

Kiuviana ADVENTURE

TRANSPORT BOOKING

**Internal
Documentation.**

TOURISM NEW ZEALAND - TRANSPORTATION

Gareth Barnett

Demo info.

1920 x 969px

The demo has been optimised for this browser size.

Due to the complexity of the website and time constraints this demo has been designed for a 1920 x 969 pixel browser window, and has been designed for a Google Chrome browser. The next design sprint of the project would be making it responsive including a mobile version.

Demo Link

<http://gareth.barnett.yoobee.net.nz/kiwiana/>

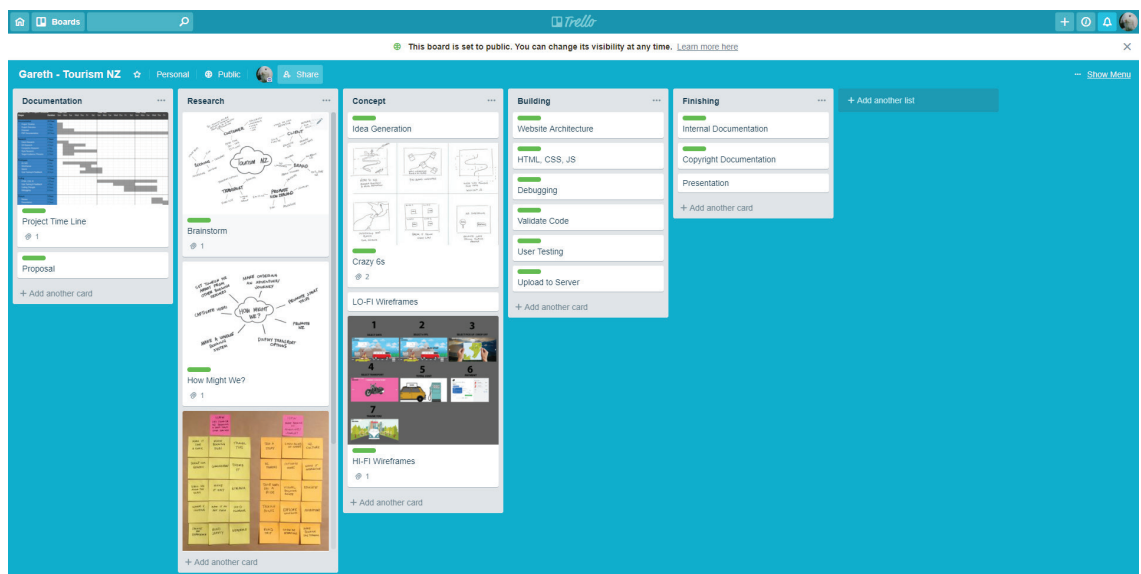
Video Demo Link

<https://www.useloom.com/share/99bc6e213f7249caaab77d0e2bcf81f1>

Project Planning.

Tourism NZ - Project Timeline		Week One							Week Two							Week Three						
Stages	Duration	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	
Documentation	20 Days																					
Project Timeline	1 Day																					
Project Overview	1 Days																					
Proposal	3 Days																					
PDF Documentation	20 Days																					
Research	7 Days																					
Client Research	2 Days																					
UX Research	4 Days																					
Competitor Research	2 Day																					
Style Research	6 Days																					
Target Audience / Persona	2 Days																					
Prototypes	7 Days																					
IA / IxD	6 Day																					
Wireframes	2 Days																					
Sketch	3 Days																					
User Testing & Feedback	4 Days																					
Coding	11 Days																					
HTML, CSS, JS	11Days																					
User Testing & Feedback	4 Days																					
Coding Changes	6 Days																					
Debugging	6 Days																					
Closure	3 Days																					
Review	2 Days																					
Presentation	3 Days																					
Hand-in	1 Day																					

Project Timeline



Trello Project Management Tool

Client Overview.

Tourism New Zealand is a Crown Entity funded by the New Zealand Government and established under the New Zealand Tourism Board Act 1991. It is led by a board of directors appointed by the Minister of Tourism and have a team of around 150 staff in 13 offices around the world. From humble beginnings, they are now the oldest tourism marketing department in the world.

Responsible for marketing New Zealand to the world as a tourist destination, the major tool they use to do this is the "100% Pure New Zealand" marketing campaign, a campaign that has evolved over the past two decades to make New Zealand one of the world's most well-respected tourism brands.

International tourism has grown to become New Zealand's largest earner of foreign exchange, pumping around NZD14.5 billion annually into the nation's economy. Over 3.7 million visitors arrive in the country every year.

Tourism New Zealand is responsible for ensuring New Zealand remains attractive internationally as a visitor destination.

Through the 100% Pure New Zealand campaign they take New Zealand's story to consumers, the travel trade and the global media, while working with the industry here in New Zealand to ensure we deliver on the promises made through the campaign.

Their marketing activity is carefully focused on a number of key markets around the world and a select group of consumers within those specific markets, this is so we get the maximum yield for the tourism industry.

Tourism is New Zealand's largest export industry in terms of foreign exchange earnings, it directly employs 7.5 per cent of the New Zealand workforce.

Key Takeaways.

- Responsible for ensuring New Zealand remains attractive internationally as a visitor destination
- The major tool they use to do this is the 100% Pure New Zealand marketing campaign
- Responsible for marketing New Zealand to the world as a tourist destination

Project Overview.

Tourism New Zealand works with the tourism industry to positively promote New Zealand internationally. They have a new campaign that is aimed at visitors staying for short periods, booking their own transport.

Your task is to create a single page web application that allows users to input information, validate the information and provide meaningful feedback when validation has failed or passed. Display transport options to the user based on the information entered. Calculate and display transport costs to the user.

Tourism New Zealand want the web app to have its own distinctive look and feel (whilst still remaining cohesive with the Tourism New Zealand brand).

Task 1.

The first part of the user experience involves visitors to a specially designed site inputting information and being shown transport options based on the number of people in their party and the length of time they intend to be traveling.

Task 2.

The second part involves calculating the transport costs including fuel consumption based on the type of vehicle chosen and the distance to travel.

Transport.

Motorbike 1 person – \$109/day, min 1 day, max 5 days, 3.7l/100km

Small car 1-2 people – \$129/day - min 1 day, max 10 days, 8.5l/100km

Large car 1-5 people – \$144/day - min 3 days, max 10 days, 9.7l/100km

Motor home 2-6 people – \$200/day - min 2 days, max 15 days, 17l/100k

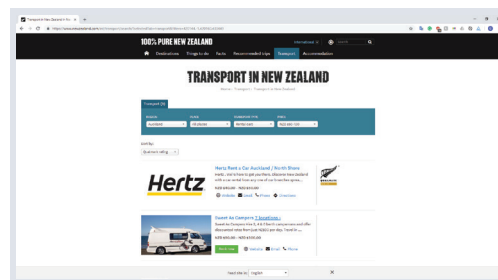
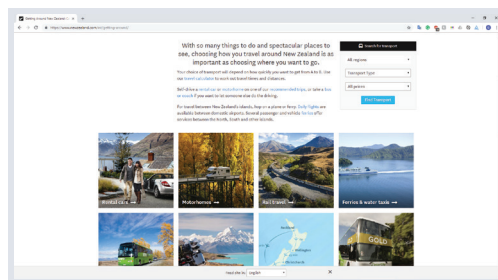
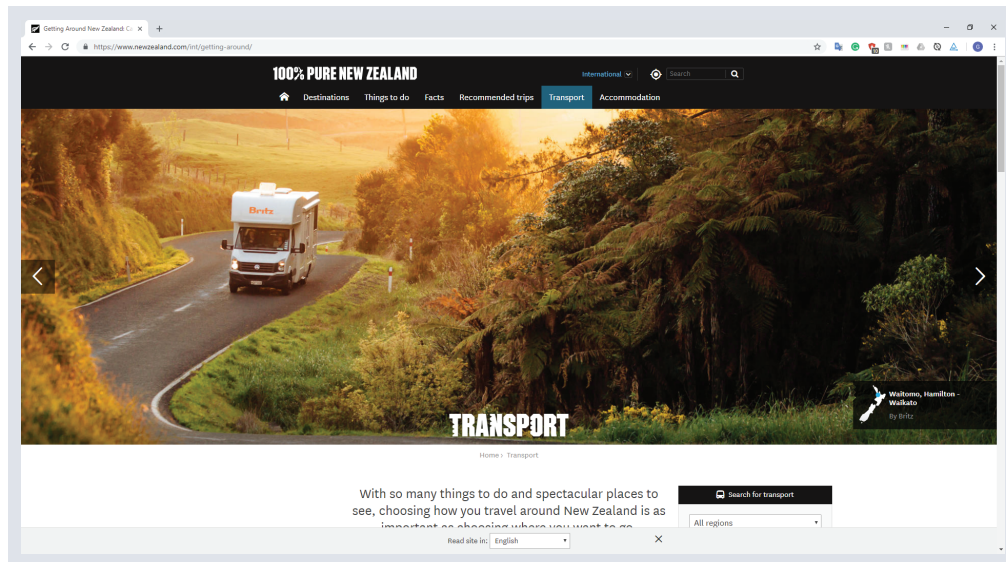
Project Constraints.

The following constraints need to be observed:

- Deliver a completed project within 3 weeks
- Single page web application
- Create logic to display transport options to the user based on the information entered
- Calculate and display transport costs to the user
- Website to have its own distinctive look and feel

Tourism NZ

Swot.



Strengths.

- Language options
- Selling NZ with images
- Travel calculator
- Responsive
- Shows a variety of options
- Showing deals

Opportunities.

- Make the website fun
- Sell New Zealand to the user
- Make it purely for transport options
- Make bookings on the Tourism NZ website
- Show safe driving practices while booking

Weakness.

- Cold & generic
- Select options half way down page
- Too many options
- Bad typography
- Safe driving practices shown at bottom of page
- Being redirected to create a booking

Threats.

- Losing users interest
- Picking budget, Go Rentals etc as it's simpler
- Losing users due to being redirected (have to start process again)

Business Needs.

Specifically, the new website needs to fulfill the following business needs:

- Increase revenue
- Website shall promote New Zealand
- Increase customer experience
- Easy to use
- Promote short trips, max 15 days
- Be available in a range of languages
- Have a professional online presence

Target Audience.

Characteristics of regular Tourism in New Zealand

- Mostly adults aged 20 - 45
- Looking to explore new cultures
- looking for adventure and fun
- Busy professionals looking for a break
- Tech savvy individuals
- Singles, couples & groups

Tourism New Zealand are looking to attract

- People who often use the internet
- People who use social media
- People looking to travel to New Zealand
- People who are looking at booking transportation for short trips
- People looking for adventure

Tourism NZ Persona's.



Occupation	Photographer
Income	\$60,000
Location	USA
Technology	Savy

Olivia, 26

"Traveling it leaves you speechless, then turns you into a storyteller"

Travel Motivations.

- Explore different cultures
- Visit unique places
- Buy cool things
- Looking for adventure

Travel Behaviour.

- Never travels alone
- Always looking for a deal
- Likes to do things on the fly
- Photographing significant places

Pain Points.

- Money - Knowing up front costs
- Finding cheap accomodation/transport
- Missing out on things due to bad planning
- Booking transport - Getting confused
- Finding significant locations to visit



Occupation	Travel Bloggers
Income	\$100,000 total
Location	Australia
Technology	Savy

Jax 38, Tayla 34

"Traveling brings power and love back into your life"

Travel Motivations.

- Making an income vlogging their journeys
- Creating awesome content for YouTube
- Getting things paid for
- On the hunt for adventure
- Excitement and fulfilment

Travel Behaviour.

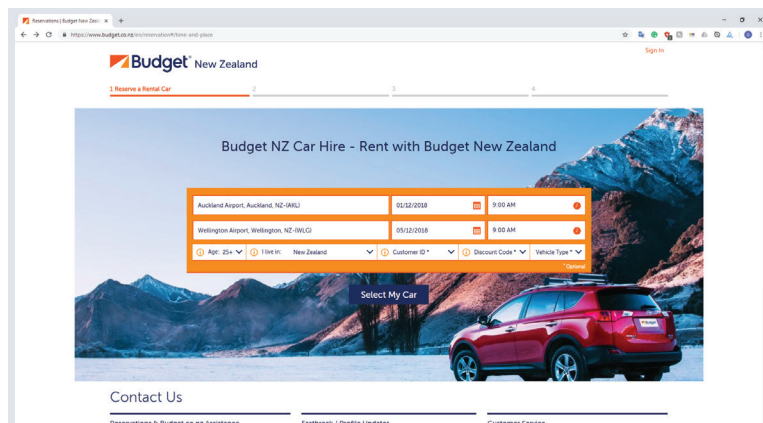
- Spends alot of time on the road
- Like to plan ahead
- Looking for adventure and fun
- Constantly videoing their journey

Pain Points.

