

**ATI DESIGN STUDIO**

Massey Isa'ako  
lasiisaako@gmail.com  
021 253 3235

# TOURISM NEW ZEALAND

+64 9 914 4780  
STEPHEN.ENGLAND-HALL@TNZ.GOV.T.NZ



WEB APPLICATION PROPOSED BY  
MASSEY ISAAKO



**26 June 2017 - 13 July 2017**



# INTRODUCTION

This booklet includes the following:

- Brief Analysis
- User Based Research and Results
- Assumed User Base
- Actual User Base
- Competitor Analysis
- Font and Color Research
- Concept Sketch Overview
- Wire Frame Overview
- Use Case Diagram
- Desired Deliverables
- Implementation Breakdown
- JavaScript Style Guide
- UXPin Prototype Design

**Project is expected to be finished  
on Thursday 13th July, 2017.**



# PROJECT ANALYSIS



## CLIENT

Tourism New Zealand (TNZ)

## EXISTING NEED

TNZ wants to promote growth in the New Zealand Tourism industry.

## CLIENT SOLUTION

They have implemented a new campaign for tourists visiting for a short period.

## MAIN COMPONENT

This campaign encourages tourists to organise their own transport to different parts of the nation.

## CLIENT BUSINESS REQUIREMENTS

TNZ would like a specially designed web application that allows tourists to:

- a) Plan their travel route based on information given (e.g. number of people, duration of stay etc).
- b) Receive a recommendation on the vehicle needed.
- c) View the travel distance and fuel costs based on vehicle fuel consumption.



# USER RESEARCH



## PURPOSE

To gain a deeper understanding of what the client needs from the proposed web application solution. This will help guide the development process of the product, so the best possible outcome is produced for TNZ and their user base.

The primary focus of this user research is to establish a specified demographic for the target audience (tourists visiting for a short period). This will help narrow down the existing user base scope.

## RESEARCH METHOD

To conduct this research, I will be targeting previous New Zealand tourists. This allows me to draw data from their existing experience with travel applications (if any). This will open up the opportunity to see what the users truly need, which will assist TNZ to reach their goal and will help users to gain the maximum benefit from the product.

## PLATFORM

I will be using SurveyMonkey as my surveying platform. To maximise the number of user responses, I will be posting this survey on Google Forums and my Social Media networking accounts. I am aiming for at least 15 responses, due to time constraints.



# ASSUMED USER BASE

## PRIMARY TARGET AUDIENCE

I predict that they will be females who are in a relationship. I assume that they are between 18 to 34 years old. I also think that they travel often and within the past six months to Europe.

In terms of planning travel, I predict that they use web apps to plan their travel route. Since they pursue an active travel lifestyle, I will assume they would like this to be accessible on mobile devices.

## SECONDARY TARGET AUDIENCE

I predict that these people will be single males between 18 through to 34 years of age. I also think that they travel often, but to a lesser degree than that of the primary target audience. They most likely would have travelled within the last 12 months.

When planning their travel route through their chosen destination, I assume that they also rely on existing applications and web platforms. I also predict that they would like this platform to be accessible on their tablets.



# SURVEY RESULTS



## SURVEY LINK

[www.surveymonkey.com/r/8P73RQZ](http://www.surveymonkey.com/r/8P73RQZ)

Due to time constraints, I have decided to continue through with the research process. As of 27th June 2017 I have received 13 responses to the survey.

## GENDER

Male:	61.54%
Female:	38.46%
Not provided:	0%
Other:	0%

## AGE

Under 18:	23.08%
18 to 24:	46.15%
25 to 34:	15.38%
35 to 44:	7.69%
45 to 54:	0%
55 to 64:	0%
65 to 74:	0%
75+:	0%

## RELATIONSHIP STATUS

Single:	53.85%
Couple:	23.08%
Family:	23.08%



# SURVEY RESULTS

## LAST TIME THEY TRAVELED OVERSEAS

Last month:	0%
During last 6 months:	15.38%
During last 12 months:	23.08%
More than 12 months ago:	61.54%
Haven't traveled before:	0%

## CONTINENT VISITED

Africa:	0%
Antarctica:	0%
Asia:	7.69%
Australia/Oceania:	76.92%
Europe:	0%
North America:	15.38%
South America:	0%

## DID THEY USE A TRAVEL APP?

Yes:	23.08%
No:	61.54%
Cannot recall:	15.38%

## WHAT APP DID THEY USE?

- "A lot of sites, does G Maps count?"
- "Travel advisor"
- "Pinterest"



# SURVEY RESULTS

## IF ANOTHER APP WAS CREATED, WHAT DO THEY WANT?

Plan route:	69.23%
Transport suggestions:	76.92%
Estimated fuel cost:	76.92%
Comments:	
"recommended landmarks"	
"Stops on the way, attractions maybe?"	

## PREFERRED DEVICE TO USE

Mobile:	76.92%
Tablet:	23.08%
Desktop:	0%

## WOULD THEY USE TNZ'S APP

Yes:	53.85%
No:	7.69%
Maybe:	38.46%



# ACTUAL USER BASE



## PRIMARY TARGET AUDIENCE

Single males aged between 18 to 24 years of age. They are most likely to travel to the Australia/Oceania continent. They last traveled more than 12 months ago and did not use a travel app to help plan their route throughout their destination. If they were to use an app, they would like to have the ability to see recommended transport options as well as the estimated cost for fuel. They are most likely to use their mobile device to access this app and are most likely to use this app as their first experience with route planning.

## SECONDARY TARGET AUDIENCE

They will most likely be females either under the age of 18 or between 25 to 34 years of age. They will either be part of a couple or are part of a family. They most likely would have traveled within the last 6 to 12 months to Asia or North America. They do make use of travel apps, including Trip Advisor, Google Maps and Pinterest. They are unsure about whether they will use the TNZ app, most likely due to the existing market of travel applications. They would like the feature to plan their route throughout their trip and would like to access the web app on their tablets.



# YOUR COMPETITORS

In this world of technological advances, there are many corporate giants fighting for the attention of your target audience. Here are three big companies who are setting the standard for user focused travelling and trip advising.

After doing some online research and testing a few relevant application, I have narrowed the large selection down to the following three applications:

- 1) Google Trips
- 2) Uber
- 3) Citymapper

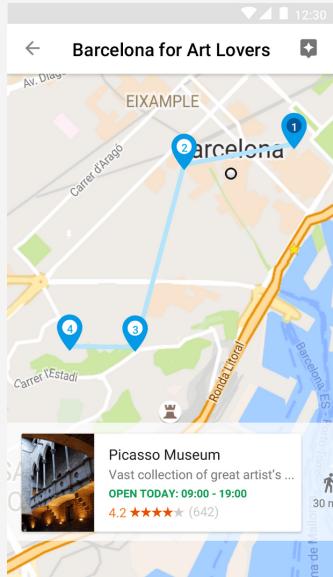
All three competitors utilise Google Maps as the main component to advise users on their route and/or the cost of travel in the area.

