Pre-Research:

- Trivago: https://www.trivago.com.au/
 - Pros:
 - initial interface is clean and simple
 - intuitive search system
 - more information and recommendations from home screen below initial view
 - Cons:
 - after searching interface becomes cluttered
 - too many pop-up information elements
 - Desired Elements:
 - simple initial interface
 - intuitive search function
 - login menu in top-right of home screen
- Wotif: https://www.wotif.com/
 - Pros:
 - After searching, information is clearly represented
 - room profiles are laid out well, with lots of information spaced out well
 - Cons:
 - initial search takes time, and presents a lot of options (possibly cluttering the page and confusing some users)
 - Desired elements:
 - uncluttered information after searching

Design:

See version_desktop_design.jpg and version_phone_design.jpg

Function of the Site:

Links on home page:

Search bar

- Allows user to search for the destination of where they want to book a hotel at in Australia by city.
- As the user types, suggestions of cities show up under the bar.
- If the search button is clicked or the enter key is pressed while on the form, it will submit and query the database for the search term.
- POST

Map

- Map button opens new page with a map of Australia.
- Uses Google API
- Has markers of available hotels and their locations.
 - Click on markers for a short overview of the hotel: name, stars, price per night, photo, location.
 - Also has a view details button.

Login/sign up

- White bars that the user can type (input) into.
 - Opaque text that disappears once the user clicks on the element.
 - E.g. "email", "password"
- If login button is pressed or the enter key is pressed while on the login forms it will attempt to login with the current inputs.
- Sign up button loads a separate page.
- Option for Facebook sign in.
 - Loads Facebook sign page.
- POST

Pages:

Booking info (calendar, number of people)

Calendar

- Used to select your check-in and check-out date.
- Selectable days (boxes).
- Once both days are selected the user is able to proceed to the next step and loads the page. "Next" button.

Number of people

- Drop down menu for adults and another for children.
- Extra details form.
- "Next" button.

Sign up

- Number of forms for user to input into.
 - Opaque text like the login/sign up element on the main page.
- "Sign up" button attempts to register a new user into the database.
 - o Returns appropriate errors if required forms are not completed.
- POST

Search results:

- Displays hotels and their information in the area that the user searched for.
 - o Photo, hotel name, stars, price, location, Wi-Fi availability, average rating

Hotel information

- More detailed information about the hotel.
 - o Pool, spa, parking, restaurant hours etc.
- "Book now" button leads to booking info page.

Back

- Element is available on all pages.
- Returns to previous page.
- If currently on a page with a form with text already from user input, "Confirm form resubmission" Pops up in a new window in front of the webpage.

Note: the layout changes for the mobile version (see image) but the functionality is the same.

Usability Testing and Final Design:

To test the usability of the site, we asked the another group to go through the website (paper design) as though they were making a booking on the site. As they went through the process out loud, our team members observed what their assumptions and actions where. If any of these processes were incorrect or ambiguous, we asked them what method would have been clearer, and changed this in the design.

In general, the original design was simple and easy to navigate around with no confusion over "what does what". However, some elements that were overlooked were as follows:

- There was no dedicated home button on each relevant page.
- It seemed unnecessary to have a confirmation of users details on the final "booking page".

 Instead, details about the name of hotel, location of hotel, number of nights, number of adults and children, arrival and departure dates, and total price were more appropriate. Additionally, a cancelation and confirm booking button was added.
- There were no "click to confirm and go to next page" buttons on pages such as the "booking your hotel" page, and the "signup and login" pages.
- The design did not mention what the top right "login or sign up" link would do. However, once this link was selected, the browser would recognize that the user had entered their details and would skip the second login/sign up page (page after the "booking your hotel" page) and go straight to the "booking confirmation page". Additionally, the top right link where the "login or sign up" link originally was, will change to "welcome <name>" and there will also be a "logout" link directly below it, where once clicked, it will return to the original "login or sign up" link.

These properties were added to the final design (see Design_final.jpg and Mobile_design_final.jpg).

Design Review

Minimising Cognitive Load

- we allow users to both search and see a map. This provides different ways for users to find what they need,
 whatever way that suits them
- big buttons and pictures make finding what users need easier, thus reducing cognitive load
- all text inputs are similar in design. This makes finding and using these elements easier for the user

Minimising Kinetic Load

most major elements are centred (and a little to the left) with minimal surrounds to capture attention (less searching for much-used elements). This also decreases mouse movement when navigating the site.

there are very few instances where scrolling is needed to gather important information or see the main object of the page (e.g. a map will not exceed the window size). This means less effort is spent on scrolling (especially the desktop; not as important on mobile)

Standards and Heuristics

- Thinking about users
 - We have approached our design with a critical importance to user-friendliness.
 - Displays the information that the user wants as they are presented with a search bar when the page first loads.
 - Scrolling down to find deals.
 - Navigation is easy through the search bar (search-dominant) and minor details at the bottom.
 - Back button.
 - Using components that users have seen before e.g. a search bar will add to the usability of the product.
- Usability heuristics
 - Visibility of system status
 - Pages will have a minimum loading time to adhere to.
 - Loading icon between pages.
 - Match between system and the real world
 - Employing commonly used symbols e.g. the magnifying glass for searching
 - Using the order of booking that most sites have destination to the next page, number of people etc.
 - User control and freedom
 - "Confirm form resubmission" popup when user attempts to leave a page with text already inputted into a form.
 - Back button returns the user to their previous page with no changes.
 - Consistency and standards
 - Using clear language that is consistent within the industry.
 - Commonly used icons.
 - o Recognition rather than recall
 - Same points as consistency and standards.
 - Possibly include a short description of what is happening on each step. E.g. "How many people are staying here?"
 - Flexibility and efficiency of use
 - Minimal page refreshes for faster loading time
 - Keep important elements central relative to the web page.
 - o Aesthetic and minimalistic design
 - Minimal amount of text used to keep user engaged.
 - Consistent colour scheme.
 - Help users recognise, diagnose, and recover from errors.
 - Restrict user input to reduce errors.
 - Using <select></select>
 - Appropriate and easy to understand error messages
 - E.g. "Sorry, we couldn't find that destination."
 - Help and documentation
 - Easy to follow steps and descriptions.
 - Help page.

Final Design