- Finding hidden gems
- Finding cheap accomodation/transport
- Sick of boring booking sites
- Finding significant locations to visit

Competitor Swot.

Budget Rental Cars.



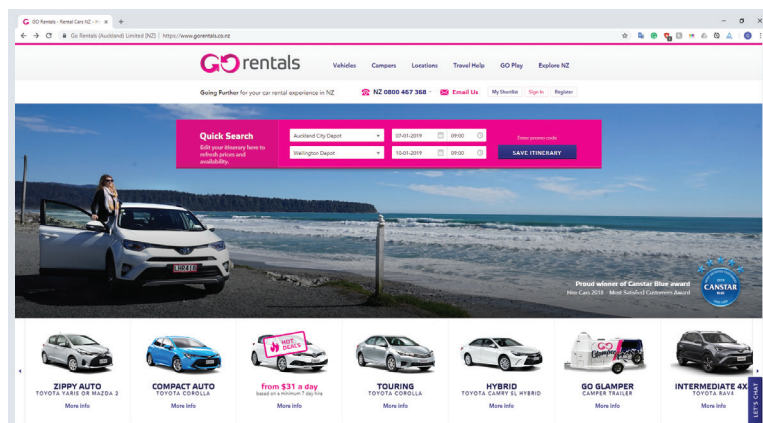
Pros:

- Bar showing ordering process
- Animations
- Infographics used for car features

Cons:

- Very cold
- Generic design
- Non-responsive design
- Confusion about name change

Go Rental Cars



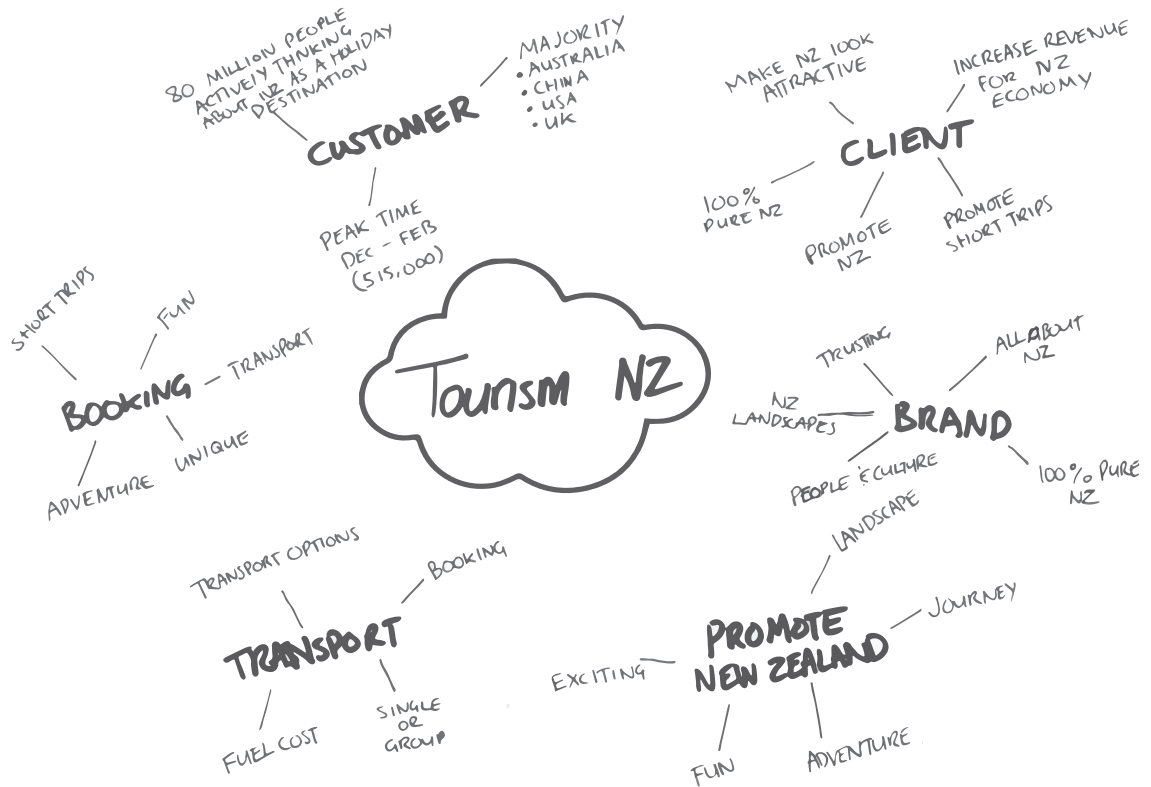
Pros:

- Breaks down steps with its build a quote system.
- Has plenty of extras ie. car seats
- Responsive design

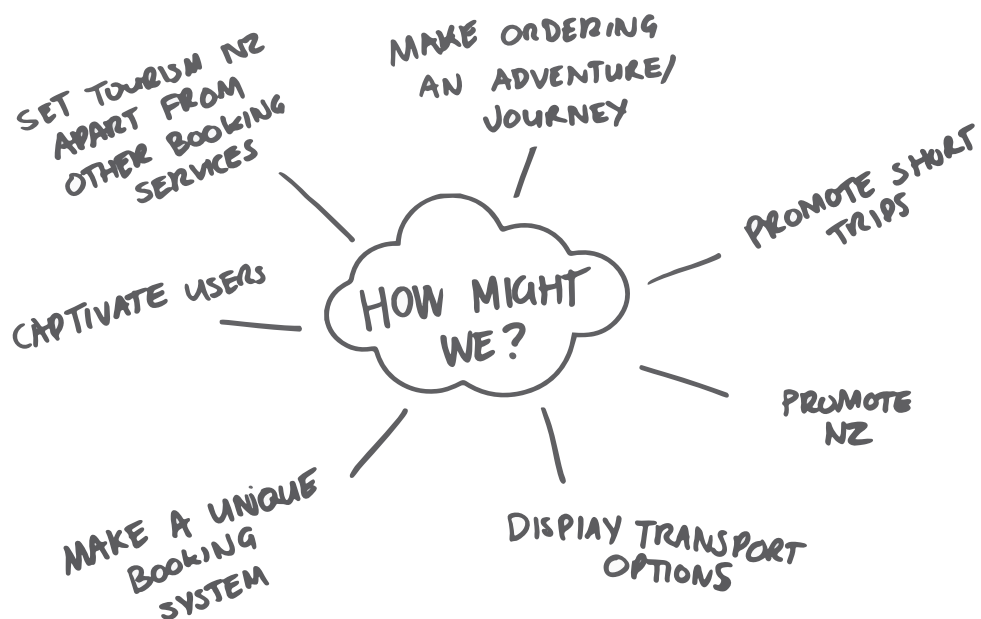
Cons:

- Generic design
- Very cold/boring
- Shows daily charge but not total charge

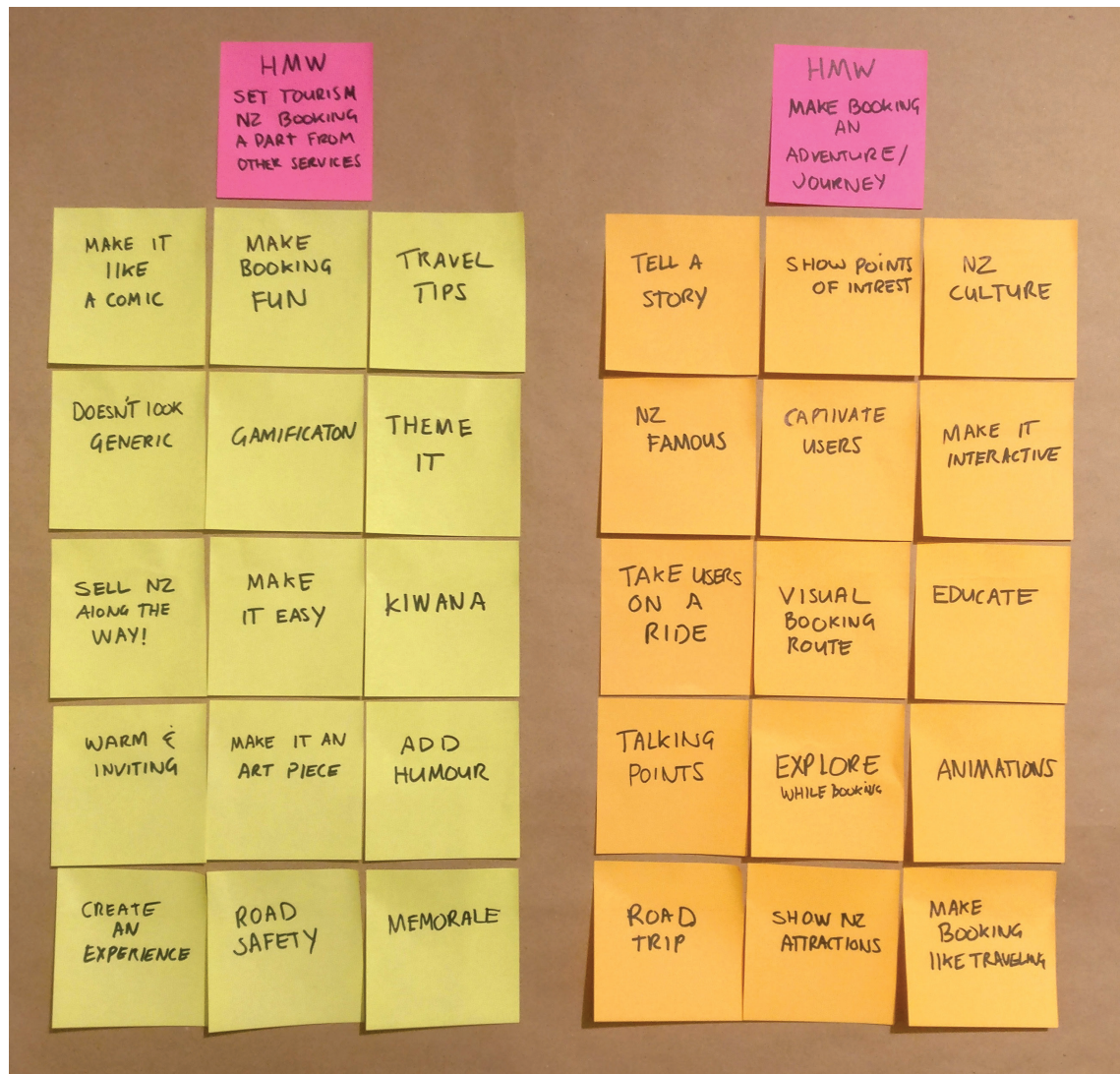
Brain Storming.



How Might We.



HMW Ideas.



HMW Summary.

Set Tourism New Zealand Booking Apart

Create a lasting experience for the user that also promotes New Zealand and "Kiwiana". By making it fun it becomes something users want to do and not feel like its a chore or boring, whilst promoting road safety in the process.

Make Booking an Adventure/ Journey

Make users feel like they are on a journey or part of a road trip. Showing points of interest or famous New Zealand landmarks along the way to promote New Zealand and culture, this will keep users interested and create talking points if people are booking together. Animations will help make the booking process interactive and keep users engaged if done in the right way.

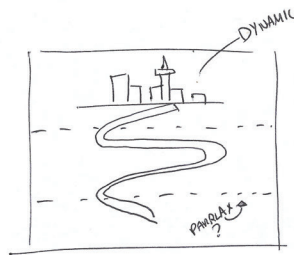
Project Description.

To create a single page website to promote New Zealand Tourism transportation booking service while encouraging tourists to come visit New Zealand. The website should be fun and unique and leave a good lasting impression where users enjoy booking their transport.

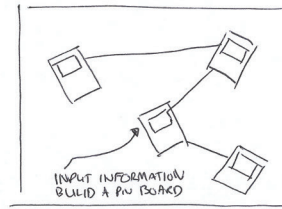
The website should be easy for users to enter their requirements and be shown transportation options based on their entered data.

The website will include a fuel calculator too so users can work out fuel costs based on their selected vehicle and destinations.

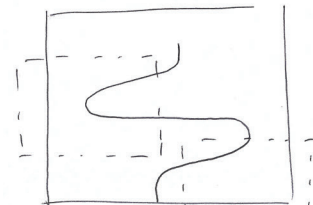
Idea Generation.