The research is done with three goals in mind. You will see the strengths of each application, issues they neglected to address as well as features we can realistically add to your product to add further value.

We will gain the necessary inspiration we need, in order to influence your product aesthetically and functionally.



# GOOGLE TRIPS



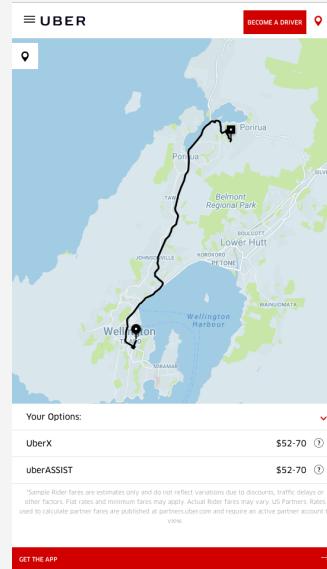
Google Trips gives suggestions of landmarks to visit according to your current location. It maps out the route to a suggested destination. It provides custom suggestions according to time, weather conditions and user reviews. It can pull information from your calendar, then give an option to download the relevant map to view suggestions offline.

Although it has information about transport around cities, it does not have an inbuilt Google Maps window to view routes within the app, but links to Google Maps itself. This forces the necessity to switch between two apps, meaning a lot of window toggling.

It would be beneficial to incorporate suggestions of landmarks to visit and have Google Maps built into TNZ's web app.



# UBER



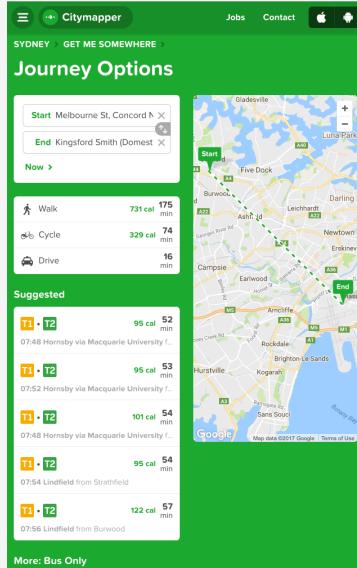
Uber is very similar to the app TNZ would like. It has Google Maps built into itself. It allows the option to enter the start and end of your journey. It then displays the route and gives the total estimated fee. They remove businesses and other landmarks from the Map, allowing you to focus on your destination.

However, Uber does not have any labels on their Map showcasing any tourist attractions.

It would be beneficial to incorporate the clean aesthetic design of Uber's app, as well as the option to see the break down of the total travel cost. I would also like to display the option of viewing the web app responsively. But on the survey results, it seems that the app should only be responsive between mobile and tablets.



# CITYMAPPER



Designed specifically for commuters in select cities Citymapper gives the user live feedback and dynamically switches between three travel modes when the mouse hovers over them. It gives an estimated amount of calories you will burn when cycling or walking. It gives an estimated time to reach your destination according to your selected travel mode.

Citymapper only caters for a small selection of cities, not including New Zealand. Their user interface is devoid of any outstanding visual design.

It would be beneficial to incorporate the use of intuitively recognisable icons to save mobile screen space. The fitness aspect of the calories burnt would be a great feature to add. I would like to switch the route style (dashed, solid or faded), according to the travel mode.



# CONCEPT SKETCHES



To begin the aesthetic design process, I have developed four rough sketches of the potential user interface of the app.

Based on the user research and the identification of the target audience and their preferences, I have decided to create this app only for mobile devices and tablets. I have also made this decision based on the competitor research.

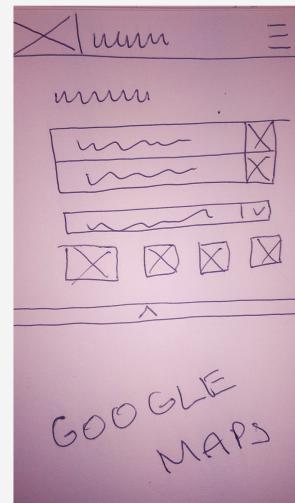
Additional reasoning for this decision also includes the fact that the nature of travelling means the user requires an application that is accessible on smaller and more portable devices. Thus removing the necessity to develop a desktop version of your product.

This application is designed solely for tourists currently in New Zealand. Although it can be used by users from outside New Zealand, the application will not function as well as it should because it is specified for the New Zealand tourism industry and those on New Zealand soil.



1

2



### SKETCH ONE

This concept is inspired by Uber. It features a large map below a fixed navigation bar, with the form located beneath it. The form is located at the bottom and will slide in/out of the window when the user touches it. The sketch has the TNZ logo in the top left corner, with a hamburger menu to the top right, which will open a slide in menu with links to the TNZ website, contact us form and more. But this slide in menu relies on the necessity of having links to external sites.

### SKETCH TWO

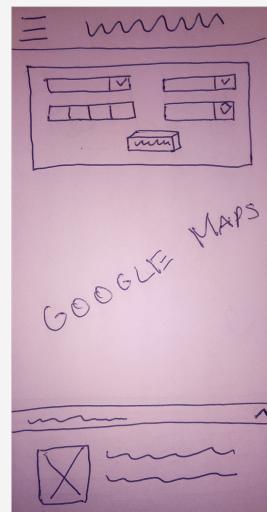
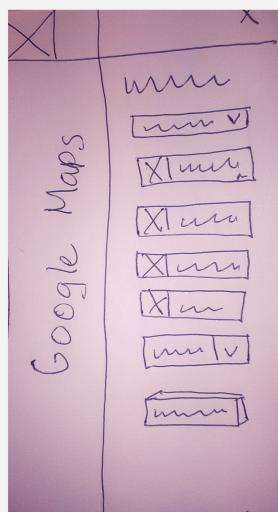
This is exactly the same as the first sketch, but with the form located above the map and below the navigation bar. All other links will be located within the menu, just like the first sketch.





3

4



### SKETCH 3

Unlike sketches one and two, number three places the form within the navigation bar itself, allowing the user to enter the relevant information, without the need to share screen space with the map. The links that were once held within this menu will be shifted to below the google map, in what is called a footer division.

