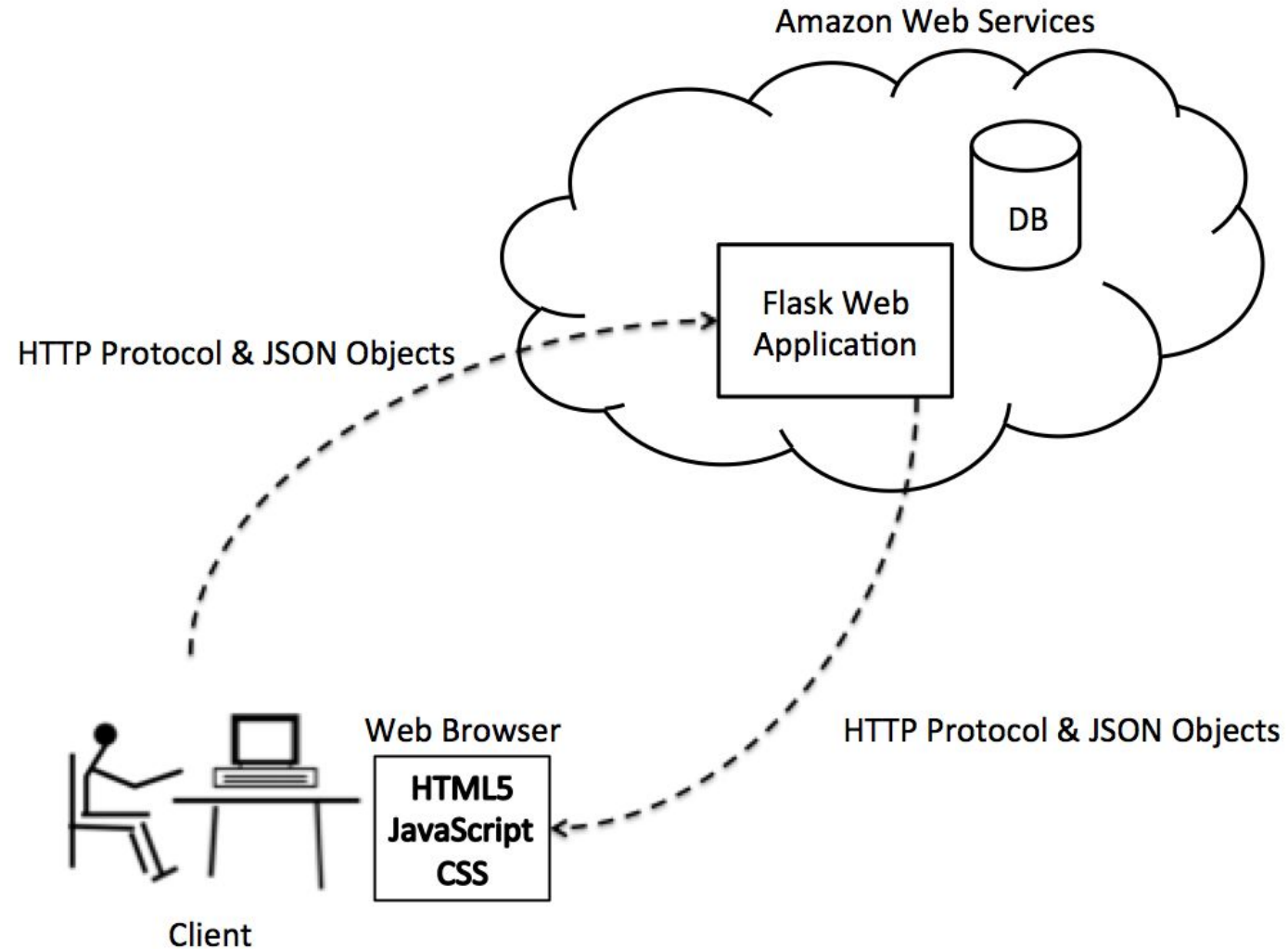
Implementation and  
Design Decisions

Schedule

Usability Testing

# Implementation and Design Decisions

# System Design



# API - Get All Meetings

**Purpose:** This API gets all the meeting records in the database

**API Method:** HTTP GET

**API Name:** "meeting"

**Inputs:** None

**Outputs:** An array of JSON objects and each object contains all the fields of a single meeting

# API - Get Meeting Details

**Purpose:** This API gets a particular meeting detail information

**API Method:** HTTP GET

**API Name:** "getMeetingDetails"

**Inputs:**

Parameter Name	Type	Required?
id	string	yes

**Outputs:** A JSON object that contains all the fields of a single meeting with the given input id

# API - Create a Meeting

**Purpose:** This API creates a meeting record and inserts it into the MySQL database

**API Method:** HTTP POST

**API Name:** "createMeeting"

**Inputs:**

Parameter Name	Type	Required?
title	string	yes
locationFloor	string	yes
locationRoom	string	yes
timeFrom	string	yes
timeTo	string	yes
meetingType	int	yes

