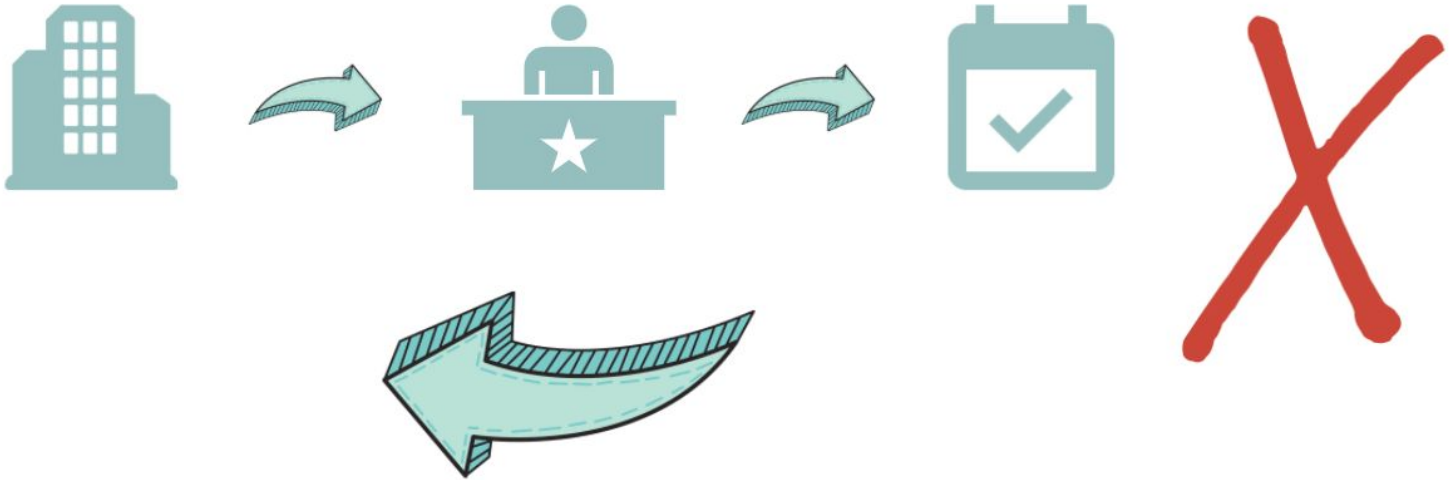
Brandeis Schedule

Team 4: Susan Li, Jane Wang

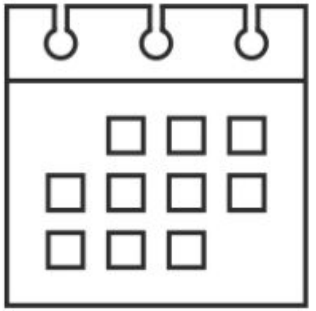
Problem Space

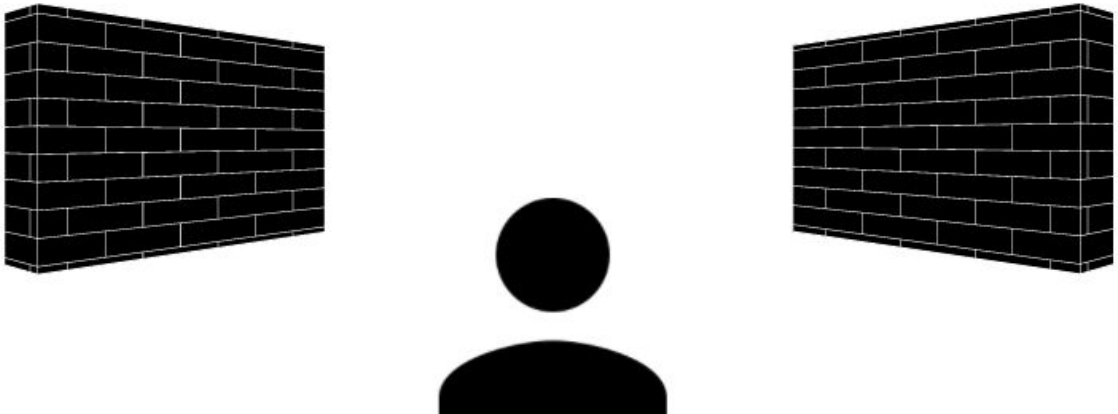
Cumbersome
Time Consuming
No Direct Resources
No Automation