### SKETCH 4

This concept is a mix of Uber and Citymapper. The map will be full screen, with the form hovering above it. Like sketch one, there is a slide in/out div with more information, similar to that of Citymapper. This is where the user may be able to access which mode they are using, if it is walking/cycling, it will also display the potential amount of calories burnt on their trip.



# FINAL WIRE FRAME

The final wire frame is the culmination of the concept design process. This is where all the best features from each sketch is used to influence the final visual layout of the application.

The following two pages outline four stages presented within the application:

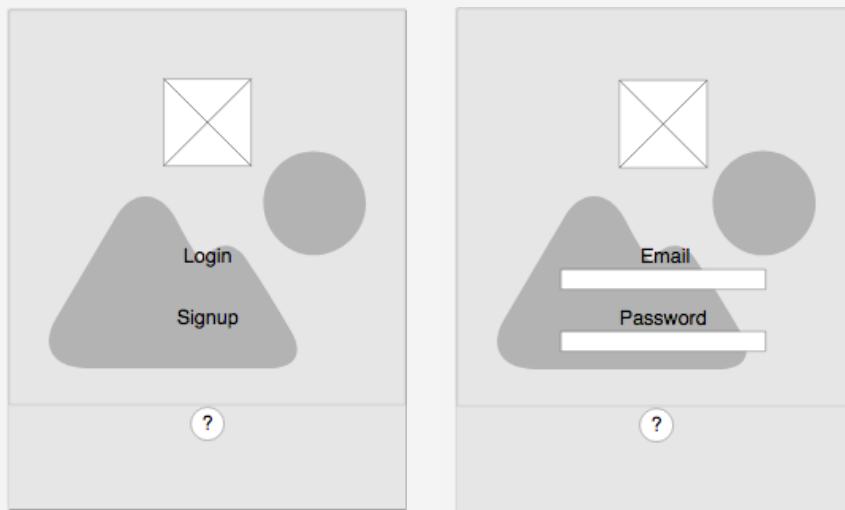
- 1) Splash Stage
- 2) Register or Login Page
- 3) Google Map Page
- 4) Input Form Page

As this project is still under development, it is normal that one or more may be removed, should any of these stages be unnecessary to TNZ's product users.



1

2



### WIRE FRAME 1 - SPLASH

This wire frame follows the standard landing page theme presented by most modern applications. This landing page will either have a large image in the background or a gradient background-colour. It will also have the standard login/sign up button. The image located at the top will be that of the TNZ logo.

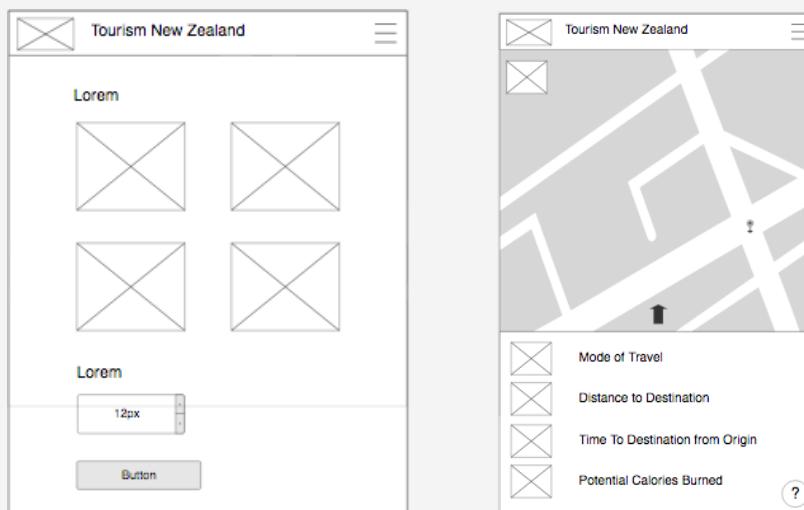
### WIRE FRAME 2 - LOGIN/REGISTER

This wire frame is what the user will see, dependent on what the user selects on the splash section. You will notice that there is a help button (?) located at the bottom of both stages. This is to hold any relevant information the user needs. This information will be added once the needs are identified through user prototype testing. If nothing is required or identified through user testing, then the (?) icon will be removed on subsequent stages.



3

4



### WIRE FRAME 3 - INPUT FORM

This will feature the travel mode the user would like to select, and will ask for other relevant information to help the app give the best possible suggestion to the user. It will take the full size of the screen and will feature live validation to help the user input the correct information. The four image placeholders are buttons representing the four possible travel modes: walk, cycle, transit and drive.

### WIRE FRAME 4 - GOOGLE MAP

Users have the ability to view their route based on the information they have given. It will have a slide up/down section at the bottom, holding additional information identified from competitor and user research: travel mode, distance, calories burned (if relevant) and cost of travel (fuel consumption).



# FONT AND COLOUR



TNZ's existing website uses three main colours. At best, the colour scheme is grayscale. This is most logically due to the existing branding that remains consistent throughout well known New Zealand icons, namely the All Blacks, Silver Ferns and more. The images presented are mainly landscape images, containing large sweeping valleys, rivers, beaches and more. It draws very much from the 100% Pure NZ site design, promoting the natural beauty to prospective tourists.

## FINAL COLOUR CHOICE

Primary Colour



Secondary Colour



Accenting Options



## FINAL FONT CHOICE

Headings - Josefin Sans

Subheadings - Josefin Sans

Paragraphs - Raleway

The colours were chosen because they are similar to the existing scheme of light and dark. But to add vibrancy, the colours also provide more visually, compared to the grayscale design of the existing website.



# COPYRIGHT



Images that will be used are retrieved from Search Creative Commons.

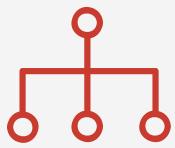
The images chosen from the Search Creative Commons database will only be those where the owner specifies the following two things:

- 1) Free for commercial use
- 2) No attribution required

Using the above two conditions should reduce any further cost for the development of your product.

It will also ensure we follow the standards and conventions maintained by the copyright law.

Other images that might be used will be retrieved from your existing website with due acknowledgement to the rightful owners.



# USE CASES

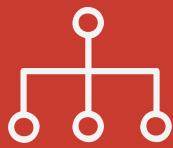


The "use case diagram" is a visual representation on the steps TNZ can expect the user to take in order to accomplish a goal. The end result is the "deliverable", which is something the users wish to gain from your product.

