CodeCollab
Final Presentation

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Description of Problem

Problem Statement

Many times during the development process, software engineers require expertise on areas they are unfamiliar with. Within a company there exist experts in different fields who can assist with these issues. However, a software engineer doesn't know everyone within their organization who could help resolve their issue.

How can we help connect these readily available experts to coworkers who need assistance?
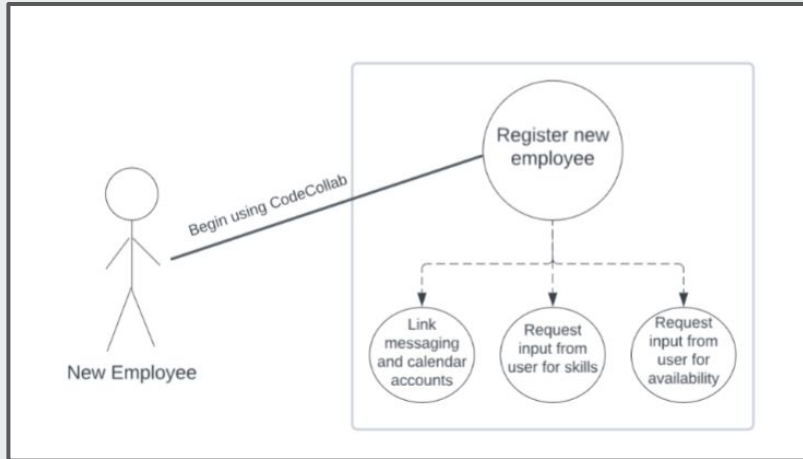
Our Solution

CodeCollab

- Connect software engineers who need help with expert.
- Database of employees and their skills.
- Algorithm to match user requesting help with expert.
- Automatically schedule meeting.

Rationale for CodeCollab

- Addresses the underlying issue of software engineers not knowing where to find help.

Updated Use Cases [1]

Use Case: New employee is joining the system.

Precondition: Employee has an account with the company and has been onboarded.

Main Flow: User links their appropriate accounts with CodeCollab [S1]. Next, the user will fill out their skill list [S2]. Finally, the user will fill out their schedule availability [S3].

Sub Flows:

[S1] User needs two types of accounts (messaging system and calendar system).
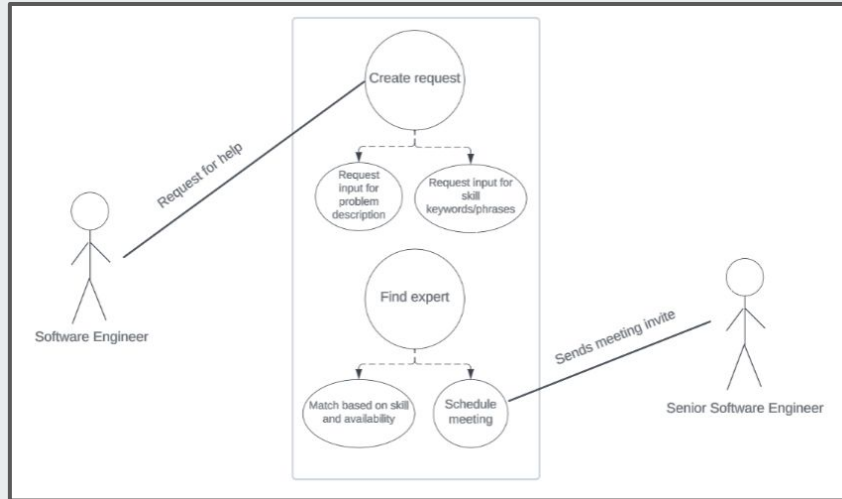[S2] User needs to fill out skill list with keywords of their skills.
[S3] User needs to fill out availability for when they have no other meetings.

Alternative Flow:

[E1] New employee has not been onboarded.

Updated Use Cases [2]

Use Case: User needs help with a SQL query.

Precondition: User registered with CodeCollab and entered their skills and availability.

Main Flow: User requests assistance for issue [S1]. CodeCollab provides list of available experts [S2]. User selects time to finalize meeting [S3].

