Overview

Karcis.co is a company that focuses on **Selling flight, train, hotel, event ticket and rental car** for **travelers**.

The project manager, Vibe, called Vi, wants the website to support **non-Latin characters** in all pages. Vi is kind of person that often curious about *why* people do something. You're expected to always **know** the **reason** behind **what you are doing**. In this project, Vi wants you to use **Git** version control system so that he could monitor the progress by seeing your commit every day. You could use either **GitHub** or **GitLab** for your repository, even though it is suggested to use **GitLab** for the git repository manager. Make sure your repository for this project is set to **private** so that nobody could steal your work. Vi really **hates** people that **doesn't** uphold their **integrity**! So make sure when you are presenting the result to him, you are presenting what you had done until **last commit** before **deadline**.

In this project, you are asked to use **GoLang** as the backend language that will be used for creating **GraphQL API**, followed by **ANGULAR2** as the frontend framework to develop your application. The language you must use for the angular framework is **Typescript**. To make sure the web service called GraphQL, your API endpoint must be accessible by using **public IP/domain**. For the database, you are asked to use **PostgreSQL**. You are free to use the databases in any section, but you must have **logical** and **strong reason** why you use it there.

There're some factors that you should notice such as **performance**, **design**, **security** and **tools understanding**.

In the performance factor, you are asked to use **Redis** to **cache** the result of any API data you consume. You are asked to use **RxJS** javascript library to help you deals with asynchronous programming problems.

In the design factor, you are asked to use a **complementary color** as your application theme color. The web design must be **responsive** with 3 **breakpoints**, **mobile**, **tablet** and **desktop**. Beyond responsive design, you are asked to make your application support **progressive web applications** to deliver amazing user experiences. Because Vi just recently **failed** in animation course that uses adobe animate application and loses the **motivation** to learn about animation, you are asked to **motivate him** by showing him how **wonderful** an application if there's **animation** on every little **component**. You are asked to provide **toggle password visibility** indicator for **all password fields**.

Since Vi notices that there are lots of junior programmers that don't have **strong foundation** in CSS, Vi hopes your CSS skill will **increase significantly** after you **finish** this project. With the intention to **improve** your **CSS skill**, you are **prohibited** to use any **CSS library** for this project. Vi wants to share the taste of wonderful feeling of **SASS/SCSS** styling language, so you are required to use it.

Insecurity factor, you are asked to use **OAuth2** for login authentication process. You may use any authorization server as long as it free, it suggested to use google authentication server. If you found any bugs in any technology you are using, report bugs to the official website and write your documentation what bugs you had found.

In tools understanding factor, you are asked to just simply not just use the tools, but **understand** *what*, *why*, *how* and anything that *related* to the tools you are using. For example: Do the tools implement any design pattern or infrastructure pattern that you maybe could add to your project.

While working on this project, remember what's the main functionality of the web, focus on **learning something new**, find some motivation when you're unmotivated, rest when you are tired, work smartly, be creative, and have fun.

Project Requirements

1. **Header**

   - **Specifications**

     o Display navigation bar for search anything (**flight, hotel, train, rental car, event**).
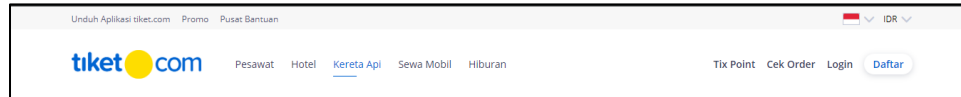
     Figure 1. Search Bar Example

     o Display currency bar so that users can change which currency they used to. Support at least **USD**, **IDR**, **SGD** currencies. You're **free** to use any **free exchange API**. For example from ***https://exchangeratesapi.io/***. Please read what **advised** on the webpage that related to **good developer manner**.

     o Display the language bar, so that the user can **change the main language**. Ex: Indonesia to English.

     o Display **login modal** when the login button is being clicked. Make sure the login button **only displayed** when user is **not logged in**.

     o Display **register modal** when the register button is being clicked. Make sure the register button **only displayed** when user **not logged in**.

     o Display **Become a profile** menu. Make sure the Become a profile menu **only displayed** when the user has **logged in**.

2. **Footer**

   Figure 2. Footer Example

- **Specifications**
  - o Provides some useful link.