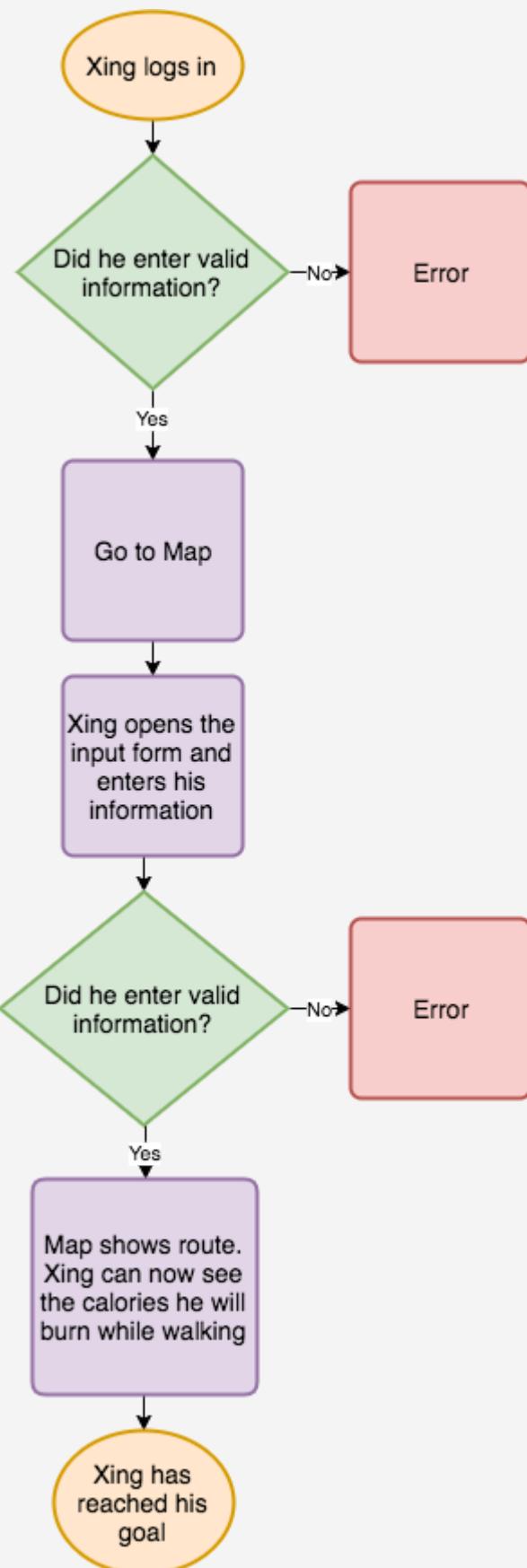
The following two use case scenarios are created through your user base, derived from the research results presented earlier in this document.

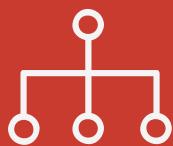
The first scenario is the primary target audience, represented by 21 year old Xing Huan. He is from China and is currently holidaying in New Zealand. Xing has recently downloaded the app. He would like to find his way to his accommodation from the Wellington airport and he knows it is within walking distance. His goal is to view the route and see the calories he can burn while walking to his destination.

The second scenario is the secondary target audience, represented by 30 year old Jessica Mulligan. Jess is visiting New Zealand with her husband and two children. They are currently lodging in Rotorua but would love to visit the Sky Tower in Auckland. Since they have hired their own vehicle, they want to see the route and get an estimated fuel cost for their trip to Auckland.

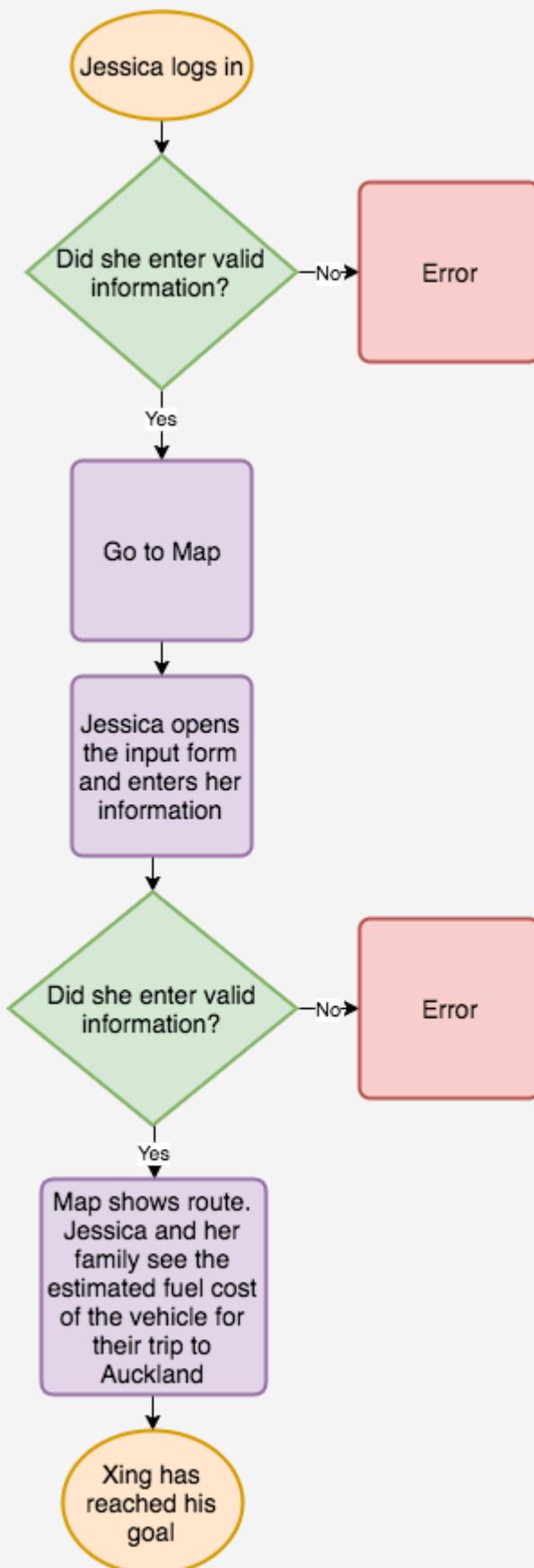


# PRIMARY USE CASE





# SECONDARY USE CASE





# DELIVERABLES



The deliverables will be accomplished through breaking them up into manageable tasks to be completed over a set time frame.

The list below presents the existing deliverables from your product:

- a) View Route
- b) View Distance
- c) Travel Mode
- d) Cost of Fuel Consumption
- e) Potential Calories Burned

Estimated timeline for deliverables:

- a) Route: 05/07/17
- b) Distance: 05/07/17 - 06/07/17
- c) Travel Mode: 07/07/17 - 08/07/17
- d) Fuel: 09/07/17 - 10/07/17
- e) Calories: 11/07/17 - 12/07/17



# JS STYLE GUIDE



This is what future developers will use as a guide to understand the way your product will be programmed. This is to reduce confusion of coding practises, setting the standard for future development and improvements.