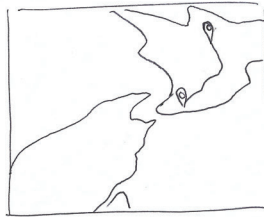
ROAD TO NZ
ANSWER QUESTIONS
TO REVEAL DESTINATION



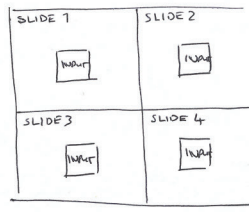
PIN BOARD INTERFACE



WEB SITE FOLLOWS
ROAD PATH
scroll path JS



INTERACTIVE MAP
PLOTTER
TIME, DISTANCE



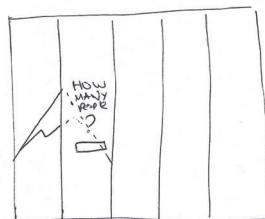
BREAK IT DOWN
HICKS LAW



PROMOTE SAFE
DRIVING DURING
PROCESS



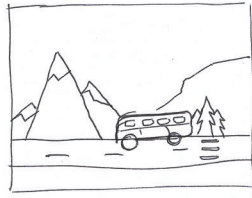
INTERACTIVE SELECTION



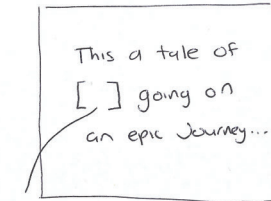
REVEAL IMAGE AS
INFORMATION IS INPUT



COMIC STYLE
INTERFACE

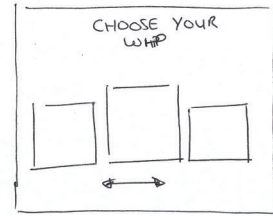


NZ ILLUSTRATION
SCENES

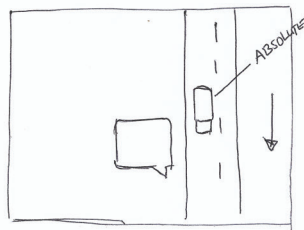


USER INPUT

STORY TELLING
(create a story
with the user)



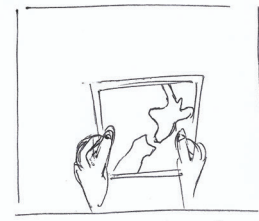
GAME STYLE
SELECTION



SCROLL CAR THROUGH
BOOKING PROCESS



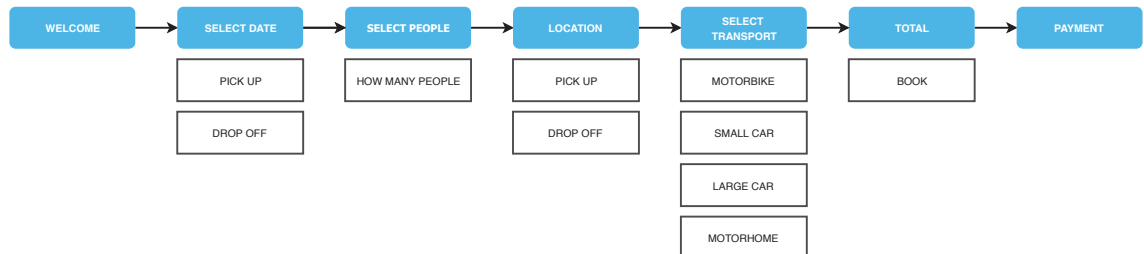
PROMOTE NZ ICONS



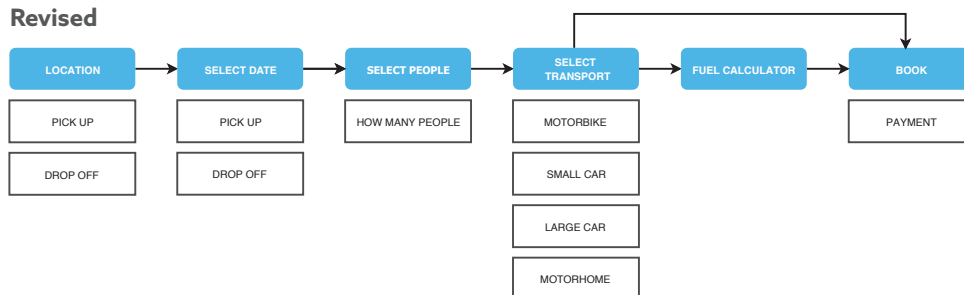
CREATE SCENES
FOR EACH
PART OF THE
BOOKING PROCESS

User Flow.

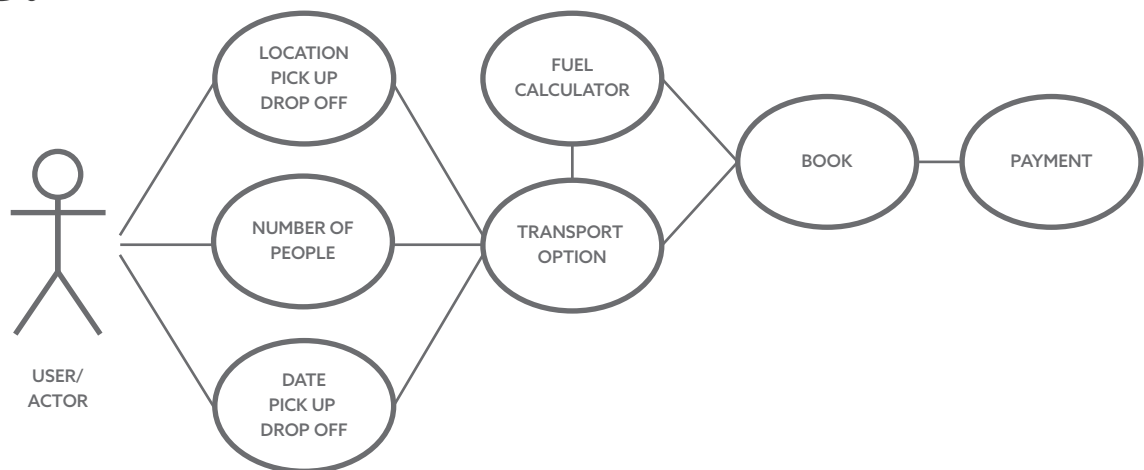
Initial



Revised



Use Case.



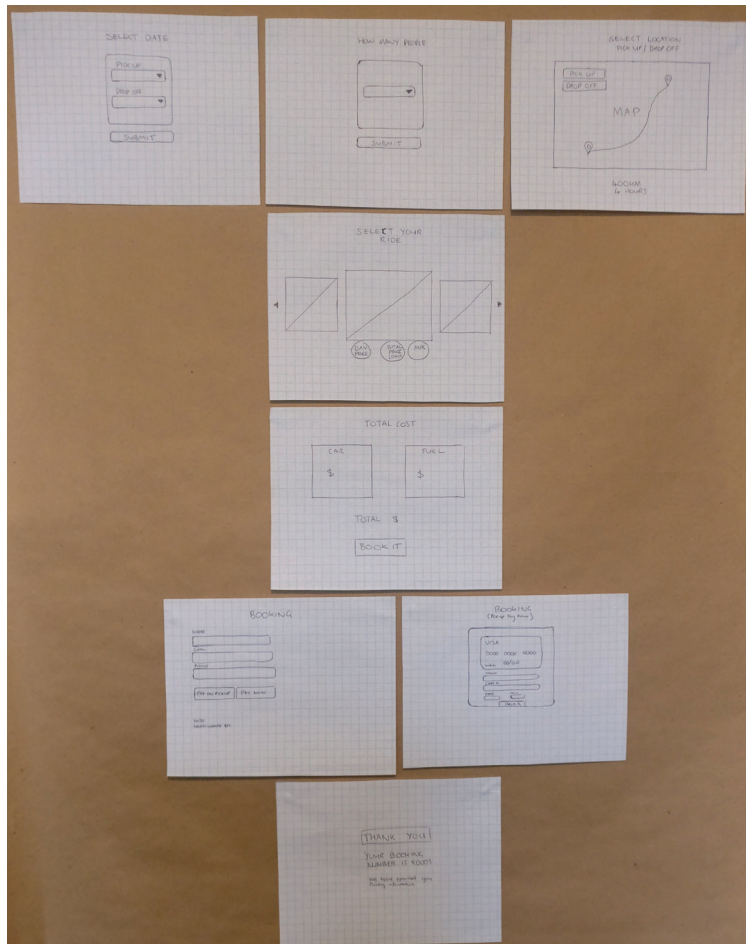
Identified Use Cases

- Users can select pick up and drop off locations
- Users can select pick up and drop off dates
- Users can select how many people required
- Users can select transport options based on logic
- Users can calculate fuel costs based on selected transport and distance
- Users can pay and have the process validated to them

External Use Cases

- Payment systems such as paypal
- linking it to their own system for showing available options based on their stock inventory.

LoFi Wireframes.

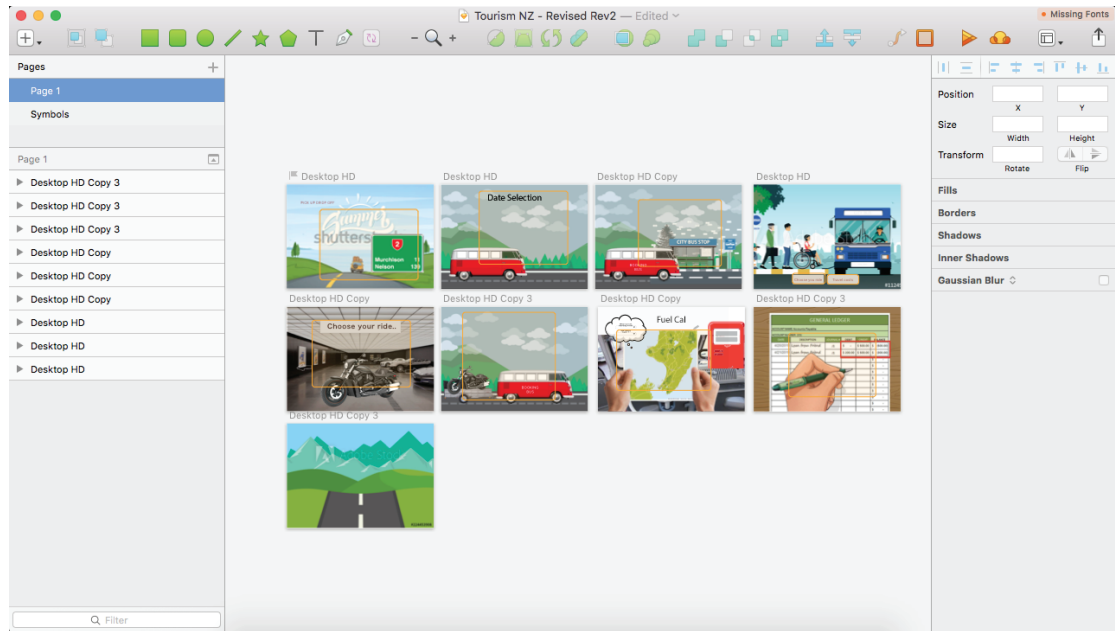


User Testing

Feedback was positive for the process of booking transport, testers had no issues booking a vehicle, but I did receive feedback about the fuel costs being based on pick up and drop off locations and being included in the price.

- Most tourists would most likely not go from point A to point B, they would explore which would give an incorrect fuel cost.
- The other issue raised was, what if they picked up the car in Auckland and drop it back in Auckland, it would show 0km for the traveling distance.
- Rental car companies don't normally charge for fuel as there is no true way of measuring what they are going to use. Standard practice is to refuel the car on drop off back to the level it was when collected.

HiFi Wireframes.



Summary

I used Sketch to prototype the website to get an idea of the look and feel I was after. Due to most of the art work needing to be created, I made each slide as a visual representation of what I was after rather than going into full detail and creating a super hifi version which would be to use in a program more suited such as illustrator or photoshop. It allowed me to add hotspots to get testers to click through the process and give feedback on their experience.

LoFi Revisions

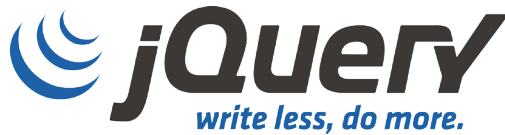
Splitting the drop off and pick up distance from the cost of the rental. Instead creating a fuel calculator where if users want to use it to work out how much certain distances are going to cost based on their selected vehicle they can but also have the option to skip this part and go straight to booking.

Thinking more about how to make the process a journey/adventure and making it fun for the user by storyboarding it out and thinking of ways I can use animation to make the experience interactive.

