

Project/Team Name: day&night

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Section 1 ("Overview") & Section 2 ("Requirements and Target Audiences")

Our campus is an extremely busy place, and it can be hard to keep track of the organized chaos that is student life. With all the fascinating events happening on campus, it is easy to get the room wrong, the time wrong, forget about the event, or not be informed of it in the first place. We wish to create a calendar for student life that solves all of these problems. Implemented in a mobile app, the calendar will include as diverse and inclusive a list of student events as possible, with the intent of catering to all students at Princeton. On Tigerapps there is a student event calendar, and we wish to build on that app's foundation in order to build a more complete timeline of campus life that will appeal to a greater portion of the student body.

Day&Night aims to improve the experience of Social, Athletic, and Performing Arts events on Princeton's campus. It will allow users to view information about everything from sports games, to special lectures, to dance shows. Features of the app include: the ability to filter through the events by genre and by date/time, event message board, and a ticket matchup feature. The ticket matchup feature will connect buyers and sellers of tickets to performances on campus. Right now, students use every listserv imaginable on campus, but Day&Night will allow users to list themselves as either buying or selling a ticket, and inform both parties if a match is found. Users must present their netID and password in order to use this feature.

Only official clubs and teams on campus will be able to post on the app, and within those organizations only the president (or captain), determined by their netID and password, will have the ability to create events. The hope is that the relative ease of uploading information about the events as compared to putting up flyers will incentivize organization leaders to post about their events. For athletic competitions, we will scrape the data off of goprincetontigers.com, but give team captains the ability to edit their events in case they want to provide additional

Section 3 ("Functionality")

There are 3 main user-experience situations that should be covered before we begin discussing the implementation of our application. First, if a totally unaffiliated Princeton student uses our application, he/she should be able to view the events calendar and contact other Princeton students about tickets, but not create new events. Second, if a Princeton student who is the president of a student group on campus uses our application, he/she should be able to view the events calendar, contact other Princeton students about tickets, and also create and manage events for his/her student group. Finally, if a non-Princeton-student uses our application, he/she should be able to view the events calendar, but not contact students about tickets or create event. The following scenario covers the maximum possible usage of the app:

A Princeton student, who is the president of a student group on campus, opens the app on his or her phone. He/she is brought right to the events calendar, and can click on specific days to see a full list of events, and can then click on specific events to see more details about the event (location, time, etc). He/she selects a ticketed event and sees that, among the standard info about the event, there are options either to “upload” a ticket for the event or to get a ticket for the event. If he/she selects either of these options, then the user is brought to the Princeton central authentication page, where he/she inputs his/her login credentials. In the “upload” view, the user provides some basic information, such as phone number, email, etc, so that the app can facilitate communication if someone requests a ticket. In the “get ticket” view, the user provides similar information so that he/she can be put on the queue to get notified when a ticket becomes available. Back at the main calendar page, the user can select create/manage events. If he/she has not logged in already, the user will be redirected to the central authentication page, after which he/she can create a new event on the calendar or edit the details of an event that he/she already created.

This experience represents the most accessibility that a user can have. The only difference between this experience and that of a Princeton student who is unaffiliated is that this unaffiliated user will be unable to create new events; that is, when he/she attempts to create a new event, the user will be shown a message saying that he/she does not have access to that feature of the application. This same message will be shown to a non-Princeton-student who attempts either to request tickets for an event or to create a new event.

Section 4 ("Design")

There are three major design components to our project: a calendar of events, ticket search platform, and event submission form. The primary focus of the application will be the calendar, which will be filterable by search options such as event type, time period, student group, student events eligibility, price, and more. From a data management perspective, the events on the calendar will be either regularly scraped from a variety of reference sites or

manually inputted through the event submission form. As this will be the most accessed portion of our app, our main design focus will be to make the calendar's user interface interactive and easy to navigate. A future hope would be to add a variety of features such as calendar reminders, rsvp tab, invite friends, and favorite events. This will require each user to have a profile connected to their princeton netid login.

Within each event, there will also be a connection to our ticket search and match functionality. Working similarly to an online matching system, users can either submit a search request or an extra ticket under each event and the application will serve to match them. If a user searches for a specific ticket type(i.e. date/time/location/price range) and one exists in the list, they will be matched with the user who posted the said ticket and will be able to purchase it from them directly and it will be removed as a listing.

Finally, our event submission form will be designed like a very simple online inquiry form, with certain required and optional fields. The information will then be converted into an event and added to the calendar immediately. The major challenge we will face with this is vetting the credibility of the submitted events. To address this from a design perspective, we will require users to login using their netid and password and possibly only allow certain users to submit events (i.e presidents, captains, and leaders of student groups on campus).

We plan on building the UI using Xcode with Swift. We will also be implementing a remote database which our scraped data and submission form will send data too. This will be the basis for the calendar events and ticket exchange queries. We also plan on using a customizable app calendar API for the base structure of our calendar. We will also need to work with OIT to connect our app with the current CAS login system used for Princeton related apps and websites.

Section 5 ("Timeline")

March 8:

Approval Meeting complete

March 15:

Design Document complete

March 21:

Project Status Website online

Initial Elevator Speech written

March 22:

Git setup for all team members

App UI sketched out

March 24:

Local database setup - test data input

March 26:

App storyboard created in Xcode with calendar integrated

March 28:

Local database of events integrated into app

Week of March 28:

Prototype complete

April 1:

Script to scrape Athletics data complete

April 8:

Remote database setup, data added, integrated into app

UI for Princeton tickets created in Xcode

April 13:

Princeton tickets setup using local database

Integrated into app UI

April 18:

Princeton tickets integrated into remote database

Submission form for events created and integrated

Week of April 18:

Alpha Version complete

Alpha testing

April 25:

Bugs from Alpha testing fixed

UI finalized

CAS login integrated

Week of April 25:

Beta Version complete

Beta testing

May 2:

Demo Presentation complete

Bugs from Beta fixed

May 2-5:

Demo Period

May 10 (Dean's Date):

Final Documentation submitted

Section 6 ("Risks and Outcomes")

There are a few main risks that we foresee in this project -- mostly having to do with the users. First of all, there's the idea that no one will use the app until everyone uses it. So features like the ticket matching, posting events, and filtering for events won't be successful unless there are enough people using the app. While it's true that you can't find tickets unless people post tickets, for instance, we hope that people will post tickets since it is in their interest to sell the ticket. Similarly, we know that student groups put a huge amount of time, money, and effort into publicizing their events, so we think that it would be in their interest to simply add their event to the app, even if there are only a few users.

Along those lines, one other risk is our reliance on student groups to post their events. Without events, our features like filtering for events, etc., are useless. However, we do think that student groups will do something this simple if it will help publicize their events. Also, we have access to the performance calendar for many arts groups since one of our group members is on the Performing Arts Council, so we can start out with a solid number of events. And the sporting events are accessible from a website, so we will have those, too.

Another user-related risk is the different levels of access that different users will have to different features of the app. We realized that spamming might become a problem if we don't have some sort of authorization process for creating events, so we decided that we should implement CAS login for that feature. This might get complicated with keeping track of the updated leadership of student groups every year. It technically could work, though, although we will have to think carefully through the different types of users (non-Princeton, student group presidents, etc.).

In terms of learning new languages and tools, we should be aware that learning how to use CAS login, learning how to send notifications (if you subscribed to an event or got a ticket match, etc.), and learning how to use the calendar API might take some time.