Result

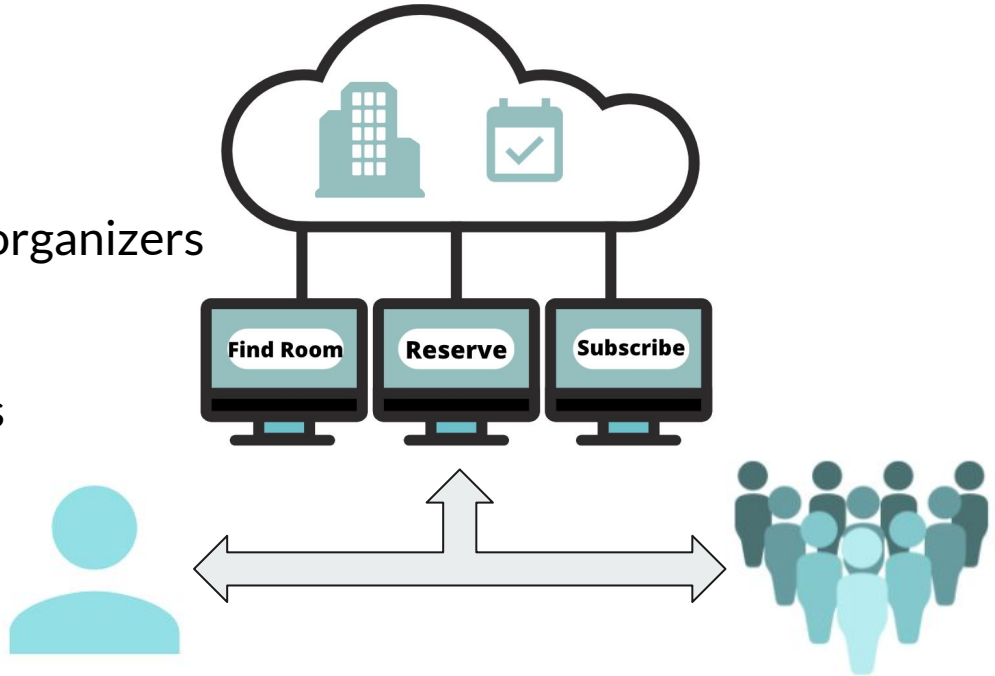
Blocked Communication!



