What's There?

Deliverable III: User Manual, Testing, and Project Report

Version 1.0

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"What's There?" Travel Application

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1.0 GENERAL INFORMATION

1.1 SYSTEM OVERVIEW

This document contains the user instructions for the “What’s There?” webapp, Version 0.1. The system is designed to be an all-in-one travel app that will inform users of various different aspects of a location, including weather, hotels, traffic, and public transportation.

The system is designed as a general use system, with core features using AJAX calls with API’s to aggregate travel data. It employs the Web-based architecture model, being written using HTML, CSS Grid, Javascript, and support from the Bootstrap framework for improved interactivity. It is entirely GUI based, requiring users to interact with the site via a clickable or touchscreen interface.

1.2 PROJECT REFERENCES

The following list of documents and Web addresses were used for reference during the development of this project. These may include web services, previous deliverables, and templates.

Application Name: What’s There?

Group: The4bits

Developer Names:

Garrett Brumley, Joseph Vo, Nasser Alqudaihi

http://www.ieee.org/documents/ieeecitationref.pdf

=== App ===

==Videos==

[1] Traversymedia, “Web Development In 2017 - A Practical Guide,” YouTube, 20-Dec-2016. [Online]. Available: https://www.youtube.com/watch?v=9hDKfBKuXjI&t=1s. [Accessed: 11-Oct-2017].

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[Online]. Available: https://www.w3schools.com/howto/howto_js_slideshow.asp. [Accessed: Sept. 11, 2017].

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[Accessed: Oct. 11, 2017].

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[Online]. Available: https://learntocodewith.me/posts/cross-platform-apps/.

[Accessed: Oct. 11, 2017].

==Data==

=Weather=

- Open Weather Map API

https://openweathermap.org/

=Restaurants=

- Zomato API

https://developers.zomato.com/

=Google=

- Google API's

  - Street View:

    https://developers.google.com/maps/documentation/streetview/intro

  - Directions API

https://developers.google.com/maps/documentation/directions/start

  - Places:

https://developers.google.com/places/web-service/

  - Maps:

https://developers.google.com/maps/web-services/

  - Traffic:

https://developers.google.com/maps/documentation/javascript/examples/layer-traffic

===Deliverables===

==Books==

[1] R. Pressman and B. Maxim, *Software Engineering: A Practitioner's Approach, 8th Edition*. New York, Ny: McGraw-Hill, 2015.

==Digital Files==

[2] U. Subedi, G. Verma, P. Amarakeerthi, and V. K. Arachchillage, “example-DELIVERABLEII.” .

[3] “good-example-Deliverable II.”.

[4] “srs_template.doc.”.

[5] “DOC_15160.DOC”.https://www.hud.gov/sites/documents/DOC_15160.DOC

1.3 POINTS OF CONTACT

Garrett Brumley, Group Leader - grb0065@my.unt.edu

1.4 ORGANIZATION OF THE MANUAL

The manual is organized as follows:

- A system summary
- A “Getting Started” guide
- A system use guide, which provides detailed descriptions of each function of the webapp.

2.0 SYSTEM SUMMARY

2.1 SYSTEM CONFIGURATION

The “What’s There?” app uses a web server and user client hardware combination to process requests for data and present them in an aesthetically pleasing fashion. The app is designed to be supported across a wide variety internet capable devices by using a flexible CSS Grid UI that scales to the device size and purpose. The client device uses a browser to process the layout code and display the application. This application uses CSS Grid, which requires a modern browser*. The user will navigate to www.whatstheretravel.com upon launch of the product, or open the local index.html to access the What’s There Homepage.

Modern browser defined as:

Chrome 60 or later

Firefox 55 or later

Safari 10.1 or later

Opera 47 or later

Edge 16 or later

iOS Safari 10.3 or later

Android Browser 56 or later

Chrome for Android 61 or later

2.2 DATA FLOWS

System uses a couple types of data flows, but the most prominent consists of a network of API calls and javascript that dynamically acquire real time data from a variety of sources, including OpenWeatherMap for real time weather data, Google Maps for real time Traffic and Public Transportation data, and Zomato for restaurant searching functionality.

3.0 GETTING STARTED

3.1 SYSTEM MENU

The Nav bar is the main tool for accessing pages and navigating around the app. On desktop, the nav bar is located on the left edge of the screen and contains five buttons. On mobile the sidebar is hidden, and a hamburger menu icon appears to allow user to collapse the nav bar to allow more room on the site. All parts of the site can be accessed from the Nav bar.