3. Home Page
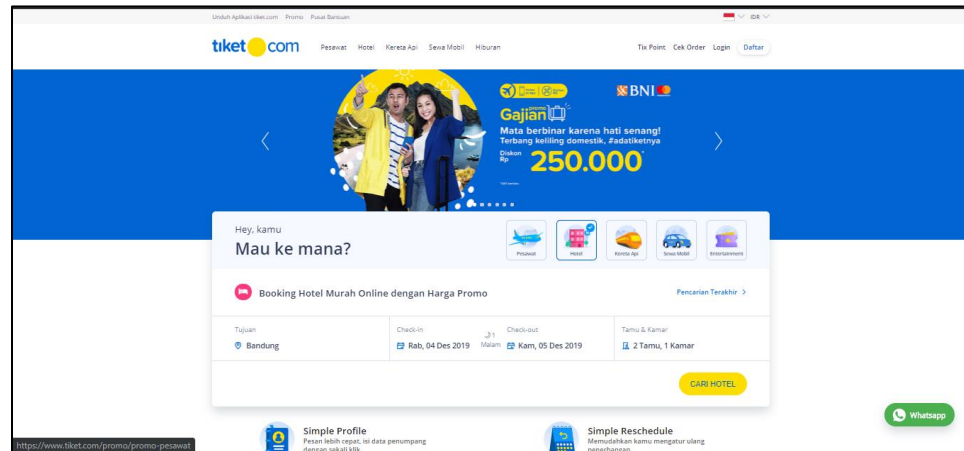
Figure 3. Home Page Example

- **Specifications**
  - o Display **quick-card** searching to increase user experience and help users to immediately search tickets with some criterias.
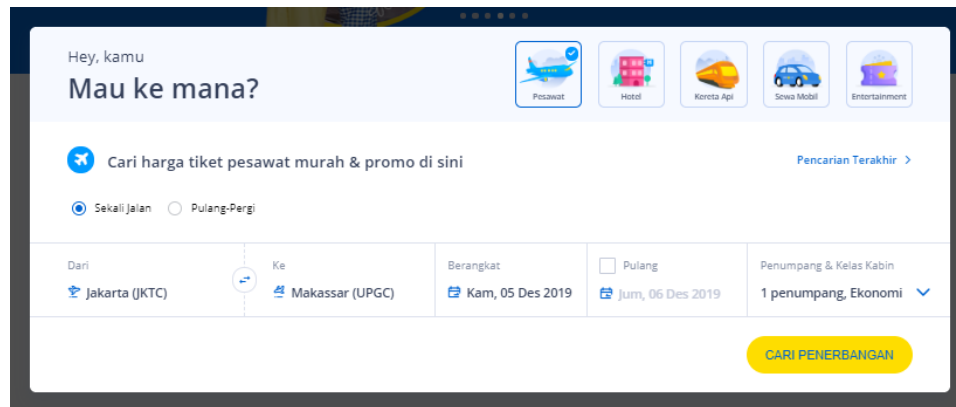

Figure 4. Quick Card Searching

  - o Display the **recommended hotel** to stay based on **user geolocation**. The recommendations could be based on **most visits**, **top-rated** or any kind of measurement. Make sure images, place name, price per night, average rating star, and category are displayed.
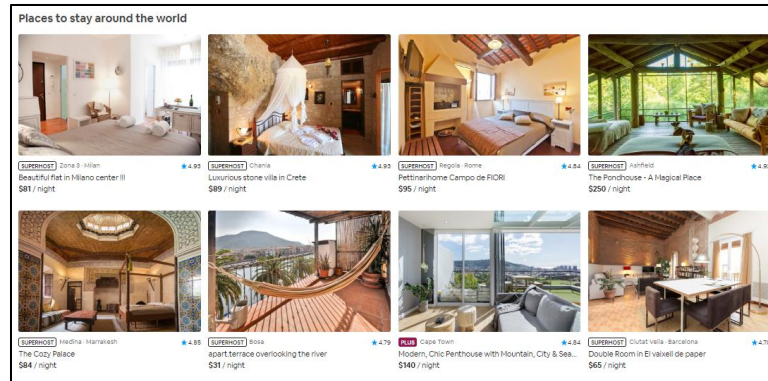
Figure 5. Recommended Hotels Card

   o When the card is clicked, user will be **redirected** to hotel detail page.

4. **Login Modal**

Figure 4. Login Modal Example

- **Specifications**

   o A user could log in using their **Google** account.

   o A user could log in using their **Facebook** account.

   o A user could log in by their independent registered **karcis.co** account.

   o Provide some simple validations for inputs.

   o If user is not registered, redirect to **register page**.