Parameter Name	Type	Required?
contactName	string	yes
contactEmail	string	yes
isOpen	boolean	yes
description	string	no
isEditable	boolean	no
password	string	no

**Outputs:** A JSON object that contains the status of the request and if success, the meeting id of the newly created meeting

# More APIs to Come...

**API Name:** isReservable

**Purpose:** This API finds out if a room is reserved only and the URL of the room reservation site

**API Name:** editMeeting

**Purpose:** This API edits existing one or more existing information in a particular meeting

**API Name:** searchMeeting

**Purpose:** This API searches all current and future meetings based on a set of conditions

**API Name:** resetMeeting

**Purpose:** This API resets the meeting edit password for the creator by sending an email with a reset link

**API Name:** verifyCreator

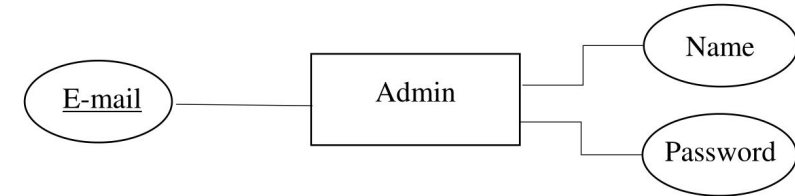
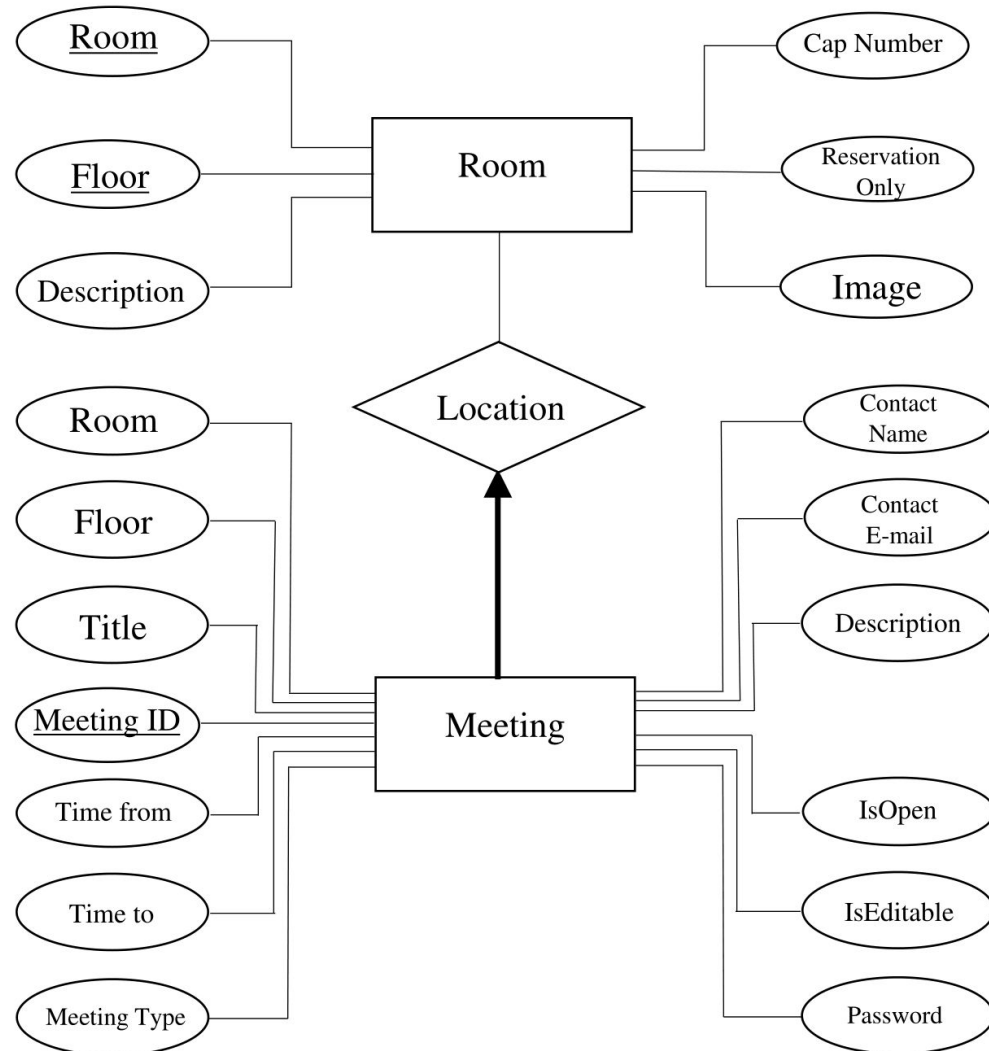
**Purpose:** This API authenticates the meeting creator in order to proceed to meeting edit

