

# Project Specification

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## Product backlog:

The *Pittsburgh Explorer* web application is an itinerary generator around single intended events in Pittsburgh with other events and dining options to fill the day. With user provided information and interest, the planner will generate a suggested default plan with editable and sharable functionality. The user would get chance to save the plan in personal account, open on mobile or download detailed pdf plans.

### Search.html/Login/Registration:

- User authorization and information storage:  
Authorized login with private plan storage. Enable share of plans between logged in members for group trips. Possible for co-editing support.

### Home.html:

- Default itinerary generation with user input  
In login page, user will provide start location, date, interested attraction category, start/end time(time-group), group size and budget option. With the given information, homepage will display a default day itinerary with estimated travel time.
- Recommendation bar  
A suggestion with attraction categories (inner classification) options with user's interest as default suggestion. Data source including data scraping from travel websites: Tripadvisor, Yelp, attraction official websites.
- Editable itinerary  
Support default day plan user adjustment. 1) Delete current options with potential empty period. 2) Adjust time spent on each activity item with half hour difference. 3) Add in recommended attraction into day plan. -a) Condition of possibility of adding in. Requires minimal time spent on each event and budget constraints. -b) While adding in, time change and shifting on the rest of the events (Calculation and algorithm involved). -c) Shifting among activities in the day. Drag and drop between events.
- Map interaction  
Added in Google Map APIs with options to demonstrate trip changes on distance.
- Download as pdf version  
Available for download of pdf version of plans.
- Mobile version  
Available to send link to mobile numbers to open html version of finalized html/pdf.
- Security concerns  
Data freshness in database -- Only valid for the next-seven-day planning  
Concurrency control for shared plans -- Ajax refresh with SQL update locking

## **First sprint backlog:** (*Product Owner: Miranda Pan*)

In first spirit, we focused on webpage design (js work in progress), database creation, basic data scraping and research on feasibility of original plan. Following are the estimated functionality by 3/28/16 with person in charge.

- Google Map APIs adjustment - *Xinran Fang*

Study about Google Map APIs with function of a) web information get (time spent) and post(location, transportation method, travel time/date) b) Add-in div for map display c) Interact with Ajax on updating new locations in the day plan

- Web scraping and draft travel database creation - *Zhimu Wang*

Web scraping for attractions and dining information from TripAdvisor, Yelp for name, location, image, web link, description, rating, estimated time spent and average rate. While scraping, taking into consideration of information for future PDF generation use and open hour/date options in calculation.

- Webpage design, draft user database creation - *Miranda Pan*.

Web page design for draft version of

- a) home page (day planner, suggestion bar, navigation, map, toolbar)
- b) New plan requirement page (also available to temperate non-login user)
- c) Registration page
- d) Login Page

Login authorization and basic *User, Plan, Attraction, TemperateUser(in discussion)*, model&form creation.

## Data models used:

Attraction
+ID
+Name
+Category
+ImageURL
+ShortDesc
+Rating
+Cost
+WebLink
+Latitude
+Longitude
+RecTime
+MinTime
+MonOpenTime
+MonCloseTime
+TueOpenTime
+...
+SundayCloseTime
+BlackoutDay
+Phone
+LongDesc

User
+ID
+first_name
+last_name
+Email
+Plans_manytomany

Plan
+ID
+Date
+startStreet1
+startStreet2
+startTime
+endTime
+interest
+budget
+isStudent
+Transportation
+groupsize
+MorningAttrID_FK
+MorningStartTime
+MorningEndTime
+MorningDuration
+LunchAttrID
+LunchStartTime
+LunchEndTime
+LunchDuration
+AfternoonAttrID
+AfternoonStartTime
+AfternoonEndTime
+AfternoonDuration
+TB1Time
+TB1URL
+TB2Time
+TB2URL
+TB3Time
+TB3URL
+TB4Time
+TB4URL
+Users_manytomany

## Drown wireframe/HTML mock-ups:

\*Home page --- supporting itinerary generation and edit

\*Search page --- supporting information requirement