## COMMENTING

With each function or significant addition to the code, explain how it contributes to the functionality of the application. This is required for loops (for/while). Must be easy to understand and follow.

## VARIABLES

Global variables should always be located at the top of the file. Local variables should always be located at the top of every function, unless variables are created within loops. Variable names must be created using the camelCase method. The first letter in the variable name will always be lowercase, any new word/phrase within the variables name will begin with a capital letter. No numbers (ie 1,2,3,4,5) or special characters in variable names.

## JQUERY

Any necessary jQuery code should directly follow the variable names. Functions should be appropriately named following the camelCase method described above.



# JS STYLE GUIDE



## JAVASCRIPT

Any raw JavaScript blocks of code (i.e. functions) that do not contribute to jQuery should be located beneath the closing jQuery document ready tag. This does not apply if the code is embedded into the jQuery coding.

## INDENTATION

These should be at a tab width of 4 (if using Sublime). Indentation should allow opening and closing tags to be directly and vertically aligned. Your notations should always be aligned with the block/line of code you are explaining through using this indentation method.



# MAJOR CHANGE



At this point of development, I have realised that the use of a login page would be unnecessary to your product. This decision has been made due to the fact that the target audience is limited to those who are currently on New Zealand soil for a short period of time. Due to the shortness of their visit based on the information provided in the brief, we have made the decision to remove the login/register section.

Based on this reasoning, the login page has now been removed. The benefits of this major change will result in an increased amount of time spent on the development of the your application's functionality.

This change will also allow more time for any other additions/modifications to be made. This will assist your product to reach its fullest potential within the your specified timeframe.



# PROTOTYPE TESTING

User testing was conducted through giving users small tasks in order to achieve one goal: view distance of travel. All testers accomplished the goal. The tasks that were set are listed below:

- 1) Enter App
- 2) Enter Information into Form
- 3) View Map
- 4) View the distance you will travel
- 5) Go back to the input form

Positive feedback was received on the professional feel of the app. The colour scheme chosen was appreciated by the testers, as well as the intuitive use of icons to present information. Users found using the app simple and easy. This is especially beneficial for tourists with limited English. This design should be universally accessible to all visitors.

Several issues were rectified through testing. One was a small colour issue with two areas in the app. I was advised to change the font weight of one area or increase the size, just to make it more visible. There was some confusion with one icon but has been quickly fixed.



# PROTOTYPE LINKS



To view the initial iteration (pre user testing version) of your product prototype, copy and paste the link below into your browser url bar:

<https://preview.uxpin.com/7212b1bf39836d5c9ff76d04f34ee54e88a7d5d6#/pages/71982129?mode=cm>

To view the final prototype (post user testing), copy and paste the link below into your browser url bar:

<https://preview.uxpin.com/fc138542b1e38be638e6a7663c27e5c990484434#/pages/72058013?mode=cm>

The following pages are screen shots of the final prototype to be developed using Javascript, HTML5 and CSS3.



# FINAL SPLASH

M





# FINAL FORM



NEW ZEALAND  
TOURISM

Number of People

Days in New Zealand

Select Transport Mode

[VIEW MAP](#)



# FINAL MAP



NEW ZEALAND  
TOURISM

PARIS

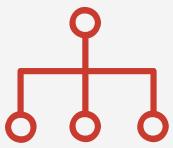
4 E ARR.

Distance km: 0.1

Fuel Cost: \$6.32

Calories Burned: 0

Designed and Developed by ATI Design Studios



# SITE MAP



This is what you can expect from your app. The diagram on the following page is a visual representation of what your app will do for the user. It includes the processes the application will run through and the decisions it needs to make. This is done with the end goal being that the user can achieve the deliverable (or task) they wanted, helping them to gain satisfaction from your app.

## KEY

Green Oval - User Input.

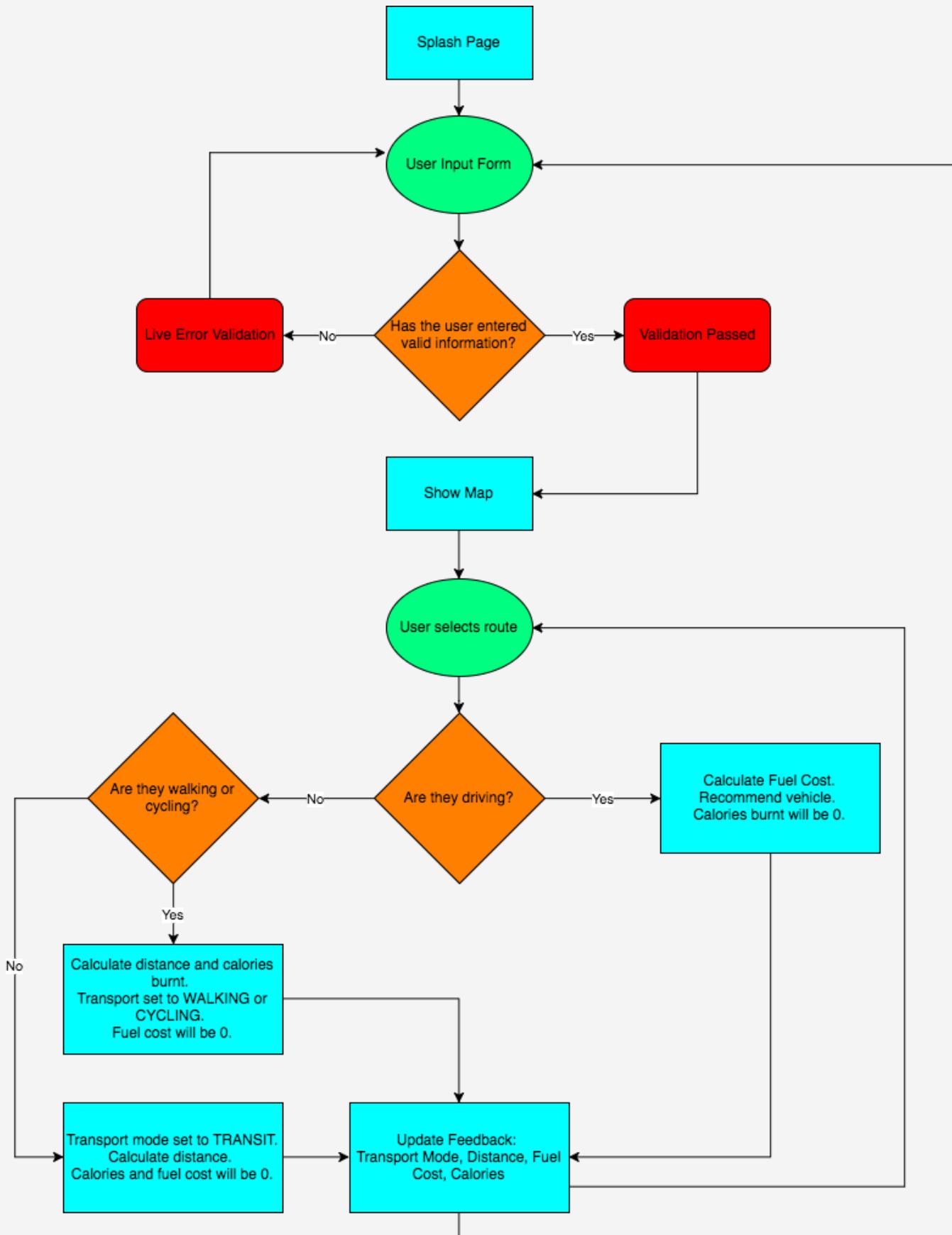
Blue Rectangle - App Process.