**API Name:** verifyAdmin

**Purpose:** This API authenticates the library administrators in order to proceed to the administrator interface



# Database Design



For query optimization:

“meeting” table:

- Clustered B+ Tree index on TIME\_FROM  
To support quick queries on times
- Hash index on (FLOOR, ROOM)  
To support quick queries on locations

“room” table:

- Hash clustered index on (FLOOR, ROOM)

**Demo!**

Requirements

Preliminary Design

Implementation and  
Design Decisions

Schedule

Usability Testing

# Schedule and Future Plan

# Schedule

Team Status: On Schedule (After Phase 1 Sep 19th - Oct 11th)

- Front-end:
  - First Version of Website
  - Some HTML pages linked with back-end
- Back-end
  - Core MySQL Database
  - Functional Flask Web Application
  - REST Endpoints Design



# Future Plan

## **Phase 2: Extended functionality implementation and system integration (Oct 12th - Nov 8th)**

- Front-end
  - Conduct Usability Test (Next Monday and Tuesday)
  - Add and revise Front-end pages
  - Implement and link more front-end pages to back-end
- Back-end
  - Modify database and REST API to support front-end changes
  - Implement more REST endpoints
  - Add security features (Input verification, Email spam filtering, etc.)

# Demonstration

<http://groupfinder.gabeabrams.com/>

# Usability Testing

## Schedule and Plan

# Times

Monday (10/19/2015) 5:00pm-6:30pm

– Half hour time slots

Tuesday (10/20/2015) 11:00am-12:30pm

– Half hour time slots

Location: Mann Library



# Schedule

Monday (10/19/2015) 5:00pm - 6:30pm

5-5:30: Peimin, Andy

5:30-6: Xing, Natch

6-6:30: Xiangyu

Tuesday (10/20/2015) 11:00am - 12:30pm

11-11:30 Tao

11:30-12:00 Gabe, Jing

12:00-12:30 Jing

# Tasks

Task	Front-end features	Back-end features
1) Set up a study group meeting just for your PSYCH 1103 section somewhere on the 2nd floor for early next week.	<ul style="list-style-type: none"><li>- Meeting creation interface</li><li>- Confirmation message after submit</li></ul>	<ul style="list-style-type: none"><li>- Email confirmation sent to the meeting creator</li><li>- Successful update to the DB</li></ul>
2) Notify the rest of the students in your section about the details of the meeting you just created.	<ul style="list-style-type: none"><li>- Share button for public link</li><li>- Link should bring user to current meeting</li></ul>	<ul style="list-style-type: none"><li>- Identify and display the meeting from the public link</li></ul>

# Tasks

Task	Front-end features	Back-end features
3) Find an upcoming meeting (open to the public) that you'd like to join.	<ul style="list-style-type: none"><li>- Meeting view and search interfaces</li><li>- Meeting list on front page</li></ul>	<ul style="list-style-type: none"><li>- Simple search meeting based on time range and meeting title</li></ul>
4) Edit the PSYCH 1103 meeting that you created earlier and change the start time to 7pm based on the feedback from the rest of your group.	<ul style="list-style-type: none"><li>- Authentication interface</li><li>- Meeting edit interface</li></ul>	<ul style="list-style-type: none"><li>- Authentication Handling</li><li>- Successful update to the DB</li></ul>

# Acknowledgements

CS 5150 Instructors:

Prof. William Arms

Mann Library:

Camille Andrews

Nick Cappadona

Sara Wright

Thank You!

Questions?