Sub Flows:

[S1] User fills out a request form describing the issue and skills they require.
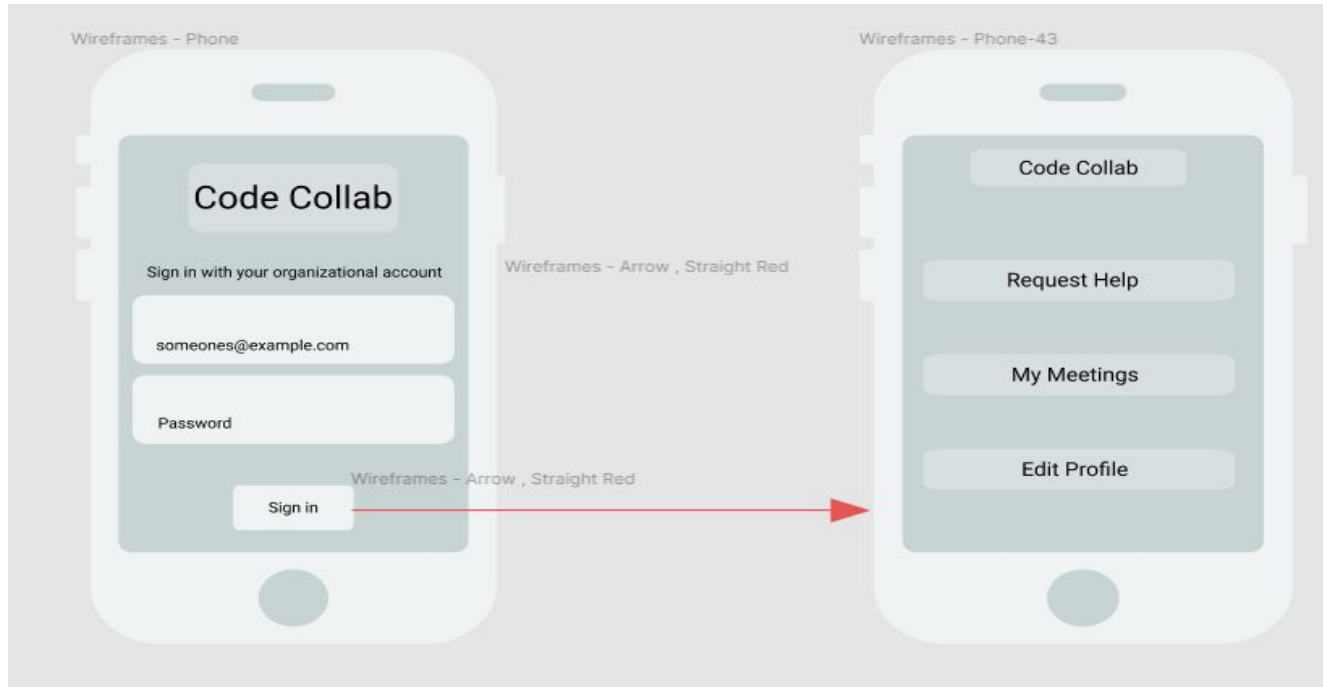[S2] CodeCollab displays a list of available experts and their availability.
[S3] User selects an expert and time, and a meeting is automatically created between the two engineers.

Alternative Flow:

[E1] There are no experts available.

Visual Representation of CodeCollab

Code Collab

Request Help

Subject:

Enter subject you need help in

Describe Issue:

Describe the issue you are encountering here

Request Help

Code Collab

Mark Availability

< **November 2023** >

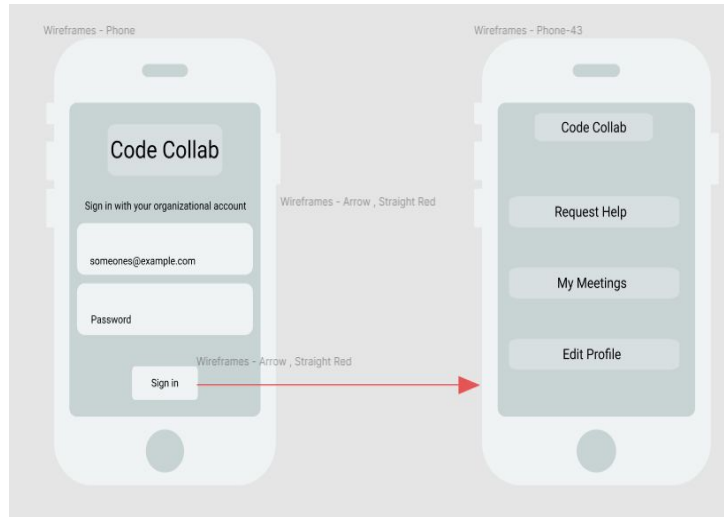| SUN	MON	TUE	WED	THU	FRI	SAT
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Sync Google Calendar