Red Rectangle - User Input Validation.

Orange Triangle - App Decisions.



# SITE MAP



CLIENT  
PROPOSAL ENDS  
HERE



DEVELOPMENT  
DOCUMENTATION  
BEGINS BELOW

**ATI DESIGN STUDIO**

Massey Isa'ako  
lasiisaako@gmail.com  
021 253 3235



# TRAVERSE

DEVELOPMENT DOCUMENTATION

WEB APPLICATION DESIGNED AND  
DEVELOPED BY MASSEY ISAAKO



26 June 2017 - 13 July 2017



# INTRODUCTION

This booklet discusses the following:

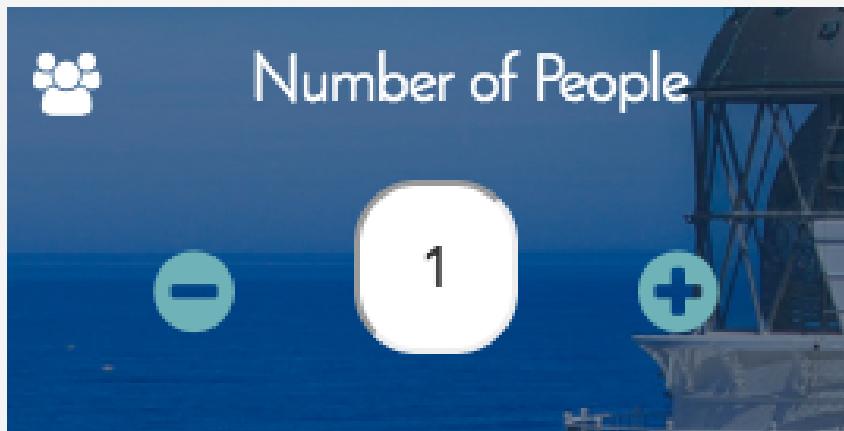
- Javascript Errors
- JS Library and Plugin
- Production Tools Utilised
- Other Tools Used
- User Interface Components
- DOM Manipulation
- Best Practises
- Deliverables
- Timeline
- Final Evaluation



# JAVASCRIPT ERRORS

## ERROR AND POSSIBLE SOLUTION

Values are not incrementing in form input fields named "days" and "people". This is meant to work using the "PLUS" and "MINUS" buttons. I've added separate functions for each of the four buttons, but decided to delete them due to knowing that there is a better solution. I am currently trying to use "for loops" in order to identify the input field, and then create a set of conditions to validate.



## FINAL SOLUTION

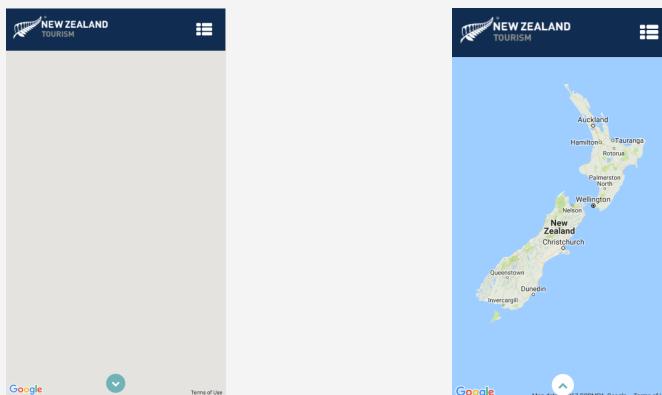
I created two classes for the buttons, one for increase and the other for decrease. Up (JS = increase) was applied to the plus buttons, and the down class (JS = decrease) was applied to the minus buttons. Every time one of these classes is clicked, the computer runs code asking what the parent division is. This identifies the input field and will then add/minus 1 from the value of the input field, while dynamically updating it onscreen.



# JAVASCRIPT ERRORS

## ERROR AND POSSIBLE SOLUTION

I am currently dealing with an issue regarding the Google Map. It will only load once the window is resized. I have tried multiple solutions to this, including resizing it on load using jQuery. After some research I have found that the issue occurs when the map is initialized while the containing division is not visible or has no height/width dimensions. The map container needs to be visible before loading the Google Map itself.



## FINAL SOLUTION

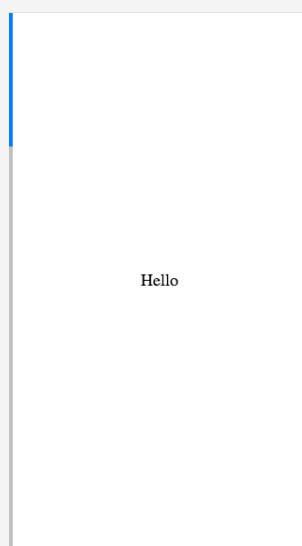
I discovered that I needed to initialize the map once the whole html page was loaded. So I called the initialiseMap function using an if statement in the full screen popup that follows the input form. The map division is visible behind the popup, allowing the map to be initialized. So essentially, the map is only loaded once the user presses the "okay" button in the full screen popup, thus running the initialiseMap function and loading the API.



# JAVASCRIPT ERRORS

## ERROR AND POSSIBLE SOLUTION

I am having problems incorporating the Swiper plugin. The error is that the Swiper never takes the full width/height of the screen. There are multiple console errors I am currently trying to figure out. I assume that I am missing something in my JavaScript file. I have looked into the API documentation, dissected the demo files and inserted it into my JavaScript. But this method is not working.