3.2 SYSTEM LAYOUT AND APP NAVIGATION

If the user wishes to return to the home page, they may tap the “I/O” button on the top of the Nav Bar. If the user wishes to access the main functionality of the app, the user may access the city pages from the “road button” on the Nav bar. Clicking or tapping the “road button” will trigger a drop box to display a list of links to the pages of currently supported cities. The trip calculator, notification panel, and about page can be accessed by tapping the calculator, info, and cloud icons respectively.

The city page contains a variety of functionalities that can be called upon by clicking elements on the page.

4.0 USING THE SYSTEM

4.1 THE NAV BAR

The Nav bar contains the following tools to navigate the application:

- Home Page Button
- City Page Button
- Trip Calculator Button
- About Button

4.2 THE CITY PAGE MAIN 1

4.2.1 MAIN TITLE

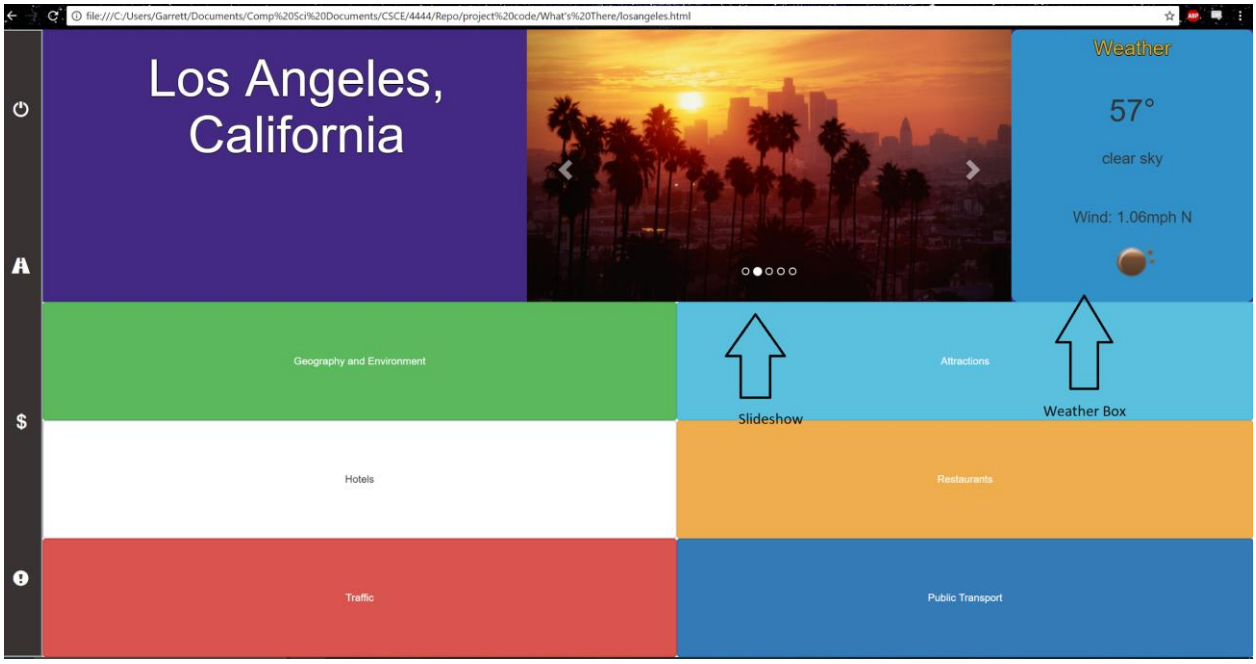
Contains the City Name for reference.

4.2.2 CITY SLIDESHOW

Contains 5 images of the city on a rotating carousel. User may navigate between pictures by using the arrow buttons on the left and right sides of the slideshow display, or by clicking on the dot navigation icons, where each dot navigates to the respective picture in the slideshow.

4.2.3 WEATHER

Contains real time weather data about the city, including Temperature, Condition, Windspeed and direction, and an Icon to expand the weather box and display the 5 day forecast.



4.3 CITY PAGE MAIN 2

Each of the cities page contains 6 buttons. Each buttons open up a modal and contains specific information for the users to read. Once entered, the users can click on the 'X' button or click outside the modal once the users is through with it.

