

```

        every list [date,[times]] in empties
    empties:
        the date in empties is the same as the date of the c
        make sure that we only effect times on the day the e
    if k[0] == evDate:
        l = 1
        # iterate through the times of k and change
        while l < len(k):
            # FIRST if the event is the same as
            if (j.sTime == k[l][0] and j.eTime == k[l][1]):
                k.remove(k[l])
                # drop l down by one as
                l-=1
            # THEN if the event is later
            elif (j.sTime > k[l][0]):
                temp = k[l][1]
                k[l][1]=j.eTime
                k.append(temp)
            # THEN if
            elif (j.sTime < k[l][0]):
                #
        #

```



Dwight Look College of
ENGINEERING
 TEXAS A&M UNIVERSITY

Team 3: Smart Scheduler Bi-Weekly Update 1

Collin Bennett, Nicholas Garde
Sponsor: Narasimha Annapareddy
TA: Eric Robles

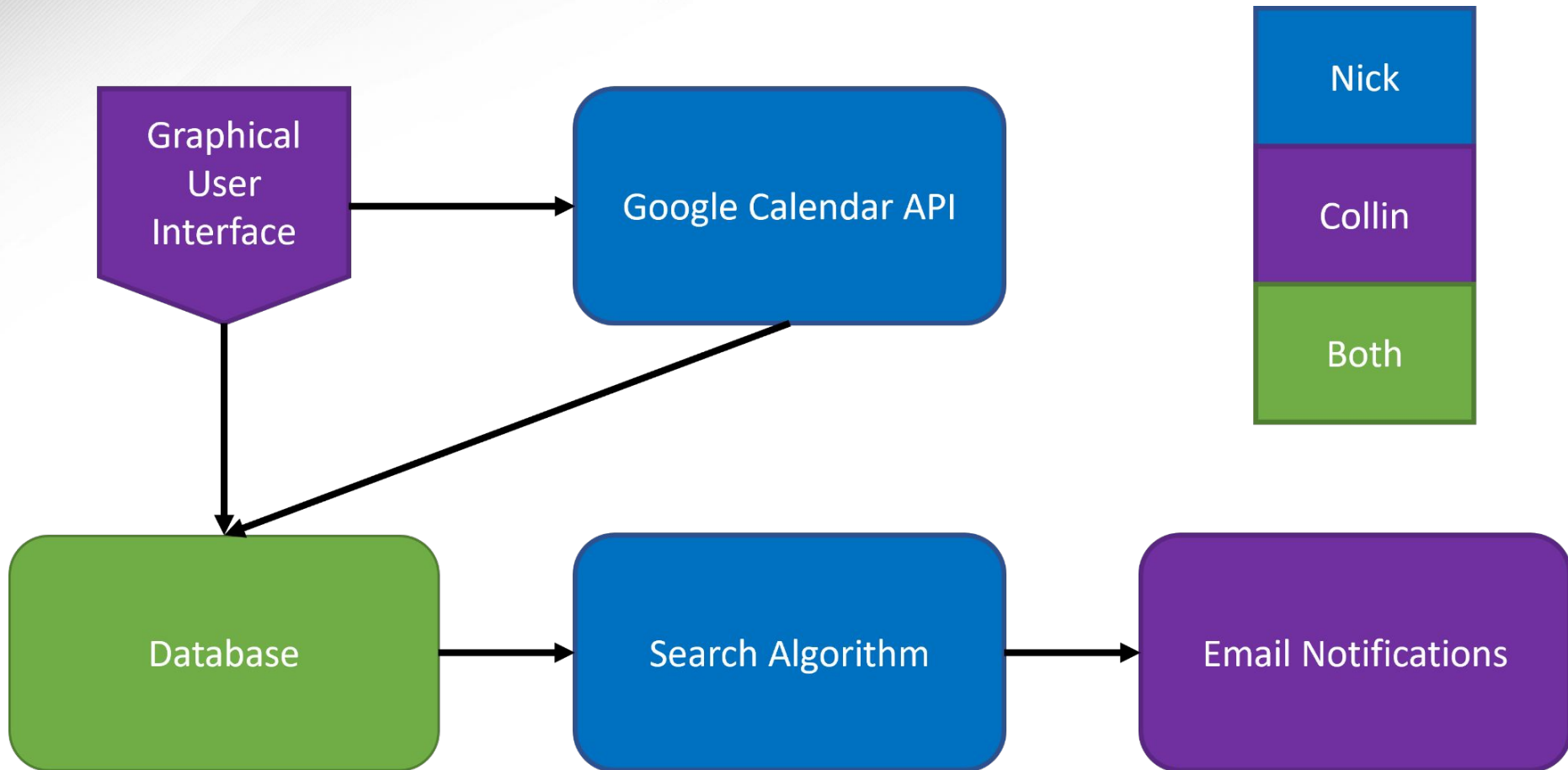


Introduction

- Scheduling meetings can be very difficult, so we are simplifying the process.

