OOverlap

Undefined Team

University of Massachusetts - Amherst

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OOverlap is a scheduling application with the busy college student and professional in mind. Organize meetings with ease by sending out request. Both users will declare their free time and then OOverlap will do the rest - comparing the two schedules and alerting you of compatible meeting times! No more hassle about changing schedules, and no more frustrating back-and-forth emails. In order to enhance your scheduling experience, OOverlap connects with your GoogleCal so that you have your most up-to-date calendar. As you schedule and confirm meetings your calendar will update to reflect the newest information.

Part of a group? Don't worry. OOverlap offers group functionality so that you can easily plan large-scale events or small board meetings. Simply create a group, invite your members, and start planning.
Additionally, with OOverlap's 'priorities' feature you can hierarchically declare you free times. It is in this way that OOverlap overthrows it's competitors.

External Libraries

Front-end

- Bootstrap: A framework for website's responsive design.
- JQuery: A Javascript library for manipulating DOM objects, handling events and AJAX
- AngularJS: A framework for designing user interactivity in the front-end side

Backend

- Login
  Google API: Let user login via their Google acount
  Facebook API: Let user login via their Facebook account
- Database
  mongodb, monk: NoSql Database and a API layer to talk with the Database

- **Google-calendar:** Import user existing calendar into the database as well as insert new events to user calendar when it's scheduled moment: a library for parsing, validating, manipulating, and formatting dates. dhtmlxScheduler API: a library for creating calendar application

- **Mail:**
  nodemailer: A library to send email to user

Create Account
Of course if a user does not have a pre-existing account with OOverlap, they will need to create an account. This component will take in a username (currently this will be a gmail address) and a password. If the account already exists, it will display a notification to the user. Users should be able to get to this component from the login function in the home page (Top left button on the navigation bar). There will be a window pop up and underneath the login form, user can click to the small text which says "Don't have an account?" to change the form to register form.

Log-in
This component is fairly self-explanatory as to why it fits in to the website. Without the log-in feature, users will not be able to customize their experience on OOverlap. In order to access all of your personal data (ie. Calendar, Pending Requests, Friends, and Groups) you have to have an account, and in order to access that account you have to log in by clicking the "Log in" button at the top left corner of the navigation bar! Your profile will be your "home page" of sorts. After you log on, you will be taken to your profile page since you should be able to do everything that you need to do from that page.

User Profile
The user profile is yet another important component in the website. As mentioned in the "Log-in" Component description, the User Profile will serve as a "home page" for the user when they are on the website. It will contain all of the information that they need in order to schedule events, access the groups they are members/admins of, and see their calendar. They can also reach their profile settings from their home page. They will be able to reach their user profile from the "Home" button in the navigation that will be placed in the upper right hand corner of screen. They will will be able to access their profile page from: www.OOverlap.com/user/[theirLoginUsername].

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Settings
The settings component fits in to the website because we are
offering the user something that is customizable. In the settings
the user can control their privacy settings, profile information
(including profile picture, username, password, etc.), calendar
preferences, email notifications, and social network connections.
Giving the user the ability to change the as much about their
profile as possible makes the website more accessible. The user
will be able to access this page from their homepage and by the
following link:
www.OOverlap.com/user/[theirLoginusername]/settings

Calendars

- **Input Calendar (Scheduling Events)**
  The input calendar component will be used when the user goes to schedule an event with a friend or colleague. This fits in to our application since it is basically the basis of what the application is designed on: scheduling events with ease. The calendar that shows up will allow the user to drag their free times on to the calendar and will then take those times to compare later on. This component can be accessed by clicking on the "Schedule an Event" button on their Profile page.

- **Overlap Calendar (Figuring Out Group Meeting time)**
  This component will occur in the back-end system once every members in the group have filled out their free time. It then retrieved all the user input and apply correct matching algorithm to figure out the time slot with highest priority.

- **"Export" Calendar (Displaying All Users Free Time)**
  The export calendar component will display the free times that both the users have filled out. With this calendar, you will be able to clearly see the overlaps. This component will ultimately be displayed once we figure out the best meeting time, and you cannot get to it before that point.

E-mail Notifications

The email notifications are an important component of the website. Via email, we plan to send the users. . .

- Notification when someone wants to schedule an event
- Notification when a group wants to schedule an event
- The details from when an event is scheduled. . .
    - The finalized time (assuming the overlaps were good!)
    - A request to look over their offered free times again because no overlaps were found (potentially with hints at good times for them to fill out or times that they might not have prioritized highly)

- Notification of friend request / group join request (if user is admin to a group) As previously mentioned, the email notifications can be toggled in the Settings component. We do not want to spam the user with emails, but feel like emails are a good way of contacting the user so that we don't have to rely on them checking our website every day to get updates. (Although it would be nice for people to want to go there every day, we just need to help remind the user that they use the site and that they should work it in to their website-checking habits. Email notifications will be sent directly to the user depending on what email they provided at login. (The email can be changed in the Settings component.)

Create Account

- Person(s) Responsible: Giovanna, Justin How does it connect and communicate to other parts of the system?: Inputs a new user's username and password, validate whether the username exists before, if not, passes it onto the database for storage, and then logs the user in and redirects them to their new user profile.

- How does it relate and implement aspects that were mentioned in our fspec?:

- This particular aspect was not directly referenced in the functional specification, but it implements creating a new user profile.

- Please predict any implementation challenges: Any issues related to this would probably be difficulties in encrypting user information to ensure user's privacy.

Overlap Calendar (Figuring Out Group Meeting time)

- Person(s) Responsible: Thai

- How does it relate and implement aspects that were mentioned in our fspec?: This component will connect with the database to retrieve all free time of members in the group and then using moment library, use matching algorithm to figure out the best overlap time slot, save information back to the database and notify "Export Calendar" components.

- Please predict any implementation challenges: The biggest challenge will be the algorithm to figure out the overlap time with highest users' prority.

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"Export" Calendar (Displaying All Users Free Time)

- Person(s) Responsible: Justin, Thai
- How does it connect and communicate to other parts of the system?: This component will mainly connect with the database to retrieve the best meet-up time
- How does it relate and implement aspects that were mentioned in our fspec?: This calendar will be the one that we build that shows the users the times that they are both free.

- Please predict any implementation challenges: There could be challenges with implementing the interface for this feature. For consistency, all the calendars shown should look like the google calendar. (It would be ugly, and confusing to have different layouts for different calendars). That said, having the overlapping times shows up on a google calendar looks as though it will be quite the challenge.