**Please find my code on my Github:** **https://github.com/dede06373065/JiazhenCodeTest.git**

**Advantage Air - The Block**

**①How many hours or days would you need to code this from scratch, from start to finish?**

Estimate at least 4 days, including virtual test and polishing.

**②What tooling would you use? Give examples for specific components, where applicable.**

# I use MUI “Collapse” to do Click “” to show more.

# I’m going to use MUI "grid" for the random layout of text and pictures.

For the click and slide effect of the mobile view, I will use "Slider “from “react-slick”

**③What animation library or styling would you use to match the animation shown?**

The easiest way is to let the designer provide svg with animation effects. I will also use some simple css, transform, translate, animation to do some simple animations, and react spring can also be used to make animations.

**④Explain your approach to ensure compatibility across the above screen sizes, and any tools or assisting technologies to guarantee a quality user experience.**

I’m going to use @media to specify the breakpoint of desktop, tablet and mobile. As well as the grid and flex-box to control the layout, which have their own responsive effects

**⑤What questions would you ask for the designer or senior/tech lead in order to feel comfortable completing the job?**

Regarding the “Advantage Air “page, I will ask the designer or senior/tech lead the display under different responsive design and effect of svg animation.

About some button like“” and “”， will there be some fade-in, fade-out or 'drawer' effect coming out of the sides?

What kind of interaction effect will there be when clicking a specific button?

**⑥Do you have any input or ideas on how to make them look, render, load faster/better?**

For this ' Advantage Air ' page, we can use next.js to write, because next.js provides (SSR) server-side render, reduces rendering time is also very beneficial to SEO.

I also found out that the contents of the page are mainly pictures, which can be compressed to reduce rendering time. For example, using webp, Add the suffix like" /m/filters:format(webp) " after the image path.

In addition, next.js also provide lazy loading, which can be achieved achieved using dynamic imports. Dynamic imports allow you to load modules only when they are needed, improving the initial loading time of your application.

**Hyundai Innovation Hub - SMH**

**①How many hours or days would you need to code this from scratch, from start to finish?**

About 3days. Most of the components in the website can be reused, and only the title and background colour are changed.

**②What tooling would you use? Give examples for specific components, where applicable.**

I would use a muted video to do the “Home banner” animation, use mui “Collapse “to do the “read more “in “Home banner”, I use MUI” Card” to show different products ‘details ,use ‘keen-slider’ to meet the mouse drag and slide effect.

**③What animation library or styling would you use to match the animation shown?**

For ‘**Hyundai Innovation Hub** ‘page animation actually is a position:relative muted video, so just insert the video, use CSS3 hover to do “transform: scale(1.2);” effect on card’s background zoom effect.

For the card click slider I will use the state to control the slide. When state is ture, I'll add a style that slides forward.

**④Explain your approach to ensure compatibility across the above screen sizes, and any tools or assisting technologies to guarantee a quality user experience.**

I would use @media to specify the breakpoint of desktop, tablet and mobile. I use the ‘keen-slider’ to control the card and overflow-hidden.

**⑤What questions would you ask for the designer or senior/tech lead in order to feel comfortable completing the job?**

I will make sure in advance, for each vehicle card, “read more “button is lead to different pages with the product’s id in the Url or just make a popup or ‘drawer ‘effect from the side to show product’s details.

**⑥Do you have any input or ideas on how to make them look, render, load faster/better?**

For this ' **Hyundai Innovation Hub** ' page ，in addition to using next.js SSR and image compression（webp）, I found that the Card of the product display can split the data of the API, only required data while shown on the card instead of requiring all of the details. And then Use the product id to find and obtain all product data details, so that the amount of transmitted data is small and the page loads quickly.

**Flight Centre - Traveller**

**①How many hours or days would you need to code this from scratch, from start to finish?**

Nearly 4days, the difficulty of this website lies in carousal function to locate on the map.

**②What tooling would you use? Give examples for specific components, where applicable.**

# I will use MUI "grid" or flexbox for the random layout of text and pictures. I can set the picture position: absolute to show this layout.