Mon	Tue	Wed	Thur	Fri
Blue	Green	White	Blue	Blue
Green	Green	Green	Purple	Grey
Orange	Blue	Purple	Orange	Grey
Orange	Orange	Purple	Orange	Green
Purple	Orange	Purple	Orange	

Project/Subsystem Overview



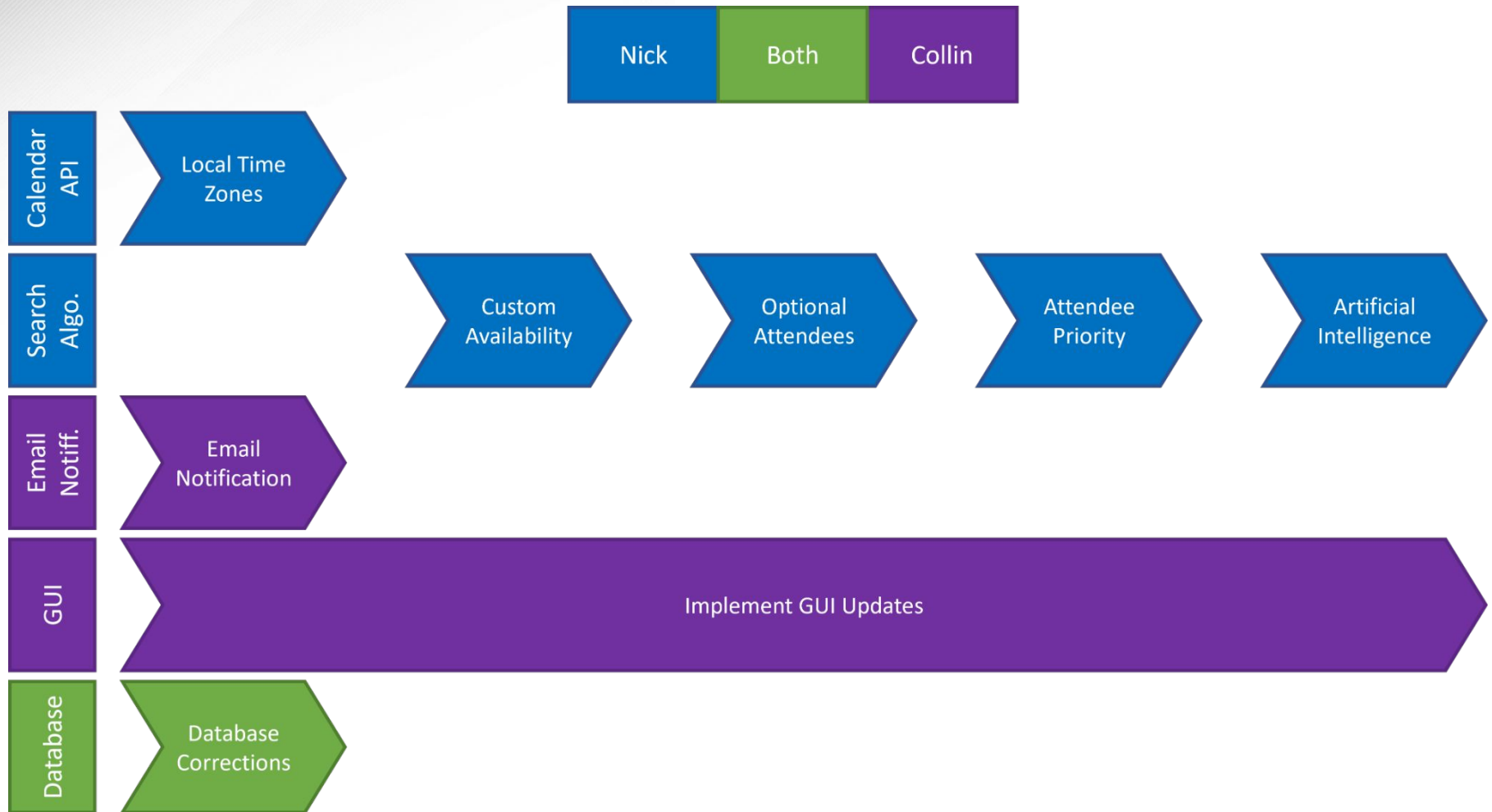


Major Project Changes for 404

Project Changes	New Goals
Streamlit to Django	User's Local Timezone
New Database	Custom User Availability
Remove All Outlook	Optional people in meetings
MailGun to smtp Protocol	Priority grading
	Potential for AI



Project Timeline





Graphical User Interface

Owner: Collin

Accomplishments since 403 40 hours of effort	Ongoing progress/problems and plans until the next presentation
Transitioned from Streamlit to a fully-featured web app using Django.	Working on getting bugs ironed out and improving the styling of the website. (Getting ready for a presentation.)



Graphical User Interface

Owner: Collin

- Planning to add the ability to import contacts from Google
- Making updating and deleting contacts simpler

After

Before

Optional - Add contacts to contact list.

Enter a full name.

Enter an email.

John Smith added to contact list.

[CREATE NEW CONTACT](#)

My Contacts

[Search](#)

Alexandra Bennett	UPDATE DELETE
Fabio Lanzoni	UPDATE DELETE
Loid Forger	UPDATE DELETE
collinbennettgmail	UPDATE DELETE



Database

Owner: Both

Accomplishments since 403 10 hrs of effort	Ongoing progress/problems and plans until the next presentation