User Feedback

Feedback came back great all feedback lead to saying it's a simple process and easy to use. Users had no issue booking transportation options and were pleased with the revised fuel situation. I had to explain the intent behind the animations because of not wanting to spend time in sketch creating all these effects such as the bus pulling up to the bus stop to make it feel like they are on a journey and testers were intrigued and excited about the concept of it.

JavaScript Library.



I have used the JQuery Javascript library, and have used extensively through out my project.

3rd Party Plugins.

Fullpage JS

<http://alvarotrigo.com/fullPage/>
<https://github.com/alvarotrigo/fullPage.js>
 Open Source - GNU General Public License
 Copyright (c) 2016 Alvaro Trigo

Google Maps API

<https://cloud.google.com/maps-platform/>

Swiper JS

<https://idangero.us/swiper/>
<https://github.com/nolimits4web/swiper>
 The MIT License (MIT)
 Copyright (c) 2014 Vladimir Kharlampidi

Bulls Eye JS

<https://github.com/waly-k/jqBullseye>
 GNU General Public License

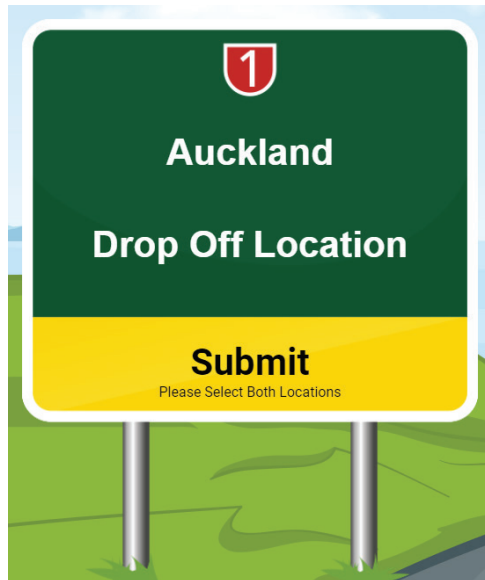
Date Dropper JS

<https://felicegattuso.com/projects/datedropper/>
<https://github.com/felicegattuso/datedropper>
 The MIT License (MIT)
 Copyright (c) 2015 felicegattuso

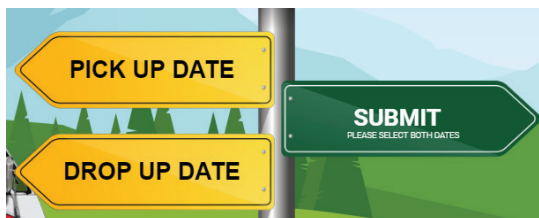
Animate.css

<https://daneden.github.io/animate.css/>
<https://github.com/daneden/animate.css>
 MIT License - Free
 Copyright (c) 2016 Daniel Eden

Process Validation.



Pick up & Drop off locations both need to be selected to move on.



When both dates are not selected



Minimum of 1 day is required



Limited to a maximum of 15 days



Cannot drop off on a past date

Process Validation.



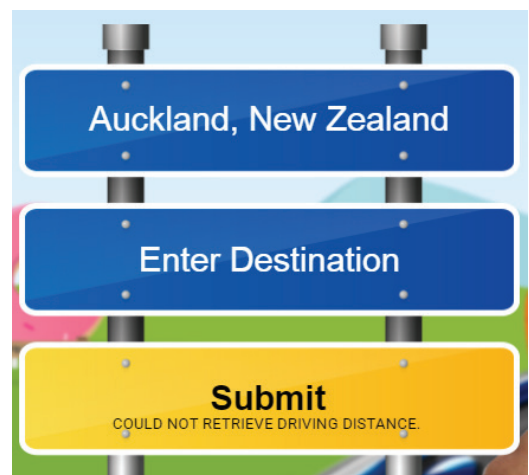
If for some reason both dates and people are not selected



When there are no available options for parameters that have been entered.
i.e 1 day & 4 people



When user has not selected the amount of people required.

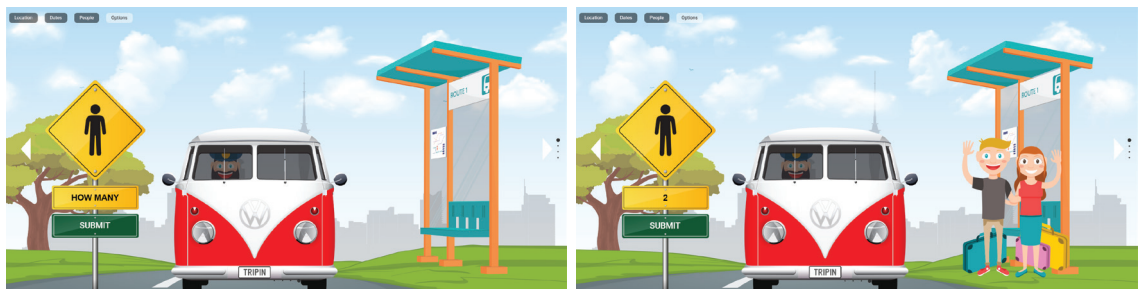


When no destinations are entered or only one has been entered.

The DOM & UI.

DOM Manipulation & UI Components

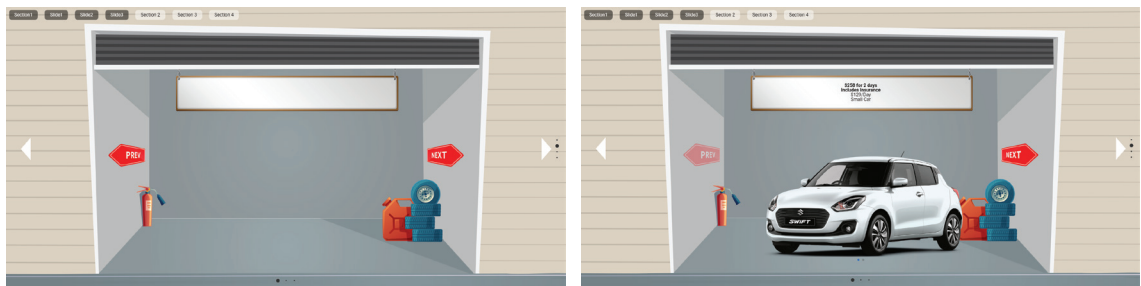
This project has used a lot of Javascript to manipulate the DOM. Here are a few examples of how the DOM was manipulated with Javascript and how I implemented functionality with UI components.



People Count

When the user selects how many people, an image by the bus stop appears or changes depending on how many they choose from 1 - 6.

Use Case Met - Selecting number of people



Transport Options

These are dynamically created with Javascript depending on the conditions met by the user's input and pushed into the Swiper slider showing available options to the user.

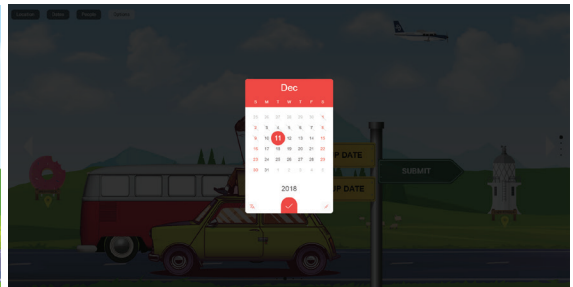
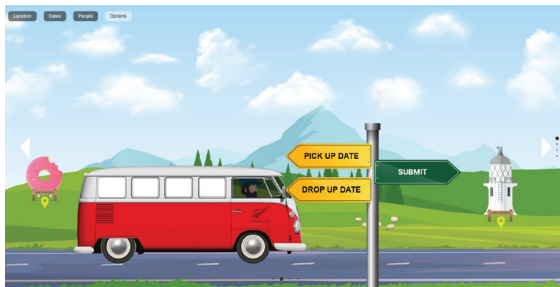
Use Case Met - Display Transport Options



Fuel Calculator

Using the google maps api to calculate the distance in KM and using logic to work out fuel cost based on transport selection. The fuel cost displays on the fuel pump and plots the route on the map.

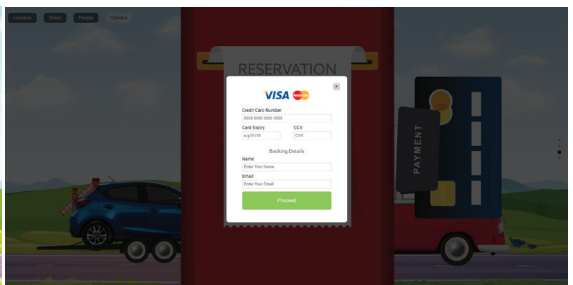
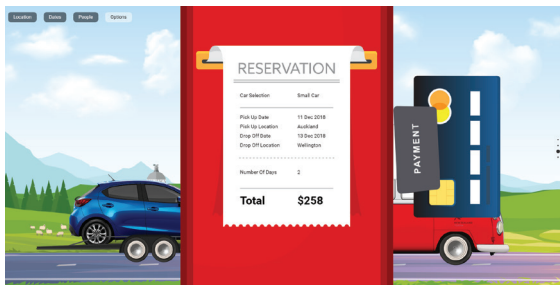
Use Case Met - Display Fuel Cost



Date Selection

To assist users in selecting pickup and drop off dates, Data Dropper JS plugin was implemented which suits this project perfectly in terms of function and interface style.

Use Case Met - Selecting dates



Booking

During the booking process the user's selections are dynamically updated onto the reservation page using javascript to create a booking sheet. When the booking button is pressed a modal is triggered where users enter their details and book.

Use Case Met - Booking

JS Best Practices.

```

625
626
627 <!--jQuery-->
628 <script src="js/jquery.min.js"></script>
629 <!--Bulls eye Plugin-->
630 <script src="js/jquery.bullseye.js"></script>
631 <!--Full Page Plugin-->
632 <script src="js/fullpage.js"></script>
633 <!--Swiper Slider Plugin-->
634 <script src="js/swiper.min.js"></script>
635 <!--Date Dropper Plugin-->
636 <script src="js/datedropper.js"></script>
637 <!--Google Maps Api Plugin-->
638 <script src="https://maps.googleapis.com/maps/api/j
</script>
639 <!--Google Maps Api Script-->
640 <script src="js/map.js"></script>
641 <!--My Script-->
642 <script src="js/javascript.js"></script>
643
644
645 </body>
646 </html>