# A picture containing text, screenshot, reef Description automatically generated

# I would use “infinite-react-carousel” and add navigation controls, such as previous and next buttons, to allow users to manually navigate through the slides and use different navigations to locate the position on the background map.

A picture containing outdoor, rock, water, nature

Description automatically generated

# A screenshot of a website Description automatically generated with low confidence

**③What animation library or styling would you use to match the animation shown?**

Sass: hover transform: translate and animation.

**④Explain your approach to ensure compatibility across the above screen sizes, and any tools or assisting technologies to guarantee a quality user experience.**

There are a lot of text and pictures interspersed in the layout of the page, so the grid is used for typesetting, and the grid also comes with responsive.

**⑤What questions would you ask for the designer or senior/tech lead in order to feel comfortable completing the job?**

Due to the special layout of text and pictures, I will ask the designer for tablet and mobile designing. And the part of the map positioning I need to dig deeper.

**⑥Do you have any input or ideas on how to make them look, render, load faster/better?**

The ‘**Flight Centre**’ page needs to load a lot of pictures, which will affect the loading speed, so I will compress the pictures with （webp）. In addition, due to the large content of the page, I will use lazy loading, and then load the following content when the mouse slides to a certain place on the page. Use CDN acceleration to copy the data on the original server to other servers, such as pictures and videos uploaded on the website, and imported Js, css and other files. After CDN is enabled, users in different regions will be assigned different servers for access.

**UQ - MBA – AFR**

**①How many hours or days would you need to code this from scratch, from start to finish**

Roughly 3days.

**②What tooling would you use? Give examples for specific components, where applicable.**

I will use grid and flex-box to do the irregular layout and use mask-image, -webkit-mask-image to deal with the irregular background images.

**③What animation library or styling would you use to match the animation shown?**

I’m going to use hover to add some slight animation and I will focus on the layout both text and images.

**④Explain your approach to ensure compatibility across the above screen sizes, and any tools or assisting technologies to guarantee a quality user experience.**

I would use the flex-box, position: relative/ absolute to do the responsive.

**⑤What questions would you ask for the designer or senior/tech lead in order to feel comfortable completing the job?**

I will ask the responsive design and pure colour background for curved images.

And is there any animation and interaction on this page?

**⑥Do you have any input or ideas on how to make them look, render, load faster/better?**

Image Compression ， image and text lazy query. Use CDN acceleration to copy the data on the original server to other servers, such as pictures and videos uploaded on the website, and imported Js, css and other files. After CDN is enabled, users in different regions will be assigned different servers for access.

**CommBank - 9Honey**

**①How many hours or days would you need to code this from scratch, from start to finish**

3 days give or take.

**②What tooling would you use? Give examples for specific components, where applicable.**

I will use grid and flex-box to do the irregular layout and use mask-image, -webkit-mask-image to deal with the irregular background images and animated gradients for buttons as well.

**③What animation library or styling would you use to match the animation shown?**

This page has animations for buttons. I’m going to use the ‘onMouseEnter’ and “onMouseLeave” events to change the state and display different text and animation effect according to the state. Maybe I will add some hover effect.

**④Explain your approach to ensure compatibility across the above screen sizes, and any tools or assisting technologies to guarantee a quality user experience**

I will use flex-box and grid and media breakpoint.

**⑤What questions would you ask for the designer or senior/tech lead in order to feel comfortable completing the job?**

I would ask the senior developer: how to make button animation more flexible。

**⑥Do you have any input or ideas on how to make them look, render, load faster/better?**

I would use image Compression(webp) ， image and text lazy query and use CDN acceleration to copy the data on the original server to other servers, such as pictures and videos uploaded on the website, and imported Js, css and other files. After CDN is enabled, users in different regions will be assigned different servers for access.

In summary, there are certain similarities in the components used across these five websites. Identifying and reusing common components can greatly enhance development efficiency. We can leverage Storybook to document the components effectively and make modifications whenever necessary during runtime.

I had a similar experience working on the Atomix homepage ([https://www.atomix.com.au](https://www.atomix.com.au/)). We utilized Next.js with TypeScript as the front-end framework, while leveraging WordPress CMS as the back-end. I also have experience using GraphQL and Apollo Client for interaction.