4.3.1 GEOGRAPHY AND ENVIRONMENT MODAL

- It contains about the physical features and it's surroundings . It includes description of the weather

4.3.2 ATTRACTIONS MODAL

- Provides a list of some of the popular tourist attractions for the city.

4.3.3 HOTELS MODAL

- Allows user to enter city, then displays some hotels in the area

4.3.4 RESTAURANTS MODAL

- Displays top restaurants in the city and allows user to search for restaurants by name or food type.

4.3.5 TRAFFIC MODAL

- Displays a real time traffic map

4.3.6 PUBLIC TRANSPORTATION MODAL

- Displays a public transportation map.

4.4 THE ABOUT PAGE

The about page contains information about the group, the project, and the class that this was an assignment for.

SECTION B. HOW TO RUN "WHAT'S THERE?"

Running "What's There?" locally

1. Make sure you are running a modern web browser.

Modern browser defined as:

Chrome 60 or later

Firefox 55 or later

Safari 10.1 or later

Opera 47 or later

Edge 16 or later

iOS Safari 10.3 or later

Android Browser 56 or later

Chrome for Android 61 or later

2. Open the What's There file containing application assets.

3. Open index.html with a browser of your choice.

Production version would be hosted at URL: www.whatstheretravel.com

SECTION C. TEST CASES AND TESTING DISCUSSION

Due to the requirements of our application, we have elected to take a functional testing approach rather than an automated one, as a command line testing suite would not be appropriate for our application in its current stage.

Test Case 01: Access Home Page

Description: User should be able to open and use "What's There?" From a local file

Assumption: a supported browser is being used.

Test Steps:

1. Open the What's There folder
2. Click on Index.html.

Expected Result: The home page should be displayed.

Test Case 02: Access Dallas Page

Description: User should be able to navigate to the Dallas city page from the home page.

Test Steps:

1. Locate Nav Bar
2. Click on road icon
3. Select "Dallas" from popout city list

Expected Result: The home page should be displayed.

Test Case 03: Access Austin Page

Description: User should be able to navigate to the Austin city page from the home page.

Test Steps:

1. Locate Nav Bar
2. Click on road icon
3. Select “Austin” from popout city list

Expected Result: The “Dallas” page should be displayed.

Test Case 04: Access Los Angeles Page

Description: User should be able to navigate to the Austin city page from the home page.

Test Steps:

1. Locate Nav Bar
2. Click on road icon
3. Select “Los Angeles” from popout city list

Expected Result: The “Los Angeles” page should be displayed.

Test Case 05: Access Restaurant Modal

Description: User should be able to browse and make a basic search in the Restaurant section.

Test Steps:

1. Navigate to any city page
2. Click on “Restaurant” Button
3. Search for “Pizza” and browse local pizza choices.

Expected Result: The restaurant modal should appear and handle the user’s restaurant browsing requests

Test Case 06: Access Traffic Modal

Description: User should be able to open and use the traffic modal on the city page

Test Steps:

1. Navigate to any city page
2. Click on the Traffic Button
3. Click and drag map to view traffic in the current city.

Expected Result: A google map with a traffic layer should open and display real time traffic information to the user.

Test Case 07: Access Hotel Modal

Description: User should be able to open and use the hotel modal on the city page

Test Steps:

1. Navigate to any city page
2. Click on the Hotels
3. Enter name of current city

Expected Result: A google map with hotels pinpointed should appear and give an overview of hotels in the area.

Test Case 08: Navigate through slideshow

Description: User should be able to locate and interact with each city page slideshow, using the navigation options displayed.

Test Steps:

1. Navigate to any city page
2. Locate slideshow at the top center of page
3. Click on the right arrow button two or three times
4. Click on the left arrow button two or three times
5. Click on each dot navigation button

Expected Result: Slideshow should change slides based on user input, and user should be able to seamlessly access any slide in the slideshow.