## FINAL SOLUTION

Unfortunately, I neglected to take a screenshot of my issue, so I have provided only the resolved screenshot. The solution was to include the Swiper CSS file. I also had to remove some lines of code from my HTML in order for the plugin to work. I also needed to reorder the files being called in my HTML, so my coding could override the default Swiper plugin files, which includes the external CSS online.



# LIBRARY & PLUGIN



## JS LIBRARY

I used a jQuery throughout the development of the web application. jQuery allowed me to work on transitions between the different stages of the web application (fade, slide etc). while allowing me to focus on the raw JavaScript to run essential functions (like the initialisation of Google Maps API).

I also set the jQuery to only run once the rest of the web application is loaded, using the document.ready line of code.

## PLUGIN

The plugin I have used in the development of this web application is the Swiper plugin. This feature was added after doing further research and was incorporated into the app as a necessary UI component to introduce the web app to users.

Multiple Google applications use touch slideshows to introduce users to their products. This is an innovative way to introduce services, so I decided to add this plugin as an effective UI component.

I did not add any other plugins due to the increased load times, especially since the web application will be accessed primarily on mobile devices and tablets.



# PRODUCTION TOOLS

## GITHUB

I learned to use this production tool recently and have really enjoyed using it throughout the final stages of development. I have used this to test my website live, and see how users interact with the web application in mobile form. I have committed many changes in development in order to keep track of the different versions of the application. Some changes I made include the compression of JavaScript, optimizing images, color modifications and more.

## TRELLO

This is an online planning tool that has helped me to split the deliverables into manageable chunks, in order to achieve the clients business requirement outlined in the brief. I set realistic timelines and ended up finishing each task well before my planned due date. Using this new tool helped me to identify which tasks needed my full attention, and which ones I could leave to complete last.

## GHANTT CHART

I used this tool more than Trello to split all my tasks up and see the progression of tasks being completed as time goes by. This is my desired tool because it allowed me to see the progression of time



# PRODUCTION TOOLS

throughout the entire development or coding stage.

## KOALA

A SASS converter and CSS compiler, useful for compressing the CSS to decrease load times. It makes the production/development side of things faster.

## TERMINAL

I prefer to develop in Google Chrome, but since I implemented AJAX/JSON into the website itself, Chrome doesn't run the server side languages properly. Instead of switching to Firefox, I managed to learn a line of python code that allows me to run a locally hosted site off the computer.

## JSHINT

A useful JavaScript linting or validation tool that helped to identify errors in my JavaScript that do not appear in the console. Most JavaScript coding errors were regarding missing and unnecessary semi-colons, unused and undeclared variables. All these issues were resolved quickly and easily, making my code a lot cleaner and closer to the standard set by the design industry.



# OTHER TOOLS

## ADOBE PHOTOSHOP CC 2017

I altered the existing Tourism New Zealand (TNZ) logo, removed the words and used the silver fern with a black background for the logo seen in the browser tab. This is done to remain consistent with the existing TNZ website tab logo.

I created a 2.5D parallax video to add as the background in the splash page. It was done through cutting two layers from the image, setting them to smart object, creating a timeline and then repositioning/resizing the images in a way that makes the video look three dimensional. The video was then exported into YouTube 1080p for optimised web compatibility.

## VIDEO.ONLINE-CONVERT.COM

This was used to convert the parallax video into a webm file from MPEG and MP4, to ensure compatibility with most internet browsers.

## ADOBE PREMIERE PRO CC 2017

The final parallax video had an irritating blackout every time it looped over. So I used this tool to cut the final two frames out, thus getting rid of the black flash. I then exported this into an MPEG file, then converted it back to MP4 using



# OTHER TOOLS

online-convert. I converted the MP4 into a webm file for browser compatibility. I also compressed the video, which has less impact on loading time.

**THE W3C MARKUP VALIDATION SERVICE**  
I have used this in regular intervals in the coding stage to ensure that the quality of the coding is assured. The HTML has returned with small errors that were quickly and easily fixed.

**THE W3C CSS VALIDATION SERVICE**  
I use this regularly to validate the CSS code, making sure that it has no errors. No errors have been found throughout development.

**JSCOMPRESS.COM**  
After validating the JavaScript, I used this tool to minify the JavaScript code, in order to decrease the mobile load times.

**FONT AWESOME ICONS**  
Used effectively in the UI, navigation is user friendly and information displayed is more interesting. It also takes less screen space and reduces on screen clutter.

**CANVA**  
I used this to present the client proposal document and this development documentation. This tool made it easier



# OTHER TOOLS

to style documents and allowed me access anywhere that has an internet connection.

## SMALL SEO TOOLS - PAGE SIZE CHECKER

I used this online tool to check the total size of my website. This will help me to achieve the best practise presented in the Yoobee Guidelines, saying that mobile applications should be less than 50kb.



# USER INTERFACE



I believe that there are many UI components used in this web application, that benefit and contribute to the deliverables identified in the proposal. The following three groups are a generalised representation of the many user interface components used in the app, as identified by usability.gov.

## INPUT CONTROLS

In the input form, I have used only four components. I used number input fields for the "Number of Days" and "Number of People." Together with this, I have manipulated these input fields using a plus and minus button. This reduces the need for the user to click on the input field and use the default keyboard they have on their device. Instead, they can use this to increase and decrease values within the input fields. This is also validated, placing a max/min on the input fields. I also included the submit button, which is named "View Map". This initialises calculations once clicked, i have also included the use of a select menu for the form of transport.

## NAVIGATIONAL COMPONENTS

I have used icons and text in order to influence the navigation of the application. This was done through the



# USER INTERFACE



effective use of intuitive icons. Throughout user testing, I identified some issues with existing icons I was using. So I began searching through the Font Awesome Icon library in order to find suitable icons for navigation. The end result being that users will be intuitively using the navigation system of icons and text, resulting in a well developed and researched user interface component.

## INFORMATIONAL COMPONENTS

An informational component used in this web application is the info slider located beneath the Google Map API. This is essentially a message box, which is a UI component being dynamically updated according to what the user selects. This UI component is an integral part of the application, because this is where the user can achieve the majority of the tasks they set out to accomplish.



# BEST PRACTISES



## CODE FORMATTING

I have tried very hard to prevent the repetition of code. I did this through manipulating the DOM efficiently using functions that can be recalled throughout the use of the app. Everything loops in a way that allows the user to view the information in a dynamic online environment. Also, the variables in my JS coding are well named and can be easily identified in regards to their roles in the overall scheme of the code. I have used camelCase naming consistently.

Additionally, I have consistently nested and indented code into readable blocks. Commenting is consistent through all code, describing the different functions of code in depth.