```

- External scripts used
- Minimise the number of scripts
- Third party scripts acknowledged



```

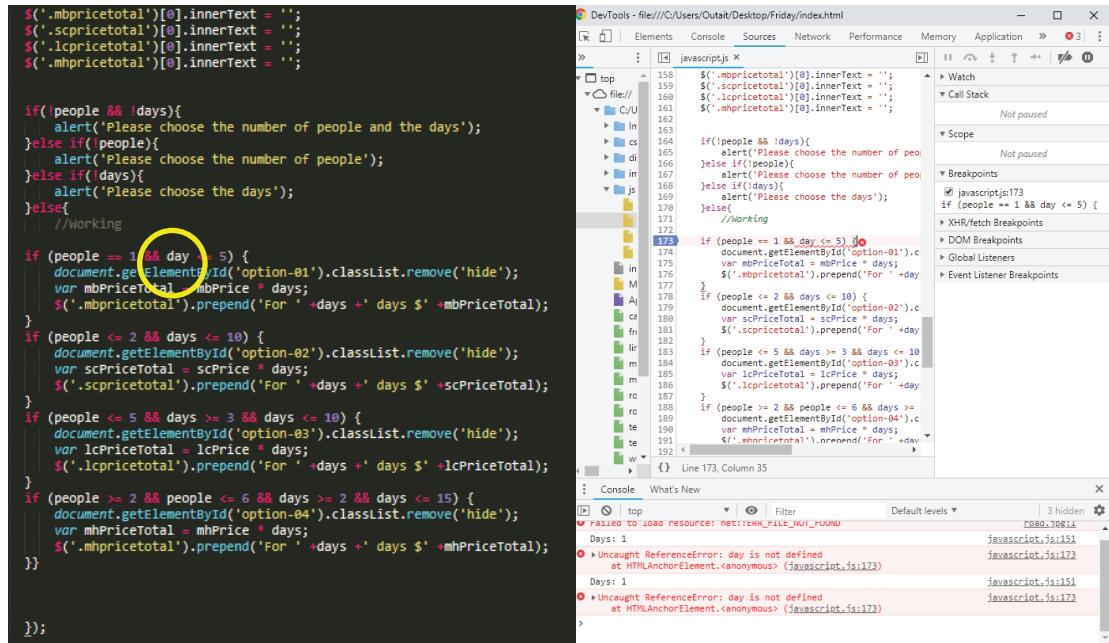
291
292
293 /** Display Transport Options on click */
294 peopleButton.addEventListener('click', function() {
295     people1 = document.getElementById('people').value;
296     $('#sorry').addClass('hide');
297     $('#oops').addClass('hide');
298     $('#oopsboth').addClass('hide');
299
300     /** Empty the slider when clicked */
301     $('#swiper-wrapper').empty();
302
303     document.getElementById('daysTotal')[0].innerHTML = days;
304     $('#daysTotal').text = days;
305
306     var people = parseInt(people1, 10);
307
308     /** Validates */
309     if((people < 1 && days) < 1 && days <= 5) {
310         $('#oopsboth').removeClass('hide');
311         document.location = '#firstPage/3';
312     }else if(people < 1) {
313         $('#peopleOutput').removeClass('hide');
314         $('#peopleOutput').html('Please Select People');
315         document.location = '#firstPage/3';
316     }else if(days < 1) {
317         $('#oops').removeClass('hide');
318         document.location = '#firstPage/3';
319     }else{
320         /** Logic */
321         var flag = true;
322         if (people == 1 && days >= 1 && days <= 5) {
323             var mPriceTotal = mPrice * days;
324             createSlide(0, mPriceTotal);
325             $('#mPriceTotal').prepend('$ ' + mPriceTotal + ' for ' + days + ' days' + '<br>Includes Insurance<br>');
326             $('#peopleOutput').addClass('hide');
327             document.location = '#secondPage';
328             flag = false;
329         }
330
331         if (people == 1 && people <= 2 && days >= 1 && days <= 10) {
332             var scPriceTotal = scPrice * days;
333             createSlide(1, scPriceTotal);
334             $('#scPriceTotal').prepend('$ ' + scPriceTotal + ' for ' + days + ' days' + '<br>Includes Insurance<br>');
335             $('#peopleOutput').addClass('hide');
336             document.location = '#secondPage';
337             flag = false;
338         }
339
340         if (people == 1 && people <= 3 && days >= 3 && days <= 10) {
341             var lcPriceTotal = lcPrice * days;
342             createSlide(2, lcPriceTotal);
343             $('#lcPriceTotal').prepend('$ ' + lcPriceTotal + ' for ' + days + ' days' + '<br>Includes Insurance<br>');
344             $('#peopleOutput').addClass('hide');
345             document.location = '#secondPage';
346             flag = false;
347         }
348
349         if (people == 2 && people <= 6 && days >= 2 && days <= 15) {
350             var mhPriceTotal = mhPrice * days;
351             createSlide(3, mhPriceTotal);
352             $('#mhPriceTotal').prepend('$ ' + mhPriceTotal + ' for ' + days + ' days' + '<br>Includes Insurance<br>');
353             $('#peopleOutput').addClass('hide');
354             document.location = '#secondPage';
355             flag = false;
356         }
357     }
358     if(flag){
359         $('#sorry').removeClass('hide');
360         document.location = '#firstPage/3';
361     }

```

- Consistent naming
- Single quotes used
- Semicolons used
- Low global variables
- Modular pattern
- Declared variables
- Comment code /* */
- JSHint linted

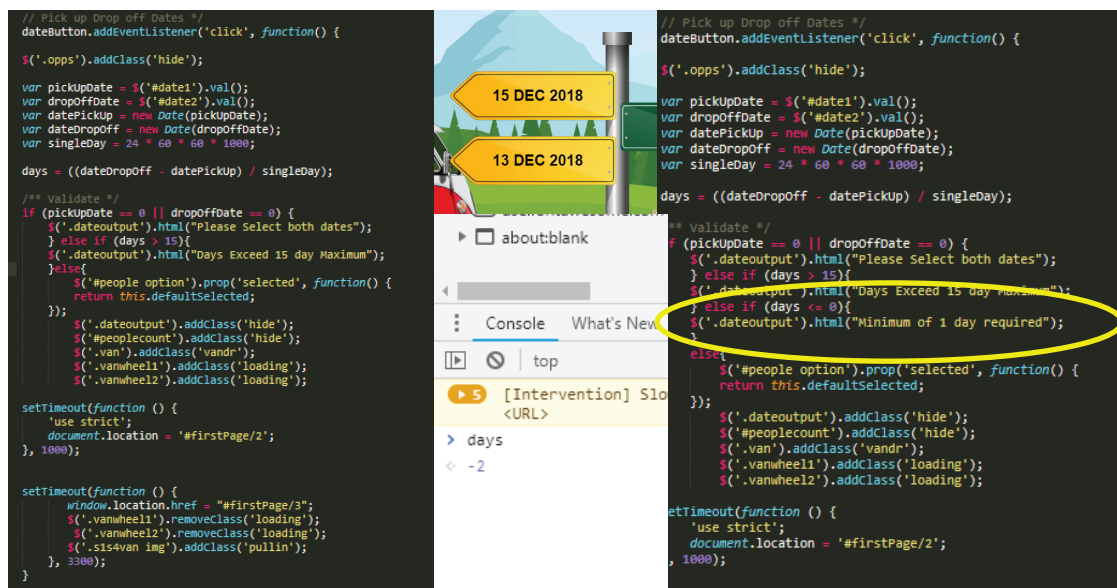


JS Debugging.



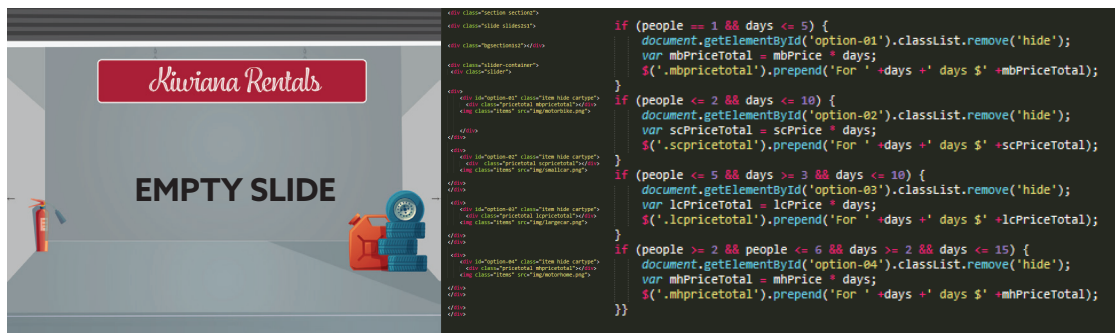
Motorbike option was not displaying - 'days' was misspelled causing an error and the 'if' statement not to validate.

Solution - rename 'day' to 'days'

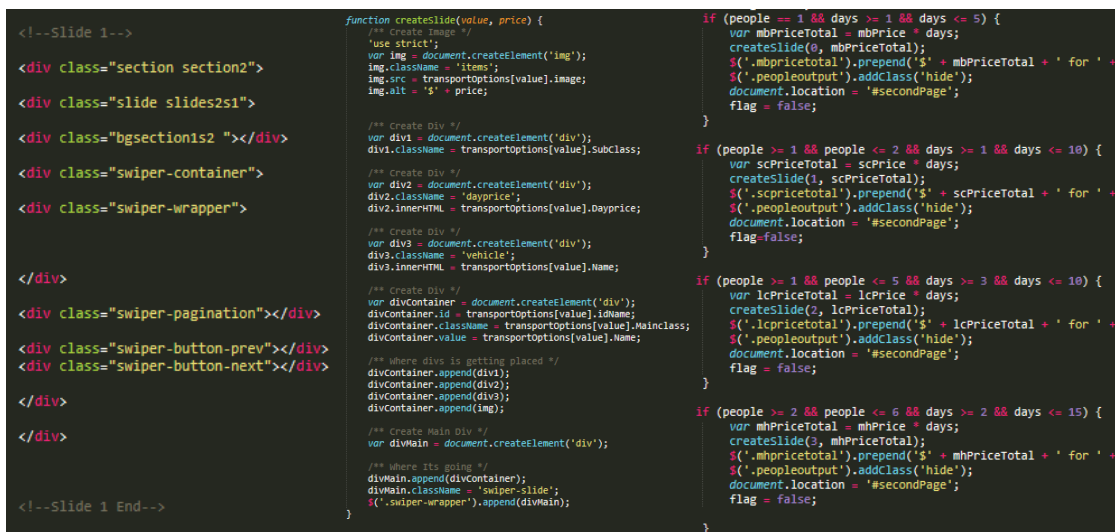


My script was allowing dates to become negative if users entered data around the wrong way, booking a future date with a past date last.

Solution - Create a else if statement that specifiys if its less than or equal to 0 it wont validate.



I had an issue where the slider was displaying empty slides because of the way I had created and was showing them. If the conditions were met for each vehicle it would remove the 'class of hide' from the option to display them but the problem was that the slides that had a 'class of hide' were still there taking up a slide but invisible.

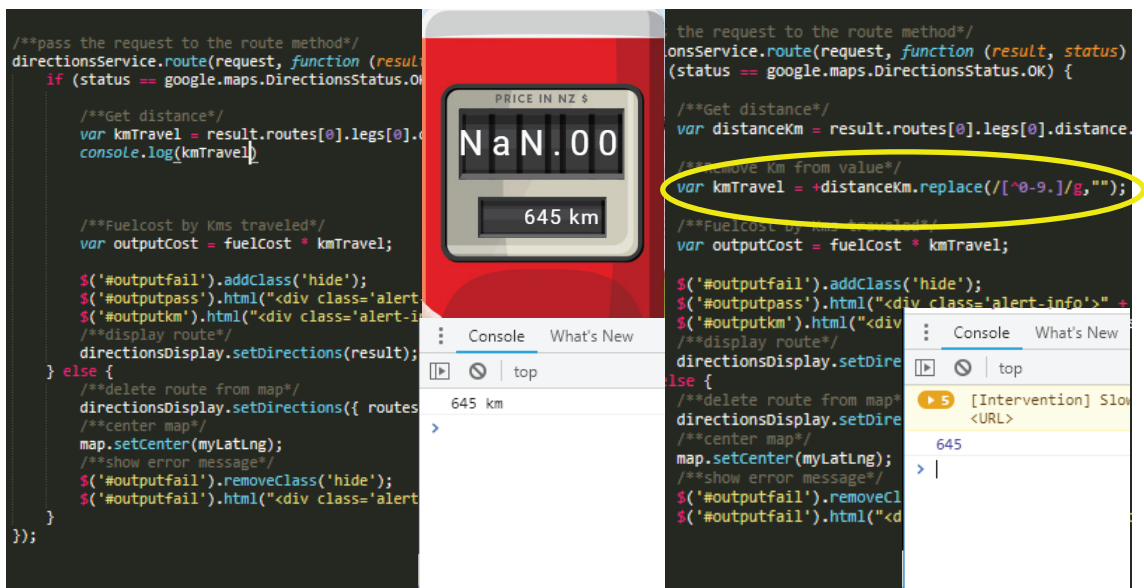


Solution - I decided to rethink the way the slider gets its data. I decided to create the data dynamically with Javascript and push it into the slider if the condition is met so there were no hidden slides. The next issue was the plugin slick slider, I managed to get the slides into it and displaying correctly but when the function was rerun it would not empty the slides. After 2 days of trying to solve this issue I abandoned the Slick Slider and tried Swiper which was much easier to solve as per the next page.



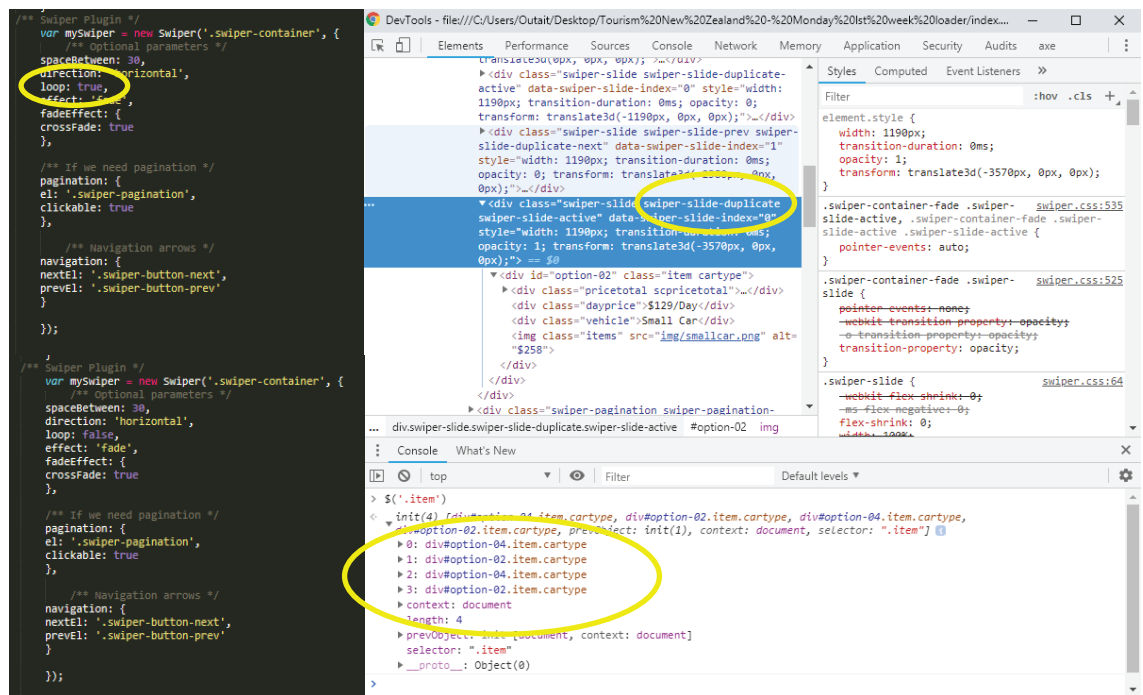
The slider was not removing slides when it was rerun with different conditions. e.g the first run was with 1 person at 2 days so the motor bike and small car should be shown, but when run again with 2 people and 2 days the motorbike should no longer be there, also the text information has duplicated on the small car which should be there.