Database has been moved from Google Firebase to SQLite, a database used with Django.	The SQLite database will be ported to PostgreSQL and hosted on a server.



Database

Owner: Both

Before

```
▼ — Meetings
  ▼ — Goof Off
    (▶) — collinbennett@tamu,edu
    ▼ — ngarde2882@tamu,edu
      ▼ — -N0pizcr3gv1eoibvCVg
        — end: "2022-04-29T18:00:00-05:00"
        — start: "2022-04-29T08:00:00-05:00"
        — summary: 1
  ▼ — Group Study Session
    ▼ — collinbennett@tamu,edu
      ▼ — -N0pj4MzmKODmwXFInJy
        — end: "2022-04-29T18:00:00-05:00"
        — start: "2022-04-29T08:00:00-05:00"
        — summary: 1
    (▶) — gholmes@tamu,edu
    (▶) — ngarde2882@tamu,edu
    (▶) — sfiguiera@tamu,edu
```

After

AUTHENTICATION AND AUTHORIZATION	
Groups	+ Add
Users	+ Add
SMART_SCHEDULER	
Attendees	+ Add
Conflicts	+ Add
Contacts	+ Add
Events	+ Add
Meeting immediates	+ Add
Meeting times	+ Add
Meetings	+ Add
Pending attendees	+ Add
USERS	
Profiles	+ Add



Search Algorithm

Owner: Nick

Accomplishments since 403 0 hrs of effort	Ongoing progress/problems and plans until the next presentation
	New data structure to be compatible with local time zones and user preferences Take into account optional attendees and priority of attendees

Search Algorithm

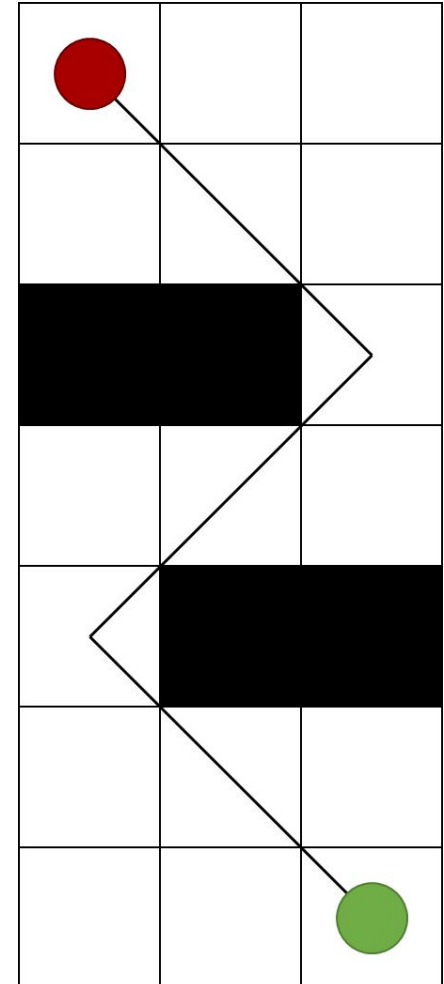
Owner: Nick

Current Design

- Places events onto calendar data structure
- Searches by # of conflicts
- Take into account number of participants in each meeting