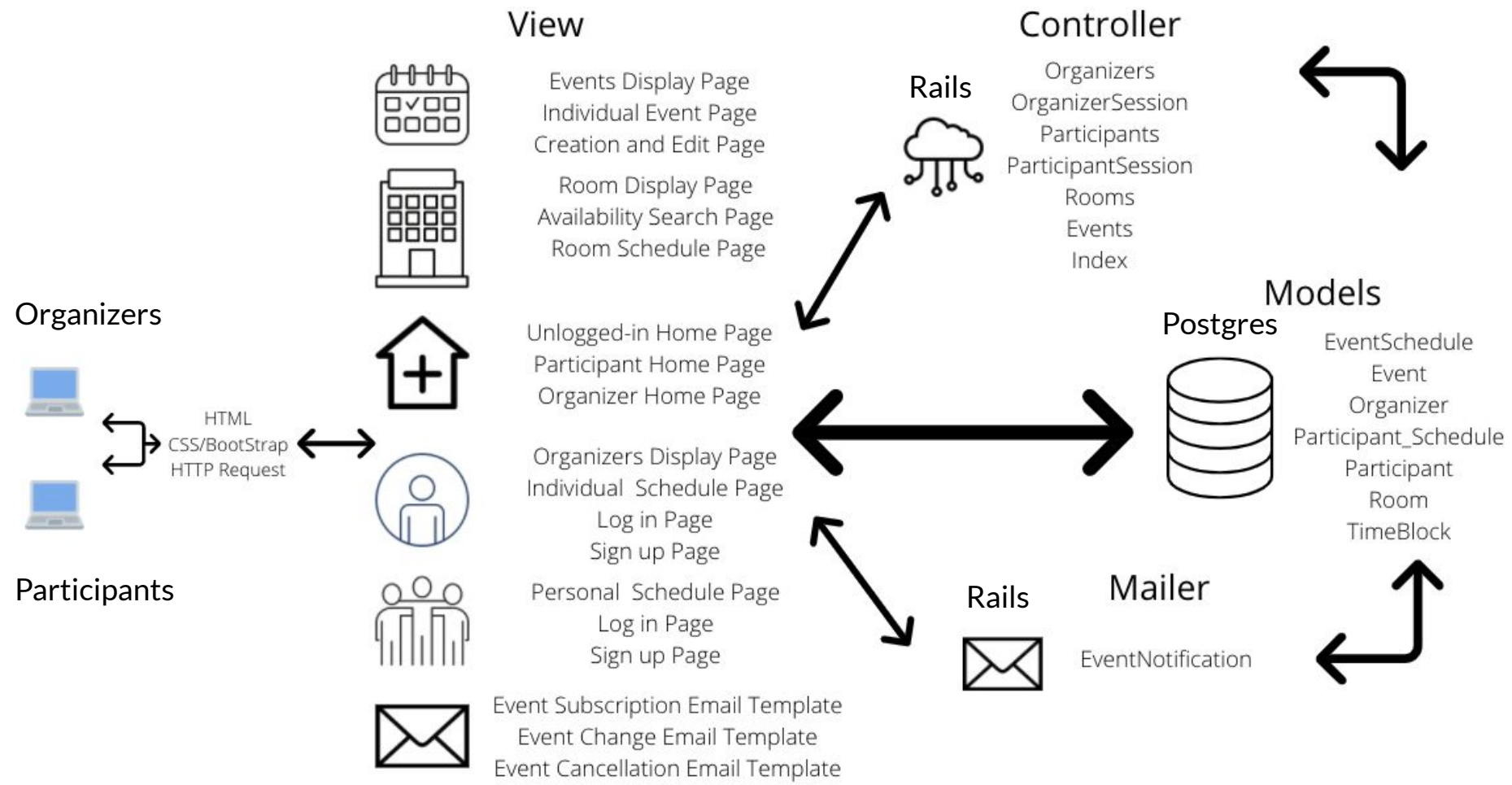


Solution

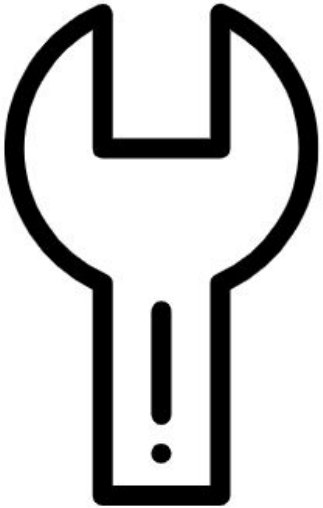
- Two Sided Platform between student organizers and participants
- One Stop Shop for All Brandeis Events



- Live Demo
  - Brandeis Schedule


View
Controller
Rails
Organizers
OrganizerSession
Participants
ParticipantSession
Rooms
Events
Index
Events Display Page
Individual Event Page
Creation and Edit Page
Room Display Page
Availability Search Page
Room Schedule Page
Unlogged-in Home Page
Participant Home Page
Organizer Home Page
Organizers Display Page
Individual Schedule Page
Log in Page
Sign up Page
Personal Schedule Page
Log in Page
Sign up Page
Event Subscription Email Template
Event Change Email Template
Event Cancellation Email Template
Organizers
HTML
CSS/BootStrap
HTTP Request
Participants
Models
Postgres
EventSchedule
Event
Organizer
Participant_Schedule
Participant
Room
TimeBlock
Rails
Mailer
EventNotification