Test Case 09: Calculate Price With Trip Calculator

Description: User should be able to open and use the trip calculator on the nav bar

Test Steps:

1. Locate Nav Bar
2. Click on calculator icon
3. Choose a city, click next
4. Choose number of travelers, click next(the number must be at least 1 traveler)
5. Choose number of days, click next (the number of days must be at least 1 day)
6. Choose travel style, click next
7. Include daily expenses (optional) , click next
8. Include tickets for some famous attractions (optional) , click next

Expected Result: The user should be able to see 6 results, which are average daily cost per person, average total cost for the trip per person, average daily cost for the group, average total cost for the group trip, cost of the trip with user specific inputs (daily expenses, and tickets) per person, and cost of the trip with user specific inputs (daily expenses, and tickets) for the group.

Testing was done functionally, with many prototypes being developed and bugs being fixed along the way. Testing was mainly done individually as each member worked on their portion of the code.

SECTION D. PROJECT FEATURE REPORT

We have successfully implemented a majority of the proposed features, including the city pages containing real time weather statistics, an interactive image slideshow, and an interactive city page that allows the user to view information about Geography/Environment, attractions, hotels, restaurants, traffic, and public transportation.

We successfully implemented a sidebar navigation feature that allows users to access the various parts of the site/app, as well as a list of cities available in this demo version.

We also successfully implemented a basic trip budget calculator that allows a user to enter the number of persons travelling, number of days, attractions, price range(low, moderate, luxury), and additional accommodations, such as budgeting for food, alcohol, entertainment, local transportation, and price of informational items from local travel stops. The calculator then displays the general amount of money you can expect to spend on your trip.

We were forced to fall back on our contingency plans when our group leader unexpectedly dropped the class mid-November, leaving us without our most experienced programmer. As a result, a number of features outlined in the requirements specification were not successfully implemented. Those features include: A city search from the main page using a search box to query city pages, and a web database management system to save user profiles and favorite cities.

Other predicted risks also impacted the project significantly, particularly our inexperience, and the fact that at the beginning of the project, none of the group members had any programming experience using HTML, JavaScript, or other languages and frameworks that were used to build the project. As a result, a majority of the project time was spent following beginner guides and trying to understand how the languages work, rather than actually using them to develop.

Finally, several communication errors and unforeseen workloads this semester hampered the group's ability to follow the project schedule that was drawn in deliverables I and II. Major due

dates in other classes took precedence over following the soft due dates the group set for itself for development of the app, leading to an overall deviation from the original schedule.

Future versions of the application will include features that we were unable to include due to setbacks, namely the city search box to query city pages, and a web database management system to save user profiles and favorite cities. We will also improve the trip budget calculator to include more options. The next phase will be extensive testing and prototyping of the app across all devices as the next functions are added.

In conclusion, thanks to the fluidity and modularity of our design, we were still able to successfully implement our core features into a working prototype, despite the many setbacks.

SECTION E. MEETING MINUTES

11/21

- Reviewed scope and contingency plan after Peter dropped.

- Talked about bootstrap and discussed parts of the framework we would be using.

- Discussed styling and finalized design choices

    - Discussed colors

    - Trims

- Divided programming roles for the Thanksgiving break

    - Garrett: Overall management and styling, main 1 (header, slideshow, current weather (forecast if possible))

    - Nasser: Fix and finish Traffic, Public Transportation, Restaurant, and Hotel buttons/modals. Help with styling.

    - Joseph: Geography/Environment and attraction buttons. City list popout box, collapse navbar on mobile. Help with styling

- Discussed Deliverable 3 due dates.
- Discussed each section of deliverable 3 and what would be required.
- Discussed unit testing, decided that we would need to use functional test cases instead of command line automated testing suites, as we felt they were not appropriate for our application.
- Divided Documentation roles
    - Garrett: Organize and format Deliverable III document, most of user manual, running instructions, testing overview and outline, write project feature report and overview, meeting minutes

  - Nasser: Hotel, Restaurant, Traffic, Public Transport User manual sections and test cases.
  - Joseph: Geography and attraction button user manual sections and test cases.

- Sourcetree discussion and training.

SECTION F. CONTRIBUTION TABLE

Member name	Contribution description	Overall Contribution (%)	Note (if applicable)
Garrett Brumley	Group leader, directed styling, layout, and wrote weather AJAX section. Wrote most of Deliverable3 Documentation	45%	
Nasser Alqudaihi	Created city page buttons and coded Hotels, restaurants, traffic, and public transportatio	35 %	

	n modals. Wrote trip budget calculator. Assisted on sections of report		
Joseph Vo	Worked on nav bar and styling, assisted on sections of report	20%	