Related Work

- **Tools:** Doodle, Microsoft Outlook, Google Calendar (allow for shared calendars and meeting scheduling but not automated).
- Calendly is a "scheduling automation platform" which shares a feature of our project and can suggest times for meetings
- **Articles:** The Importance of Being a Code Reviewer, The benefits of automating your meeting scheduling process
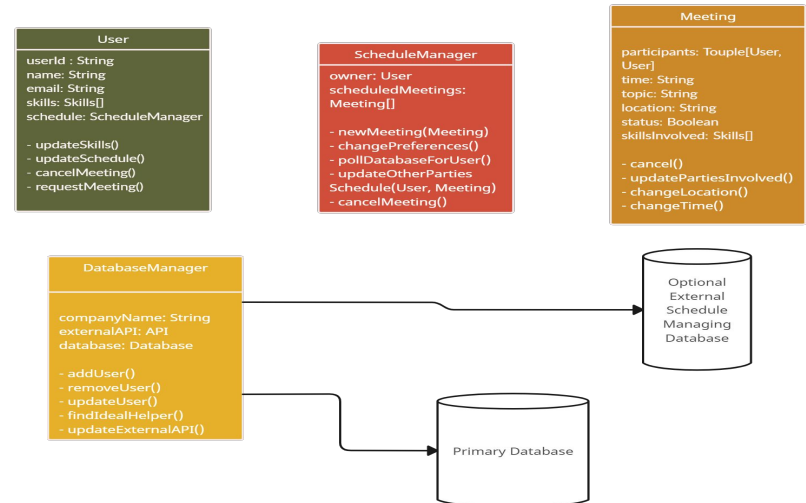
Class Concepts/Tools Used
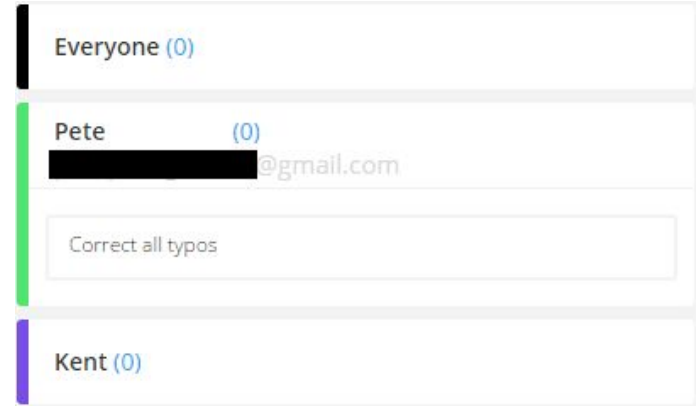
1) **Scrum**

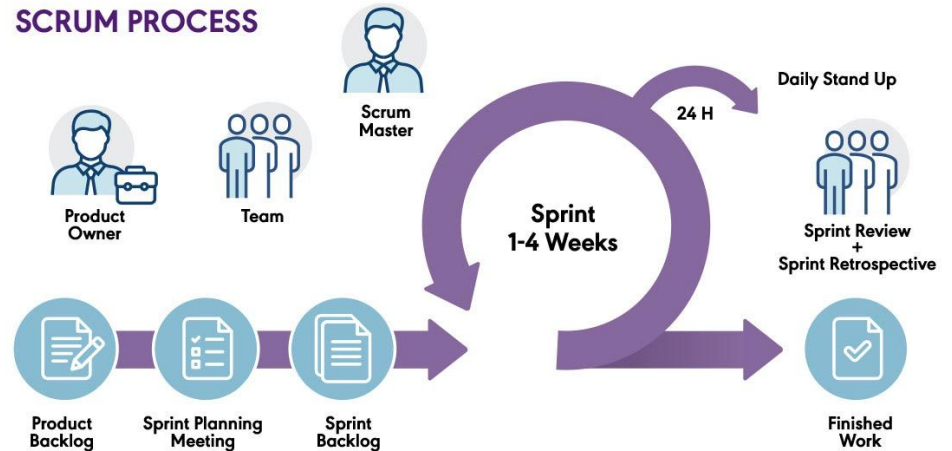2) **Wireframing**

3) **Class Diagrams/Design Patterns**

Future Work

- Skill Endorsements and Ratings
- Real-Time Chat and Collaboration Tools
- Code Review and Feedback System
- Machine Learning for Improved Matching
- Payment and Reward System

What We Learned

- Software Development Life Cycle
- Agile software development
- Requirements, design, project management

Questions?