Gems and Libraries



icalendar gem

nokogiri gem
open-uri gem

figaro gem

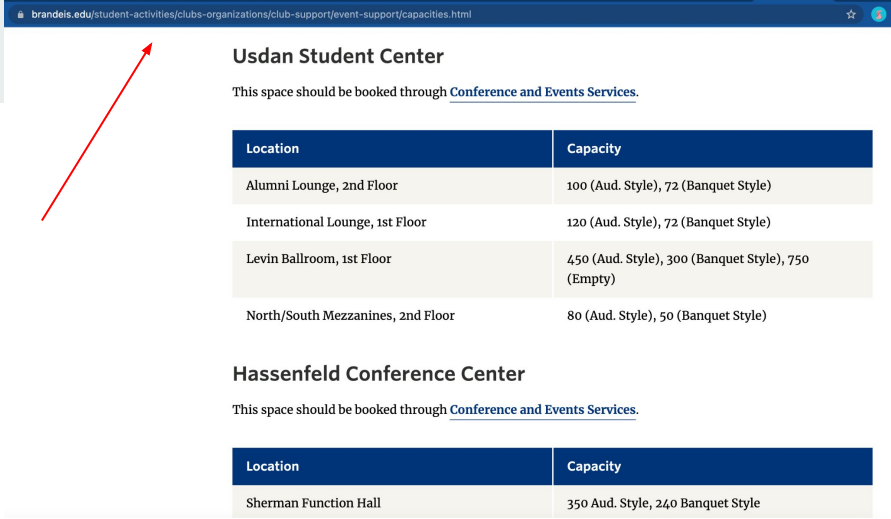
faker gem

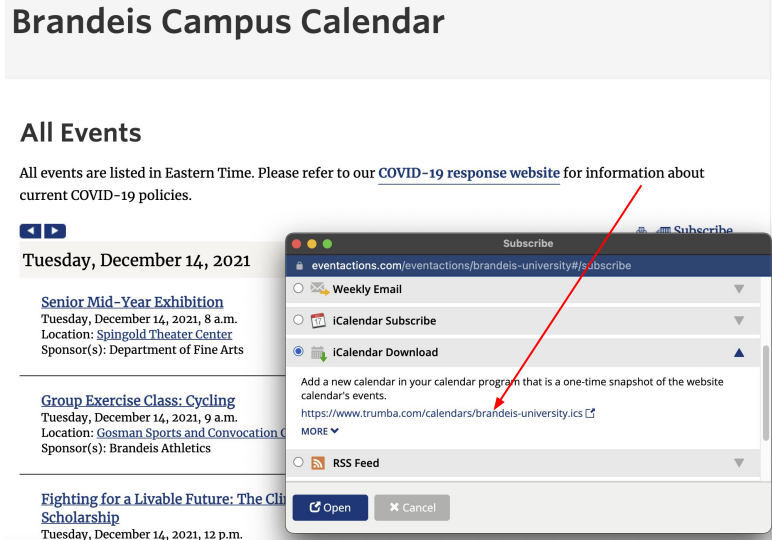
Custom Class: Calendar

Challenges and Solutions

Data Seeding

- Live Data Import from Brandeis Website
  - open-uri gem
  - nokogiri gem
  - icalendar gem
- Calendar Updates From User End
  - icalendar gem: uid field
    - Eg. http://uid.trumba.com/event/156811124\
    - Compare and Update





Challenges and Solutions

Icalendar Gem Custom Field

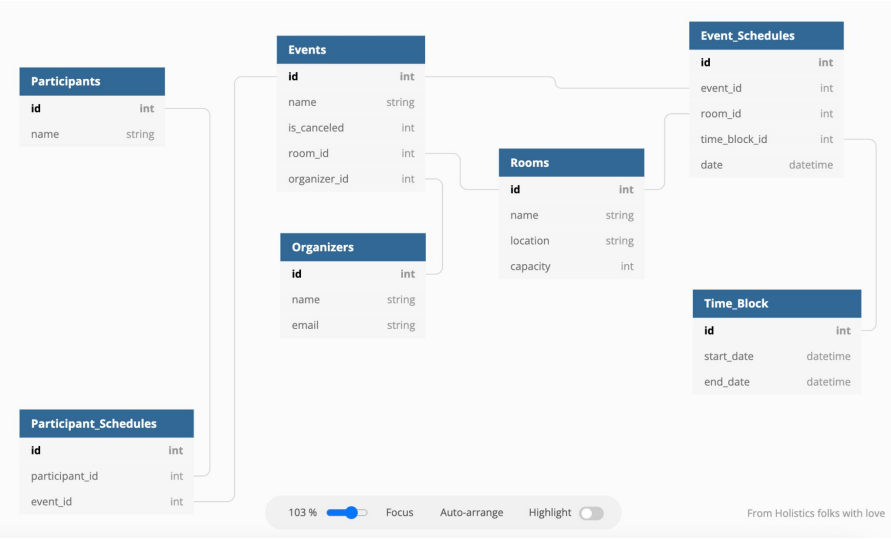
```
irb(main):010:0> events.custom_properties
=>
{"x_microsoft_cdo_alldayevent"=>["FALSE"],
 "x_trumba_customfield"=>["Brandeis Event Template", "Spingold Theater Center", "Dreitzer Gallery", "Department of Fine Arts"],
 "x_trumba_link"=>["https://www.brandeis.edu/events/?trumbaEmbed=view%3devent%26eventid%3d156811122"]}
```