Solution - Use jquery .empty() on the swiper -wrapper to remove all child nodes/slides so when the function is run it is empty and will populate it with the correct options depending on what conditions are met.



Was unable to perform math on kmTravel due to it having 645 km (NaN not a number) which was causing my fuel cost calculation to fail.

Solution - Use regular expression to remove the 'km' off the end so I can use it in my calculations.



Another slider issue was that it was creating duplicate slides which was effecting the way my logic was wokring for selecting a car, updating images and fuel calculation on the next pages (trailer page, fuel, payment pages) as shown in the screen shot above.

The reason for this is beacuse when the slider is set to loop it's constantly revolving and creates duplicate slides to do this.

Solution - Change the settings of swiper loop from true to false.

JS Linting.

JS Hint Version 2.9.6 - <https://jshint.com/>

These are the settings I used in the linting process

CONFIGURE

Report

- ✓ Cyclomatic complexity
- ✓ Unused variables
- ✓ Undefined variables

Warn

- ✓ About == null
- ✓ About debugging code
- ✓ About unsafe for..in
- ✓ About arguments.caller and .callee
- ✓ About assignments if/for/...
- ✓ About functions inside loops
- ✓ About eval
- ✓ About unsafe line breaks
- ✓ About potential typos in logical operators
- ✓ When code is not in strict mode
- ✓ When new is used for side-effects

Assume

- ✓ Browser
- ✓ NodeJS
- ✓ jQuery
- ✓ Development (console, etc.)
- ✓ New JavaScript features (ES6)
- ✓ Mozilla JavaScript extensions
- ✓ Older environments (ES3)

JS Linting Main Script.

Initial Test

After the first test I decided to restructure my script and remove document.ready as this is unnecessary when the script is placed right before the </body> tag. Also placing the out of scope warnings back into scope and resolving other issues by removing and adding semicolons.

```

1  $(document).ready(function(){
2
3      $('#date1, #date2').dateDropper();
4
5
6      setTimeout(function(){
7          $('.vanwheel12').removeClass('loading')
8      },4900);
9
10     setTimeout(function(){
11         $('.vanwheel1').removeClass('loading')
12     },4900);
13
14 });
15
16
17
18
19
20
21
22
23 //Fuel calculation
24
25 var mbFuel = (3.7 * 2.3)/100;
26 var scFuel = (8.5 * 2.3)/100;
27 var lcFuel = (9.7 * 2.3)/100;
28 //Diesel $1.30L
29 var mhFuel = (17 * 1.3)/100;
30 //Road User Charges
31 var ruc = 8.068;
32 //getting car by click
33 let fuelCost;
34 let rucCost;
35
36
37 // using document ready...
38 $(document).ready(function(){
39
40     //initialising fullpage.js in the jquery way
41     $('#fullpage').fullpage({
42         sectionsColor: ['#f6984', '#8a9b9c', '#f05a28', '#fec401'],
43         navigation: true,
44         slidesNavigation: true,
45         licenseKey: 'OPEN-SOURCE-GPLV3-LICENSE',
46         anchors: ['firstPage', 'secondPage', '3rdPage', '4thPage', 'lastPage'],
47         animateAnchor: true,
48         css3: true,
49         fadingEffect: true,
50         easing: 'easeInOutCubic',
51         easingcss3: 'ease',
52         lazyLoading: true,
53         fitToSection: true,
54         scrollbar:true,
55
56     });
57
58
59
60 //How to disable scrolling
61 $.fn.fullpage.setMouseWheelScrolling(true);
62
63
64
65     $.fn.fullpage.setAllowScrolling(true);
66
67     // calling fullpage.js methods using jquery
68     $('#moveSectionUp').click(function(e){
69         e.preventDefault();
70         $.fn.fullpage.moveSectionUp();
71     });
72
73     $('#moveSectionDown').click(function(e){
74         e.preventDefault();

```

CONFIGURE

Metrics

There are 26 functions in this file.
Function with the largest signature take 2 arguments, while the median is 0.
Largest function has 48 statements in it, while the median is 2.
The most complex function has a cyclomatic complexity value of 8 while the median is 1.

Ten warnings

- 7 Missing semicolon.
- 11 Missing semicolon.
- 90 Missing semicolon.
- 200 Missing semicolon.
- 165 'mbPriceTotal' used out of scope.
- 166 'scPriceTotal' used out of scope.
- 167 'lcPriceTotal' used out of scope.
- 168 'mhPriceTotal' used out of scope.
- 378 Missing semicolon.
- 472 Unnecessary semicolon.

Four undefined variables

- 108 pickUpDate
- 111 pickUpDate
- 113 pickUpDate
- 109 dropOffDate
- 112 dropOffDate
- 114 dropOffDate
- 172 Swiper
- 377 calcRoute

Two unused variables

- 172 mySwiper
- 90 output

JS Linting Main Script.

Finalised

No Errors and no warnings, undefined variables are inputs waiting on users selection i.e date.

The swiper and calcRoute gets defined dynamically by the users decisions.

```

1      setTimeout(function () {
2          $('loadingScreen').addClass('hide');
3      }, 4000);
4
5
6      screen.orientation.lock('landscape');
7
8      var transportoptions = [{
9          Name: 'Motorbike',
10         image: 'img/motorbike.png',
11         Mainclass: 'item cartype',
12         idName: 'option-01',
13         SubClass: 'pricetotal mbpricetotal',
14         // alttag: 'Motorbike',
15         Dayprice: '$109/Day'
16     }],
17     {
18         Name: 'Small Car',
19         image: 'img/smallcar.png',
20         Mainclass: 'item cartype',
21         idName: 'option-02',
22         SubClass: 'pricetotal scpricetotal',
23         // alttag: 'Small Car',
24         Dayprice: '$129/Day'
25     }],
26     {
27         Name: 'Large Car',
28         image: 'img/largecar.png',
29         Mainclass: 'item cartype',
30         idName: 'option-03',
31         SubClass: 'pricetotal lcpricetotal',
32         // alttag: 'largecar',
33         Dayprice: '$144/Day'
34     }],
35     {
36         Name: 'Motor Home',
37         image: 'img/motorhome.png',
38         Mainclass: 'item cartype',
39         idName: 'option-04',
40         SubClass: 'pricetotal mhpricetotal',
41         // alttag: 'motorhome',
42         Dayprice: '$200/Day'
43     }];
44
45
46
47
48     function createslide(value, price) {
49         /** Create Image */
50         'use strict';
51         var img = document.createElement('img');
52         img.className = 'items';
53         img.src = transportoptions[value].image;
54         img.alt = '$' + price;
55
56         /** Create Div */
57         var div1 = document.createElement('div');
58         div1.className = transportoptions[value].SubClass;
59
60         /** Create Div */
61         var div2 = document.createElement('div');
62         div2.className = 'dayprice';
63         div2.innerHTML = transportoptions[value].Dayprice;
64
65         /** Create Div */
66         var div3 = document.createElement('div');
67         div3.className = 'vehicle';
68         div3.innerHTML = transportoptions[value].Name;
69
70         /** Create Div */
71         var divContainer = document.createElement('div');
72         divContainer.id = transportoptions[value].idName;
73     }

```

CONFIGURE

Metrics

There are 32 functions in this file.
Function with the largest signature take 2 arguments, while the median is 0.
Largest function has 58 statements in it, while the median is 2.
The most complex function has a cyclomatic complexity value of 9 while the median is 1.

Three undefined variables

- 276 people
- 277 people
- 277 people
- 279 people
- 365 Swiper
- 507 calcRoute

One unused variable

- 365 mySwiper

JS Linting Map.

Finalised

No Errors but two warnings, undefined variables are inputs waiting on users selection, in this cause the Google Map Api.

```

270  /**create map*/
271  var map = new google.maps.Map(document.getElementById('googleMap'), mapOptions);
272
273  /**create a DirectionsService*/
274  var directionsService = new google.maps.DirectionsService();
275
276  /**create a DirectionsRenderer - Display Route*/
277  var directionsDisplay = new google.maps.DirectionsRenderer();
278
279  /**bind the DirectionsRenderer to the map*/
280  directionsDisplay.setMap(map);
281
282
283  /**define calcRoute function*/
284  function calcRoute(fuelCost) {
285    /**create request*/
286    var request = {
287      origin: document.getElementById("from").value,
288      destination: document.getElementById("to").value,
289      travelMode: google.maps.TravelMode.DRIVING,
290      unitsSystem: google.maps.UnitSystem.METRIC
291    };
292
293
294
295
296
297    /**pass the request to the route method*/
298    directionsService.route(request, function (result, status) {
299      if (status == google.maps.DirectionsStatus.OK) {
300
301        /**Get distance*/
302        var distanceKm = result.routes[0].legs[0].distance.text ;
303
304        var kmTravel = +distanceKm.replace(/[\^0-9-]/g,"");
305
306        var outputCost = fuelCost * kmTravel;
307
308        $('#outputfail').addClass('hide');
309        $('#outputpass').html("<div class='alert-info'>" + outputCost.toFixed(0) + ".00
310        console.log(kmTravel)
311        console.log(distanceKm)
312        $('#outputkm').html("<div class='alert-info'>" + distanceKm + "</div>");
313        /**display route*/
314        directionsDisplay.setDirections(result);
315      } else {
316        /**delete route from map*/
317        directionsDisplay.setDirections({ routes: [] });
318        /**center map*/
319        map.setCenter(myLatLng);
320        /**show error message*/
321        $('#outputfail').removeClass('hide');
322        $('#outputfail').html("<div class='alert-danger'>Could not retrieve driving di
323      });
324    });
325  }
326
327
328
329  var options = {
330    types: ['(cities)'],
331    componentRestrictions: {country: "nz"}
332  };
333
334
335  /**Get locations from input*/
336  var input1 = document.getElementById('from');
337  var autocomplete1 = new google.maps.places.Autocomplete(input1, options);
338
339  var input2 = document.getElementById('to');
340  var autocomplete2 = new google.maps.places.Autocomplete(input2, options);
341
342

```

CONFIGURE

Metrics

There are 2 functions in this file.

Function with the largest signature take 2 arguments, while the median is 1.5.

Largest function has 14 statements in it, while the median is 8.

The most complex function has a cyclomatic complexity value of 2 while the median is 1.5.

Two warnings

310 Missing semicolon.

311 Missing semicolon.

Two undefined variables

271 google

274 google

277 google

289 google

290 google

299 google

337 google

340 google

310 console

311 console

JS Linting Map Script.