Planned Design

- 24hr data structure
- Optional Attendees
- Take into account priority of participants





Calendar API

Owner: Nick

Accomplishments since 403 0 hrs of effort	Ongoing progress/problems and plans until the next presentation
	Optional “Remember Me?” Pull user time zone

Calendar API

Owner: Nick

Current Design

- Pulls user events from their calendar
- Pushes created events back onto their calendar

Planned Design

- Option to skip authentication
- Retrieve user time zones





Email Notifications

Owner: Collin

Accomplishments since 403 2 hours of effort	Ongoing progress/problems and plans until the next presentation
Moved from API-based email to an SMTP server to eliminate email costs.	Integrating the new email solution into the new framework.



Execution Plan

Subsystem	August 31st	September 14th	September 28th	October 12th	October 26th	November 7th
Search Algorithm (Nicholas)	Review changes to algorithm and receive sponsor feedback	Implement timezone functionality	Implement custom start and end times, valid days	Researching better machine learning and lowest-cost solutions	Iron out any potential oddities in the search algorithm	Have search algorithm completely done
Database (Both)	Move from firebase to relational database	Have database ported from SQLite to PostgreSQL and hosted.	Simplify database, getting rid of unnecessary tables	Continue work on other subsystems	Check database for correctness	Database is done, hosted and complete
GUI (Collin)	Django website bigfixes and refinements	Have required and optional attendee functionality integrated	Have some form fields optional to simplify things	Get additional user feedback on the website style	Implement changes based on the user feedback	GUI is finalized and styled
Email Notification (Collin)	Rework email to SMTP from API functionality	Email is fully functional on a basic level	Email is properly styled	Email is not being sent to user's spam folder	Validate and test email	Email is sending without error and styled
Google APIs (Nick)	Review and research Google APIs in Django	Integrate timezone functionality with Google API	Integrate Google contacts imports	Begin testing correctness of API calls	Finalize testing of API calls	Google APIs are finalized



Validation Plan

Task	Specification	Method	Result	Owner
Google Calendar - Pull Contacts	Test Fetching Accuracy (No errors)	Using Google's OAuth2.0 to request contact data from the user from their email	Pending	Collin Bennett
Google Calendar - Insert Event Times	Google API is properly inserting correct event times	Ensure that calendar events can be added to specified user calendars without error. Specifically, ensuring that users in different time zones are being sent the proper information.	Pending	Nicholas Garde
Database - User Authentication	Database is storing user account details	Ensure PostgreSQL solution is working properly	Pending	Collin Bennett
Database - Event Parameters	Ensure event parameters are added properly	Add several events of varying nature to Database from the GUI, ensuring that they are properly added each time by comparing the inputted values to those stored in Database.	Pending	Collin Bennett



Validation Plan (Continued)

Task	Specification	Method	Result	Owner
Firestore - User Events	Ensure User events are properly added	Pushing each user's calendar to database to be stored until the data is needed for the search	Success	Collin Bennett
Search Algorithm - Time Zones	Ensure User events have proper times	Ensure that users in different timezones are correctly accounted for by the algorithm	Pending	Nicholas Garde
Search Algorithm - Additional Parameters	Valid times and weekdays	Ensure that additional parameters are correctly accounted for by the algorithm	Pending	Nicholas Garde
Email API Correctness	Testing of Email Notification Scenarios	Ensure the email link clicks make the proper writes to the database and move efficiently.	Pending	Collin Bennett
GUI - Ease of Navigation	Exploring GUI navigation ease-of-use	Ensure the GUI navigation works properly, nothing is out of place, and correct error messages are displayed.	Pending	Collin Bennett
Bug fixing	Attempting to Break and Find Errors in Our Program	Ensure that the program works under all conditions by scheduling numerous programs under varying conditions and checking that they are scheduling correctly.	Pending	Collin Bennett and Nicholas Garde



Dwight Look College of

ENGINEERING
TEXAS A&M UNIVERSITY

Questions?