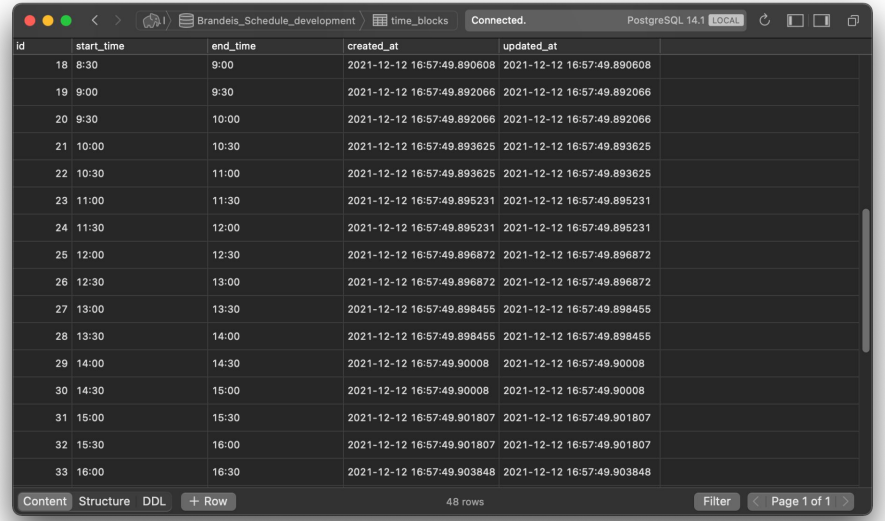
- Text Parsing
  - Regex

```
irb(main):011:0> events.to_ical
=> "BEGIN:VEVENT\r\nDTSTAMP:20211201T160859Z\r\nUID:http://uid.trumba.com/event/156811122\r\nDTSTART;TZID=America/New_York:20211210T080000\r
\nDTEND;TZID=America/New_York:20211210T230000\r\nDESCRIPTION:Come see work by our majors and minors in studio art!\r\nLOCATION:Spingold Thea
ter Center\r\nSUMMARY:Senior Mid-Year Exhibition\r\nCATEGORIES:Brandeis Events\r\nX-MICROSOFT-CDO-ALLDAYEVENT:FALSE\r\nX-TRUMBA-CUSTOMFIELD;
NAME=Event Type;ID=21;TYPE=number:Brandeis Event Templ\r\n ate\r\nX-TRUMBA-CUSTOMFIELD;NAME=Location;ID=33270;TYPE=CustomAsset:Spingold Thea
t\r\n er Center\r\nX-TRUMBA-CUSTOMFIELD;NAME=Room;ID=33271;TYPE=SingleLine:Dreitzer Gallery\r\nX-TRUMBA-CUSTOMFIELD;NAME=Event sponsor(s);ID
=33274;TYPE=MultiLine:Departme\r\n nt of Fine Arts\r\nX-TRUMBA-LINK:https://www.brandeis.edu/events/?trumbaEmbed=view%3devent%26e\r\n ventid
%3d156811122\r\nEND:VEVENT\r\n"
```

Challenges and Solutions

Room Availability Algorithm and Complex Database





id	start_time	end_time	created_at	updated_at
18	8:30	9:00	2021-12-12 16:57:49.890608	2021-12-12 16:57:49.890608
19	9:00	9:30	2021-12-12 16:57:49.892066	2021-12-12 16:57:49.892066
20	9:30	10:00	2021-12-12 16:57:49.892066	2021-12-12 16:57:49.892066
21	10:00	10:30	2021-12-12 16:57:49.893625	2021-12-12 16:57:49.893625
22	10:30	11:00	2021-12-12 16:57:49.893625	2021-12-12 16:57:49.893625
23	11:00	11:30	2021-12-12 16:57:49.895231	2021-12-12 16:57:49.895231
24	11:30	12:00	2021-12-12 16:57:49.895231	2021-12-12 16:57:49.895231
25	12:00	12:30	2021-12-12 16:57:49.896872	2021-12-12 16:57:49.896872
26	12:30	13:00	2021-12-12 16:57:49.896872	2021-12-12 16:57:49.896872
27	13:00	13:30	2021-12-12 16:57:49.898455	2021-12-12 16:57:49.898455
28	13:30	14:00	2021-12-12 16:57:49.898455	2021-12-12 16:57:49.898455
29	14:00	14:30	2021-12-12 16:57:49.90008	2021-12-12 16:57:49.90008
30	14:30	15:00	2021-12-12 16:57:49.90008	2021-12-12 16:57:49.90008
31	15:00	15:30	2021-12-12 16:57:49.901807	2021-12-12 16:57:49.901807
32	15:30	16:00	2021-12-12 16:57:49.901807	2021-12-12 16:57:49.901807
33	16:00	16:30	2021-12-12 16:57:49.903848	2021-12-12 16:57:49.903848