5. Register Modal

Figure 5. Register Modal Example

- **Specification**
  - Display fields in the modal, such as **email address**, **first name**, **last name**, **password**, and **phone number**.
  - A user could register by using their **Google** account.
  - A user could register by using their **Facebook** account.
  - A user could register their independent account.
  - Provide some simple validation for inputs.
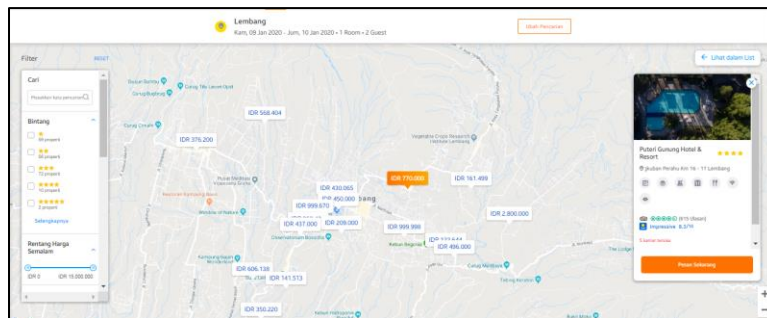
6.   Hotel Search Page
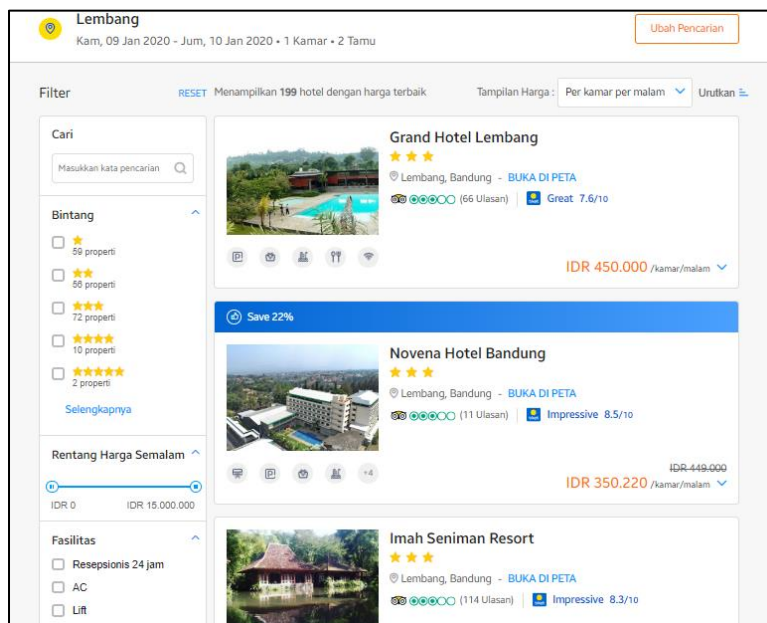

Figure 6. Hotel Search Page (Map View)

Figure 8. Hotel Search Page (List View)

- **Specifications**
  - Display the **map widget**. Make sure it is zoomable (in/out).
  - Display each place using a **price marker**. **Highlight** the place location when the place card is hovered and focus.
  - Users must be able to filter the hotel by **name**, **price**, **facilities**, and **area**.
  - Display selected hotels with common information such as, **hotel images**, **hotel type**, **hotel name**, **hotel address**, **facilities**, **average rating star**,

total rating count (tooltip), **average price per night**, **hotel availability**, and **order now button.**

- For the hotel address, display it with **marquee technique**.

- Display Filtered Hotel Price Pinned on the map.

- Make sure the filter can be combined with the others.

- When the user drags the map, client will fetch data from backend based on user point **latitude** and **longitude** on the map with radius around 10 km.

- User can **switch to list view or map view**.