## BROWSERS/FUNCTIONALITY

Through testing on a live server, I can confidently say that the app works on Internet Explorer, Firefox, Safari and Chrome. I have compressed all jpg images to decrease file size while also maintaining the quality. I have also compiled all the CSS into one file using SASS and Koala. All JS and CSS code has been minified to reduce file sizes and decrease load times. Doing this has removed one second from loading after testing, which is a significant improvement for the web application.



# BEST PRACTISES



## HTML5/CSS3

This website has been tested on multiple Android devices, so I can confidently say that it works fine on Android Mobile and Tablet Devices. The CSS uses the default reset code to get rid of unnecessary margins and padding set in the browsers. I have also made use of box-sizing, just to make everything sit well within the screen and their respective parent divs. I have also validated my code, resulting in absolutely no errors in CSS and HTML coding.

## JQUERY

I have imported this library using a Google Hosted CDN, which reduces the file size of the entire website. I have also included the use of JSON and AJAX, resulting in no console errors online.

## MOBILE

I have not downloaded any unnecessary plugin codes, and have only used CDN's in order to access my jQuery and the Swiper Plugin. All links presented are made as large as possible relative to device screen size. This makes it easier to select buttons on the screen, making the users experience easier and increasing the likelihood they complete their tasks. The live website size is only 7.46kb, well below the 50kb cap in the Yoobee



# BEST PRACTISES



Guidelines. The CSS and JavaScript file sizes are also well below the 25kb limit in the Best Practises, both of them are less than 10k. The meta viewpoint tag is also used to prevent zooming into the website. The first "page" or stage the user sees is large and bold, with a clear button to click in order to progress through to the next stage. It is very simple to navigate, and users can easily find their way throughout the app.

## ACCESSIBILITY

Based on the basic standards presented in the Best Practises document, I have provided every input field with an easy to understand label. Images that were directly referred to in the HTML were given alt attributes for screen readers, thus increasing the accessibility of the web application.

## THIRD PARTY PLUGINS

The Swiper plugin I used was styled in a way that fit in with the overall aesthetic design of the application. This made it easier to incorporate into the app. I also only used a CDN, thus reducing the general size of the web application.

## UI GRADIENTS

An online tool that provides preset gradients, which were used in Swiper.



# BEST PRACTISES



## USER TESTING

I gave users five tasks to complete, testing took place on the computer. I recorded their responses and made changes according to the feedback. I also designed the website around the use cases I created in the proposal. It allowed me to see which deliverables to finish first and helped me to design the website in a way that helps the user to accomplish their tasks or "deliverables".

The tasks that were set are listed below:

- 1) Enter App
- 2) Enter Info
- 3) View Map
- 4) See the distance you need to travel
- 5) Go back to input form

Feedback:

- "Change the icon to view map."
- "Text change to regular."
- "Bump text up."
- "Back to input looks like directions."

This feedback was taken on board and helped me to alter the existing site. It also guided the rest of the development, with constant user testing, I believe that this website has benefited aesthetically and functionally.



# DELIVERABLES



As stated within the client proposal document, I set out to achieve several deliverables. They were:

- a) View Route
- b) View Distance
- c) Travel Mode
- d) Cost of Travel
- e) Potential Calories Burned

I am very happy to say that the above deliverables have been met, allowing me to fulfil the use case scenarios I presented to the client under the pre-development documentation.

The user has the ability select and view their travel route, they can also view the distance they need to travel. Using travel mode, they can select whether they will Walk, Drive, Cycle or use Public Transport to reach their destination. If they choose walking or cycling, the user also has the ability to view the amount of calories they can burn.



# TIMELINE

In terms of meeting the deadlines I set in the client proposal, I can honestly say that I accomplished all set tasks well before the due date, allowing me to focus even more on the users experience of the product.

I believe that using multiple tools like GitHub, Trello and especially a personalised Ghantt Chart really helped me to manage my time and workload.

The evidence for this is presented within my Ghantt Chart, showing the progression of tasks as they were completed. Deliverables were met and implemented by 7th of July, allowing me to make small adjustments in the last week of development regarding UI as well as validating the HTML/CSS/JS code.

Here is a link to Trello:  
<https://trello.com/b/r4iPLrkq/module-2-foundation-coding>

Here is a link to GitHub:  
<https://github.com/Masseylsaako/Tourism-App/commits/master>



# FINAL EVALUATION

## AESTHETIC EVALUATION

I believe that this product fulfils the users needs very well in terms of aesthetic design. It functions exceptionally and delivers in every aspect a user could expect from it.

The layout is very clean and easy to follow. I attempted to make this web application as user friendly as possible. This was done through following the standard design of applications, while also maintaining the standard branding of Tourism New Zealand.

Through font and colour research, I have selected fonts that are readable, legible and display well onscreen. They do not have a great effect on the loading time of the website, which is essential since the users will access this application on their mobile devices and tablets. The colours used also compliment each other, reducing the feel of a grayscale design that is common in the clients existing website.

It provides unique interactions to the user, through the constant fading in and out of stages, everything in the process is streamlined so the user can easily finish what they came to do. I kept at the front of my mind that I am designing for the



# FINAL EVALUATION

end user. I believe that this mindset has benefitted the design of the product immensely, which is evident in the final version of the web application.

## PROCESS EVALUATION

The process of completing each deliverable was very satisfying and knowing that I have accomplished something that will be useful to customers was very rewarding. The process for the user to run through in order to reach their deliverable is very straightforward. Only one simple form needs to be filled out. They can select their route which will help to dynamically display the needed information/deliverables. This is very simple because users on smaller devices would prefer to do less work to accomplish a task, which is a mantra I have followed and implemented into the process. The end result being that the user does less work, for the same result they would get from Citymapper and Uber.

## FULFILLING BUSINESS REQUIREMENTS

The business requirements that were set came in the form of the deliverables that the user could aim for, should they use the website. I believe that in fulfilling the deliverables, I have also fulfilled the



# FINAL EVALUATION

business requirements set by the client.

## FINAL STATEMENT

I strongly believe that this website is a powerful representation of what the client desires from the product. It helps users to find where they want to go, has a minimal amount of english for non-english speakers but allows foreigners to use the application without the need to be fluent. This functions well as a web application aesthetically and functionally and based on the above evaluation as well as the evidence provided through the end result, I am very happy with the final product.

## FINAL WEBSITE LINK: YOOBEE

[https://massey.isaako.yoobee.net.nz/Module\\_2/App/index.html](https://massey.isaako.yoobee.net.nz/Module_2/App/index.html)

## FINAL WEBSITE LINK: GITHUB

<https://masseyisaako.github.io/Tourism-App/>