Finalised

Added the two missing semicolons. Now there are no Errors and no warnings.

```

269
270 /**create map*/
271 var map = new google.maps.Map(document.getElementById('googleMap'), mapOptions);
272
273 /**create a DirectionsService*/
274 var directionsService = new google.maps.DirectionsService();
275
276 /**create a DirectionsRenderer - Display Route*/
277 var directionsDisplay = new google.maps.DirectionsRenderer();
278
279 /**bind the DirectionsRenderer to the map*/
280 directionsDisplay.setMap(map);
281
282
283 /**define calcRoute function*/
284 function calcRoute(fuelCost) {
285     /**create request*/
286     var request = {
287         origin: document.getElementById("from").value,
288         destination: document.getElementById("to").value,
289         travelMode: google.maps.TravelMode.DRIVING,
290         unitsSystem: google.maps.UnitsSystem.METRIC
291     };
292
293
294
295
296
297 /**pass the request to the route method*/
298 directionsService.route(request, function (result, status) {
299     if (status == google.maps.DirectionsStatus.OK) {
300
301         /**Get distance*/
302         var distanceKm = result.routes[0].legs[0].distance.text ;
303
304         var kmTravel = +distanceKm.replace(/[\^0-9.]/g,"");
305
306         var outputCost = fuelCost * kmTravel;
307
308         $('#outputfail').addClass('hide');
309         $('#outputpass').html("<div class='alert-info'>" + outputCost.toFixed(0) + ".00
310
311         $('#outputkm').html("<div class='alert-info'>" + distanceKm + "</div>");
312         /**display route*/
313         directionsDisplay.setDirections(result);
314     } else {
315         /**delete route from map*/
316         directionsDisplay.setDirections({ routes: [] });
317         /**center map*/
318         map.setCenter(myLatLng);
319         /**show error message*/
320         $('#outputfail').removeClass('hide');
321         $('#outputfail').html("<div class='alert-danger'>Could not retrieve driving di
322     }
323 });
324
325 }
326
327
328 var options = {
329     types: ['(cities)'],
330     componentRestrictions: {country: "nz"}
331 };
332
333 |
334 /**Get locations from input*/
335 var input1 = document.getElementById('from');
336 var autocomplete1 = new google.maps.places.Autocomplete(input1, options);
337
338 var input2 = document.getElementById('to');
339 var autocomplete2 = new google.maps.places.Autocomplete(input2, options);
340
341

```

CONFIGURE

Metrics

There are 2 functions in this file.

Function with the largest signature take 2 arguments, while the median is 1.5.

Largest function has 12 statements in it, while the median is 7.

The most complex function has a cyclomatic complexity value of 2 while the median is 1.5.

One undefined variable

271 google

274 google

277 google

289 google

290 google

299 google

336 google

339 google

JS Linting Secondary.

JSLint

Secondary Verification

I decided to use another linter called Jslint.com which is alot more strict on the linting process, this time I recieved warnings such as "use strict" and undeclared variables but no errors which means it is perfectly acceptable and will cause no issues.

Warnings

```

This function needs a "use strict" pragma.
locationButton.addEventListener('click', function() {
Expected '===' and instead saw '=='.
if (selectedPickup == 0 || selectedDropOff == 0) {
Expected '===' and instead saw '=='.
if (selectedPickup == 0 || selectedDropOff == 0) {
This function needs a "use strict" pragma.
dateButton.addEventListener('click', function() {
Expected '===' and instead saw '=='.
if (pickUpDate == 0 || dropOffDate == 0) {
Expected '===' and instead saw '=='.
if (pickUpDate == 0 || dropOffDate == 0) {
Undeclared 'window'.
    window.location.href = "#firstPage/3";
This function needs a "use strict" pragma.
peopleButton.addEventListener('click', function() {
Undeclared 'people'.
    people = document.getElementById('people').value;
Undeclared 'people'.
    people = Number(people);
Undeclared 'people'.
    people = Number(people);
Undeclared 'people'.
if (people < 1) {
This function needs a "use strict" pragma.
peopleButton.addEventListener('click', function() {
Expected '===' and instead saw '=='.
    if (people == 1 && days >= 1 && days <= 5) {
Undeclared 'Swiper'.
    var mySwiper = new Swiper('.swiper-container', {
Undeclared 'calcRoute'.
    calcRoute(fuelCost);
Undeclared 'window'.
window.addEventListener("click", windowOnClick);

```

Options

Assume... ☐ in development ☐ a browser ☐ CouchDB ☐ Node.js	Tolerate... ☒ bitwise operators ☒ conversion operators ☒ eval ☒ for statement ☒ get and set ☒ long lines ☒ multiple vars ☒ single quote strings ☒ this ☒ whitespace mess	Global variables... \$,document,setTimeout
Fudge... ☐ First line number is 1	☒	

Settings used for this linting test

Final Design.

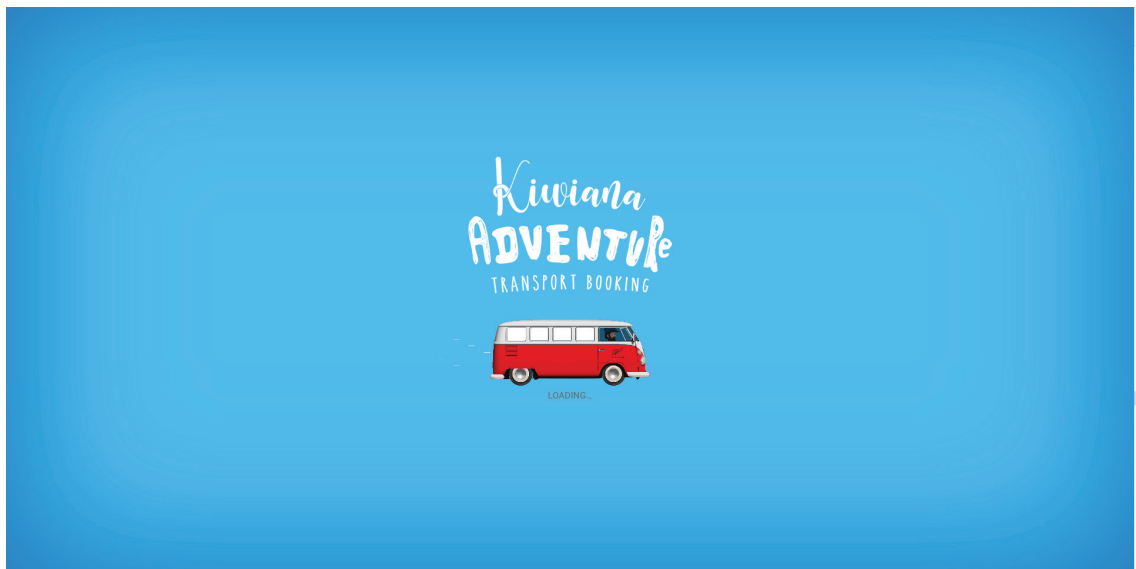
I have designed for Tourism New Zealand an interactive story board style website using a New Zealand /Kiwiana theme to make it unique and memorable for visitors. The concept is to make the booking process fun and an adventure to feel like a road trip.

This includes features such as famous New Zealand landmarks where users can hover over them and get information on that specific POI.

I have used animations to captivate the user to help keep them on the site, it also provides an unique experience and creates a talking point where they may want to refer friends and family to it.

It's designed to be simple to use, and create suggestions in the form of transportation options depending on their personal requirements.

Site Features.



Loading Screen

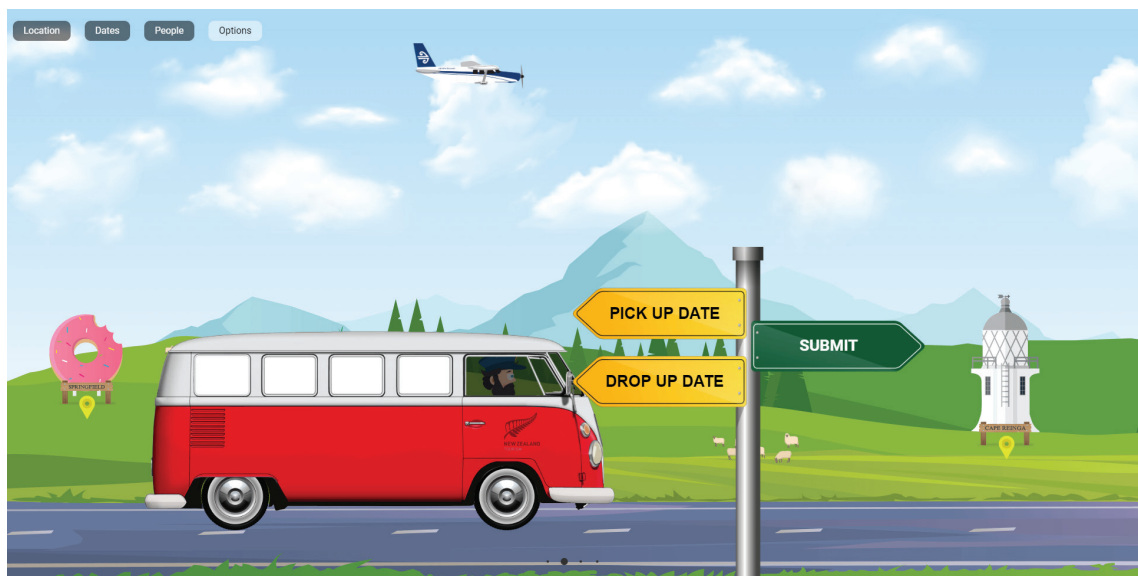
Due to the website being a single page site and the amount of content, the Javascript I have implemented allows the website to load in the background so users don't see Full Page JS plugin loading etc.



Screen 1 - Pick Up Drop Off Selection

Interactive way of choosing these options via select option and including it in a New Zealand style road sign which updates the location on the sign after picked. This option also includes validation.

This screen also includes a language option.

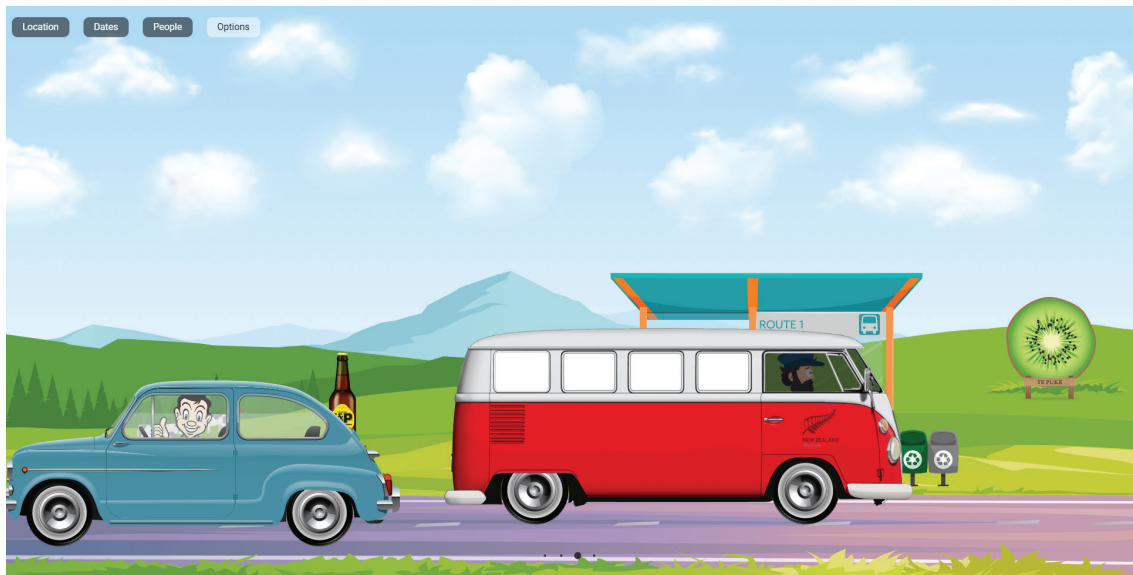


Screen 2 - Date Picking

Continuing the theme of using signs for inputs these signs use the date dropper plugin for selecting dates. This option also includes validation.

Points of Interest

Clicking the marker icons in the background provides the user with information about famous New Zealand landmarks to help encourage tourist to want to visit and explore New Zealand.



Screen 3

The van driving from the previous screen up to the bus stop all add the feel that you're actually on a journey, also showing off more New Zealand landmarks.



Screen 4 - People Selection

When the number of people have been chosen it updates the image on the right to represent that amount of people. This screen also has an animation of the bus pulling up.



Screen 5 - Transportation Options

Using a slider to display transport options and information about each option price per day, price for selected number of days.

The garage background showing 100% Pure Campaign.