- In list view, user can navigate each hotel to map view.
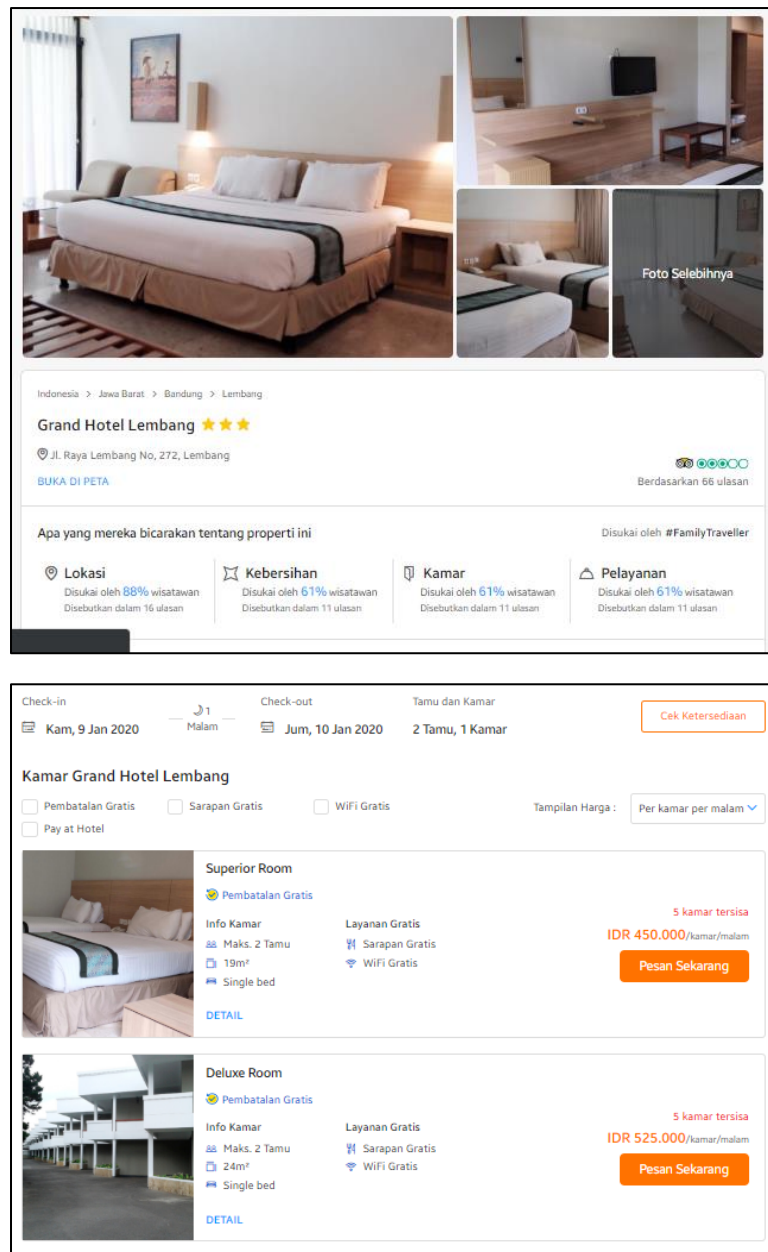
7. Hotel Detail Page

Figure 7. Hotel Detail Example

- **Specifications**
  - Display banner images with **4 pictures**.
  - Display multiple images of the place as an **infinite navigable slider and Slideshow**.
  - Display breadcrumb that contains detail of the hotel address.
  - When view photos clicked, show a modal that displays images navigation

- Display save as order now button.
- When the button is being clicked, **redirect** to the Checkout page.
- Display share button.
- When the button is being clicked, display modal that allows user to share the place URL by using one of 3 methods, copy to clipboard, Facebook or email.
- Display common data such as hotel name, address, description, facilities, summary reviews, reviews, location in maps.
- Display **Quick Box** searching availability Room.
- Display filtered hotel room.
- Display filtered common data such **as hotel name, facilities, price, availability**.
- Display reviews with **pagination**.
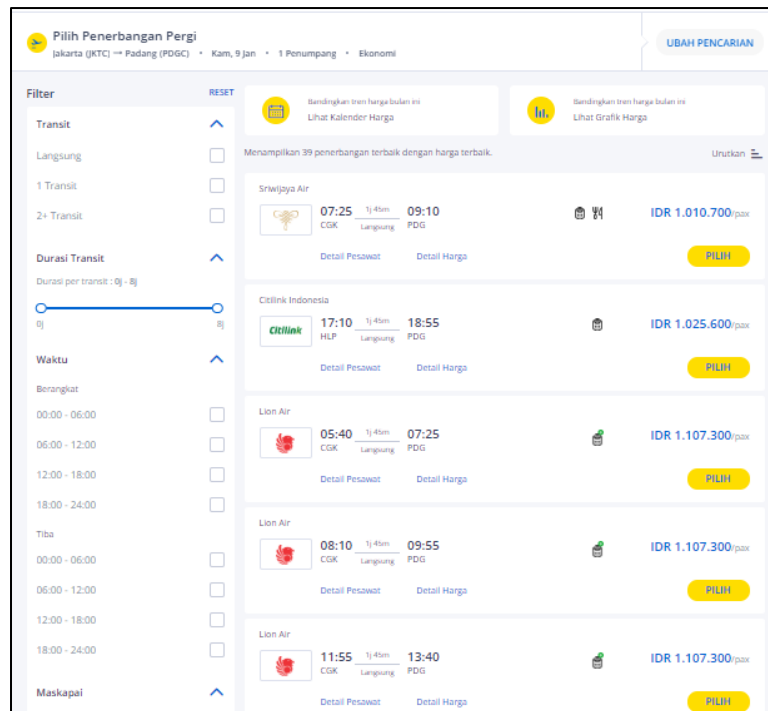- Display the nearest top 5 hotel.