Repetitive Methods and Algorithms

- Custom PORO
  - Calendar
    - check_room_availability(room_id, date, start_time, end_time)
    - find_available_rooms(date, start_time, end_time)
    - get_current_event
    - get_by_event_name(name)
    - ……
  - Readable Codes
  - Easier Testing and Debugging

Challenges and Solutions

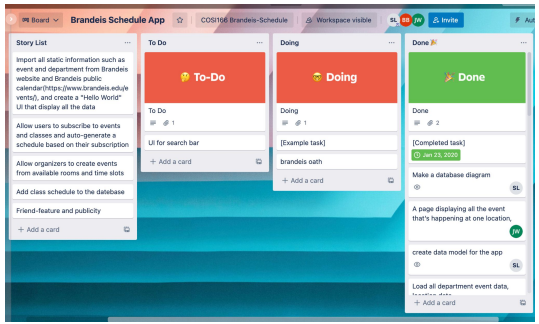
Email Updates on Event

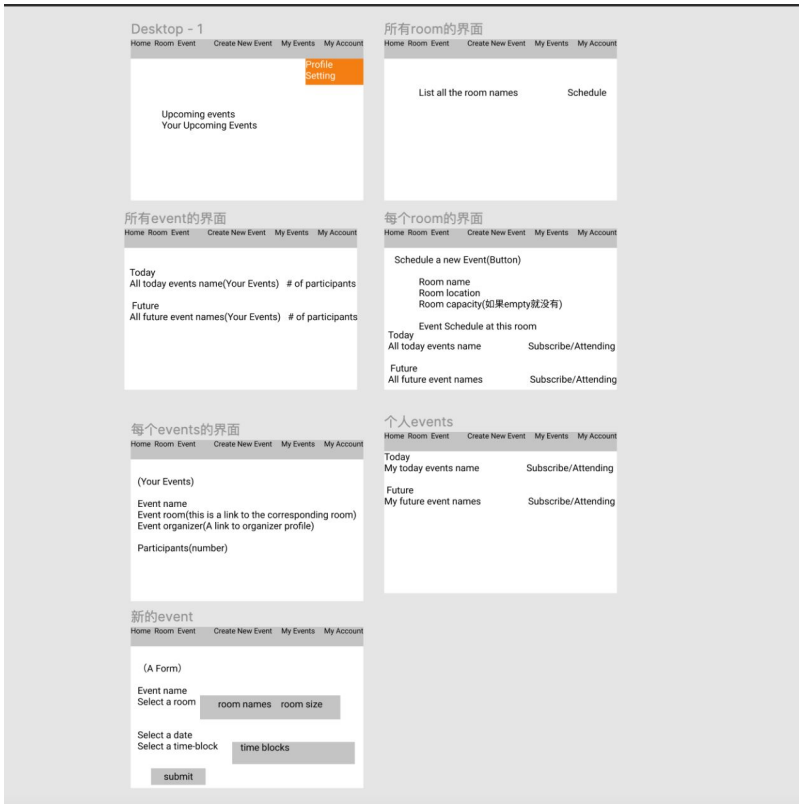
- Send Email
  - Action Mailer
  - figaro gem
  - brandeisschedule@gmail.com
- Event Invitation
  - ics file as attachment
    - icalendar gem

```
user_name: ENV["GMAIL_USERNAME"],
password: ENV["GMAIL_PASSWORD"]
```

Our Approach

- Clear Work Division
  - Susan: Back-End
  - Jane: Front-End
- Work Schedule
  - Product and UI design
  - Trello for work updates





Future Development

- **Incorporate Brandeis Event Application Process**
  - Google OAuth and Brandeis Login authentication
  - Programmatic fill in and submission of Brandeis Event Application Form
  - Include Pending, Accepted, Declined status for event application (Either Work with Brandeis Student Activity Department or Read From Email)
  - **Tackling Real World Problem!**
- **Chat and Social Media**
  - Participants could communicate with other users
  - Participants could communicate with organizers directly
- **Algorithm that can advertise to users any potential events they might be interested in based on their event subscription.**

Takeaway

- Best teamwork: communication, accountability, encouragement to each other❤️
- Experience of building a software from scratch

Thank You!

- Any Questions?