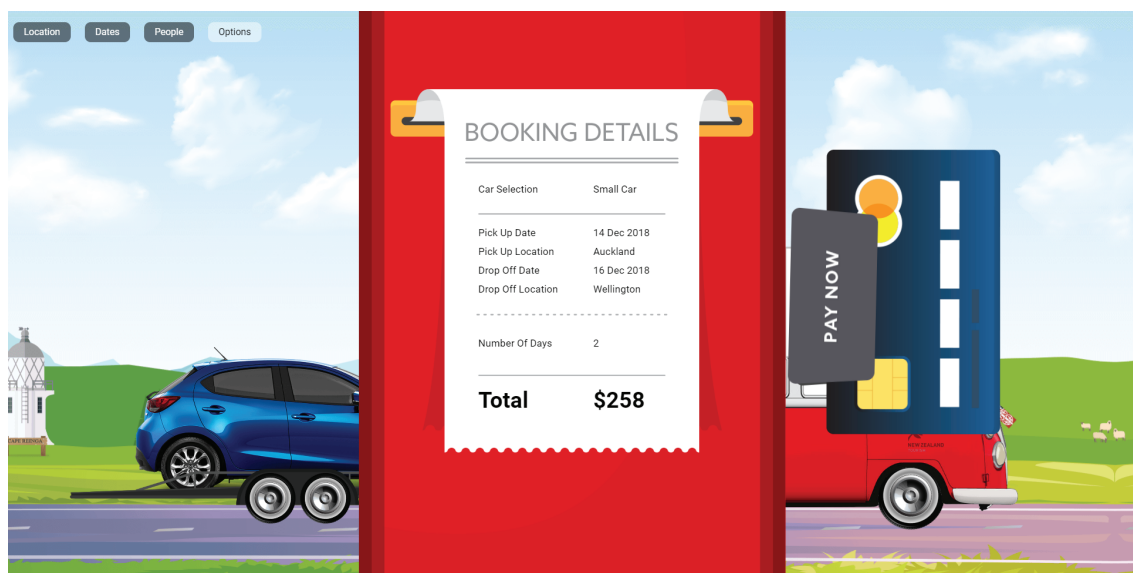
Screen 6

This screen gives users the option to either go straight to booking or go to the fuel calculator. The vehicle is also updated on the trailer depending on which option the user choose.



Screen 7 - Fuel Calculator

On this screen users can enter their origin and destination which will be plotted on the map. The fuel pump will also be updated with travel distance in Kms and fuel cost based on the selected vehicle, which is also dynamically updated in the background. The motorbike, small car and large car are petrol based on \$2.30 per litre & the motorhome/camper van is diesel which is based on \$1.30 per litre and road user charges of \$0.68 cents per 1 km.



Screen 8 - Booking

This form gets updated based on the users selection making it look like a docket. The debit card swipes like they have made a physical payment when credit card details are filled out on the next page

Screen 9 - Payment Form

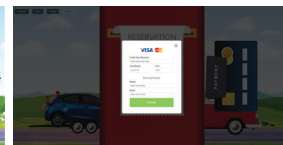
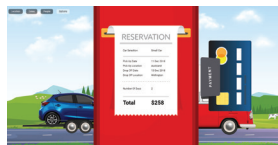
Take payment via credit or master card and get the users details for the booking name and email.



Screen 10 - Ending

The background is updated depending on the location they picked at the start of the journey. The sign also updates with the users booking reference.

Website Architecture.



User Testing.



Summary

To test the concept worked well and that I had achieved the use case's identified. We did group user testing by getting them to complete the tasks below. All users could complete this easily and enjoyed the experience and were smiling through it.

Task's Given

Users were asked to book transport based on their requirements

- Users can select pick up and drop off locations
- Users can select pick up and drop off dates
- Users can select how many people required
- Users can select transport options based on logic
- Users can calculate fuel costs based on selected transport and distance
- Users can pay and have the process validated to them



100%
Completion

HTML Validation.

HTML

Validation passed with no errors or warnings. I have left comments in the html code to help developers easily find where slides and sections end.

Nu Html Checker

This tool is an ongoing experiment in better HTML checking, and its behavior remains subject to change

Showing results for contents of text-input area

Checker Input

Show

☒ source
 ☐ outline
 ☐ image report

Options...

Check by

text input

css

```

<!DOCTYPE html>
<html lang="en">

<head>
  <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
  <title>Tourism NZ</title>
  <link rel="stylesheet" type="text/css" href="./css/fullpage.css"/>
  <link rel="stylesheet" type="text/css" href="./css/animate.css"/>
  <link rel="stylesheet" type="text/css" href="./css/stylesheet.css"/>
  <link rel="stylesheet" type="text/css" href="./css/swiper.css"/>
  <link rel="stylesheet" type="text/css" href="./css/jquery.bullseye.css"/>
  <link href="./css/datedropper.css" rel="stylesheet"/>
  <link href="./css/my-style.css" rel="stylesheet"/>
  <link href="https://fonts.googleapis.com/css?family=Roboto:100,100i,300,300i,400,400i,500,500i,

```

Check

Use the Message Filtering button below to hide/show particular messages, and to see total counts of errors &

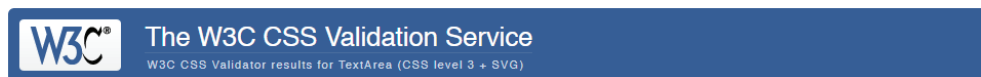
Message Filtering

Document checking completed. No errors or warnings to show.

CSS Validation.

CSS

Has passed with no errors, but does show warnings these warnings will help support browser compatibility efforts. The validator only validates against valid code. The vendor extensions are proprietary code. As such it will always be invalid.



Jump to: [Warnings \(109\)](#)

W3C CSS Validator results for TextArea (CSS level 3 + SVG)

Congratulations! No Error Found.

This document validates as [CSS level 3 + SVG](#) !

To show your readers that you've taken the care to create an interoperable Web page, you may display this icon on any page that vali



(close the img tag with > instead of /> if using HTML <= 4.01)



The W3C validators are developed with assis
[Donate](#) and

Warnings (109)

URI : TextArea	
49	<code>-webkit-box-sizing</code> is an unknown vendor extension
53	<code>-webkit-appearance</code> is an unknown vendor extension
54	<code>-moz-appearance</code> is an unknown vendor extension
70	<code>-ms-text-align-last</code> is an unknown vendor extension
71	<code>-moz-text-align-last</code> is an unknown vendor extension
166	<code>-webkit-box-shadow</code> is an unknown vendor extension
202	Unrecognized at-rule <code>@-webkit-keyframes</code>
224	<code>-webkit-animation</code> is an unknown vendor extension
229	<code>-webkit-animation-delay</code> is an unknown vendor extension
234	<code>-webkit-animation-delay</code> is an unknown vendor extension
239	<code>-webkit-animation-delay</code> is an unknown vendor extension

Autoprefixer for CSS cross compatibility

-O-
-ms-
-moz-
-webkit-

Deadlines Analysis.

Tourism NZ - Project Timeline		Week One							Week Two							Week Three						
Stages	Duration	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	
Documentation	20 Days																					
Project Timeline	1 Day																					
Project Overview	1 Days																					
Proposal	3 Days																					
PDF Documentation	20 Days																					
Research	7 Days																					
Client Research	2 Days																					
UX Research	4 Days																					
Competitor Research	2 Day																					
Style Research	6 Days																					
Target Audience / Persona	2 Days																					
Prototypes	7 Days																					
IA / IxD	6 Day																					
Wireframes	2 Days																					
Sketch	3 Days																					
User Testing & Feedback	4 Days																					
Coding	11 Days																					
HTML, CSS, JS	11Days																					
User Testing & Feedback	4 Days																					
Coding Changes	6 Days																					
Debugging	6 Days																					
Closure	3 Days																					
Review	2 Days																					
Presentation	3 Days																					
Hand-in	1 Day																					

Variation Highlighted Above

Summary

I managed to achieve all milestones I had set out with only small variations. I managed to start coding 2 days early which was beneficial for the project.

I decided to do a bit of debugging each day on the Javascript code I had written rather than waiting till the end of the second week, I did this so I wouldn't be presented with alot of bugs and fixing them as I go made it much more managable fixing 1 or 2 issues rather than 20 at the end and those issues breaking logic which was previously working.

The biggest issue I had during the project was with a plugin called Slick Slider as per the debugging section of the this document. In the end I decided to abandon it after 2 days as it was starting to hold back the project and work with another slider plugin.

Production Tools.



Project Management

Managing the project and making sure im hitting milestones.



Prototyping

Sketch was used for creating mockups for and testing to make sure the use case and user requirements are being met before coding.



Creating & Editing Illustrations

Photoshop & Illustrator were heavy used in the project due to the style of the website for creating and modifying content



Text Editor

Sublime is the choosen text editor tool for the project which is used for coding html, css and js



Development

Html was used for the markup. CSS and Sass were used for styling.



Compiler

Koala was used for compiling my Scss files into a single css



Google Maps Api

The Google Maps API was used for the travel calculator get distance data based on what the user inputs.



Logic & Dom Manipulation

Javascript and the JQuery library were used for Dom & logic manipulation as well as plugins such as Date Dropper, Full Page JS etc.



Debugging JS

Chrome DevTools was used in the project to find bugs and issues while coding.



Javascript linting

JSHint was used to validate the js code to help find errors and correct them and test against industry standards. I also used JSLint as secondary check.

Next Sprint.

Things I would like to do the next design sprint

- Make the website mobile responsive and truly responsive for desktop rather than currently only being responsive if it's at the correct aspect ratio.
- Add an option with a road roundabout where you can go down different roads which could book accommodation as an example.
- Implement more transport options for each category.
- Work on cross browser compatibility.

Project Reflection.

Design/Illustrations

I would have liked to have spent some more time on illustrations to improve some of the things I'm not 100% happy with.

Plugins

I encountered a few issues with plugins, in future I will research more about them and see if other users are having issues to help save time in the long run.

Javascript

I feel like I have learnt a lot in a short amount of time with Javascript, I was able to do 90% of the things I wanted to do and things I couldn't do I found a way to work around them, so overall I'm happy with how the project went in terms of using Javascript.

Image Ref.

Below is a list of images I have either used or acquired to take out components and modify them to suit my project.

Free for Personal Use

Designed by Vectorpocket

https://www.freepik.com/free-vector/vector-illustration-of-a-mountain-landscape_1215613.htm

https://www.freepik.com/free-vector/cartoon-illustration-of-garage-interior-storage-room-with-auto-equipment-tires-jerrican_2669637.htm

https://www.freepik.com/free-vector/set-of-vector-translucent-clouds-of-various-types_1215902.htm

https://www.freepik.com/free-vector/vector-realistic-illustration-set-of-transparent-glass-bottles-with-drinks-ready-for-branding_1265844.htm

Designed by Freepik

https://www.freepik.com/free-vector/empty-bus-stop-with-flat-design_2383301.htm

https://www.freepik.com/free-vector/payment-receipt-template-with-flat-design_2846454.htm

https://www.freepik.com/free-vector/road-signs_792683.htm

https://www.freepik.com/free-vector/people-traveling-in-flat-style_1797294.htm

https://www.freepik.com/free-vector/german-sausage_764267.htm

https://www.freepik.com/free-vector/variety-of-wooden-signposts_922525.htm

https://www.freepik.com/free-vector/four-colored-dialog-balloons_1172130.htm

Designed by Macrovector

https://www.freepik.com/free-vector/transparent-clouds-set_1531132.htm

Designed by Bakar015

https://www.freepik.com/free-vector/coloured-carrot-design_938841.htm

Designed by Rutthakit SERMSHEEP

https://pngtree.com/freepng/kiwi-vector_1019549.html

Designed by Rawpixel.com

https://www.freepik.com/free-vector/doughnut-unhealthy-food-illustration_2611250.htm

Designed by Vecteezy

<https://www.vecteezy.com/vector-art/158590-skydiver-team-jumping-from-an-airplane-vector>

<http://pngimg.com/download/3066>

Designed by Seeklogo

<https://seeklogo.com/vector-logo/149692/visa>

<https://seeklogo.com/vector-logo/89177/mastercard>

Adobe Stock Paid Images

<https://stock.adobe.com/images/retro-white-van/79910707>

<https://stock.adobe.com/nz/images/summer-alpine-mountains-landscape-with-pines-on-foreground/205862177>

<https://stock.adobe.com/nz/images/gas-station-icon-cartoon-illustration-of-gas-station-vector-icon-for-web/129349720>

<https://stock.adobe.com/images/cities-in-new-zealand/85096723>

<https://stock.adobe.com/images/flat-design-new-zealand-s-landmarks-and-icons/118528633>

<https://stock.adobe.com/images/vector-illustration-cartoon-landscape-with-travel-car-rides-on-the-road-and-handwritten-lettering-of-summer/137791524>

<https://stock.adobe.com/images/hand-drawn-travel-lettering/137057665>

<https://stock.adobe.com/nz/images/vector-illustration-of-fiat-500-1957-1975-old-timer-classic-car/192089290>

Vehicle Images

In a live project Tourism New Zealand would provide their own images or get permission to use these.

<https://www.mazda.co.nz/model/mazda2/hatch/15l-petrol-glx>

<https://www.mazda.co.nz/model/mazda6/wagon/22l-diesel-gsx>

<https://www.indianmotorcycle.com/en-us/chief-dark-horse/>

<https://www.volkswagen-vans.co.uk/en/models/california.html#home>