8. Flight Search Page

Figure 10. Flight Search Page

- **Specifications**
  - User able to filter the flight **by transit, duration, time, airline, facilities, airport transit, duration**.
  - Display list of flights with common information such **images, depart time, duration, arrive time, detail flight, detail price.**
  - The display chooses the button to confirm.
  - Redirect to the next step if choose button clicked.
  - **Using** steps **when users want to** buy ticket(s).
  - Use an **infinite scrolling** concept for this page to load all the flights.
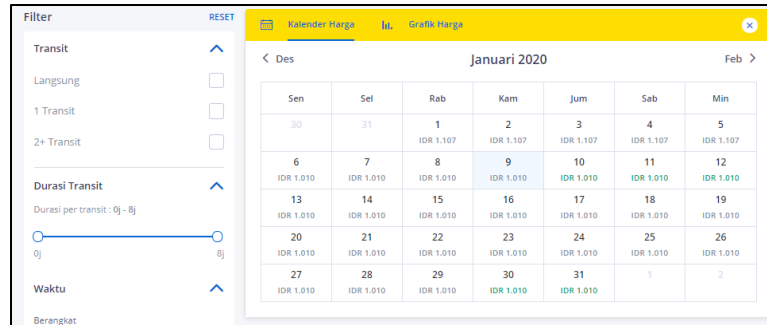 - Display **Price** for each date in the **calendar**.

Figure 11. Flight Price per Date on Calendar

- o User will be **notify** when **newest flight** has occurred based on **the filter**.
- o **Notification** user must be **real-time**.

9. Checkout Page

Figure 12. Checkout page

Figure 13. Checkout detail bank

- **Specifications**
  - Display form order and validate on each fields.
  - **Auto fulfill form** order when user logged in.
  - Make sure **phone number** is **exists**.
  - Display passenger form base on quantity of ticket and validate on each fields.
  - Make sure **promo code** is **exists**.
  - Using steps when user want to checkout.
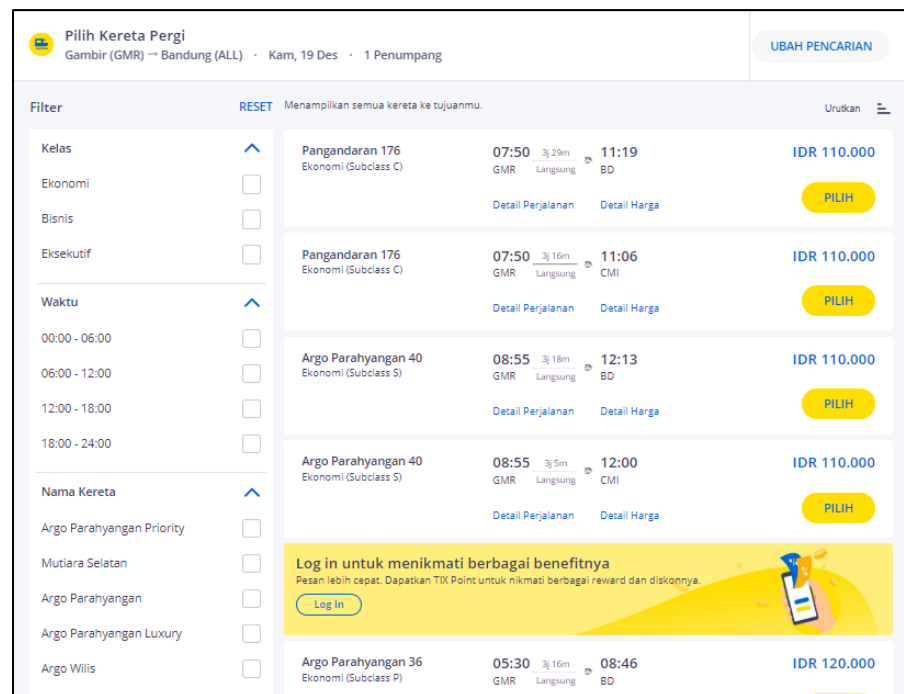
10. Train Search Page

Figure 14. Train search page

- **Specifications**
  - User able to filter the train by **class, time, type**.
  - Display list of trains with common information such **class, type, depart time, depart location, arrive time, arrive location, duration, detail price, detail trip**.
  - Display choose button to confirm.
  - Redirect to **checkout pages**.
  - **Using** steps **when user want to** buy ticket(s).
  - Use infinite scrolling concept for this page to load all the trains.
  - User will be **notify** when **newest train** has occurred based on **the filter**.
  - **Notification** user must be **real-time**
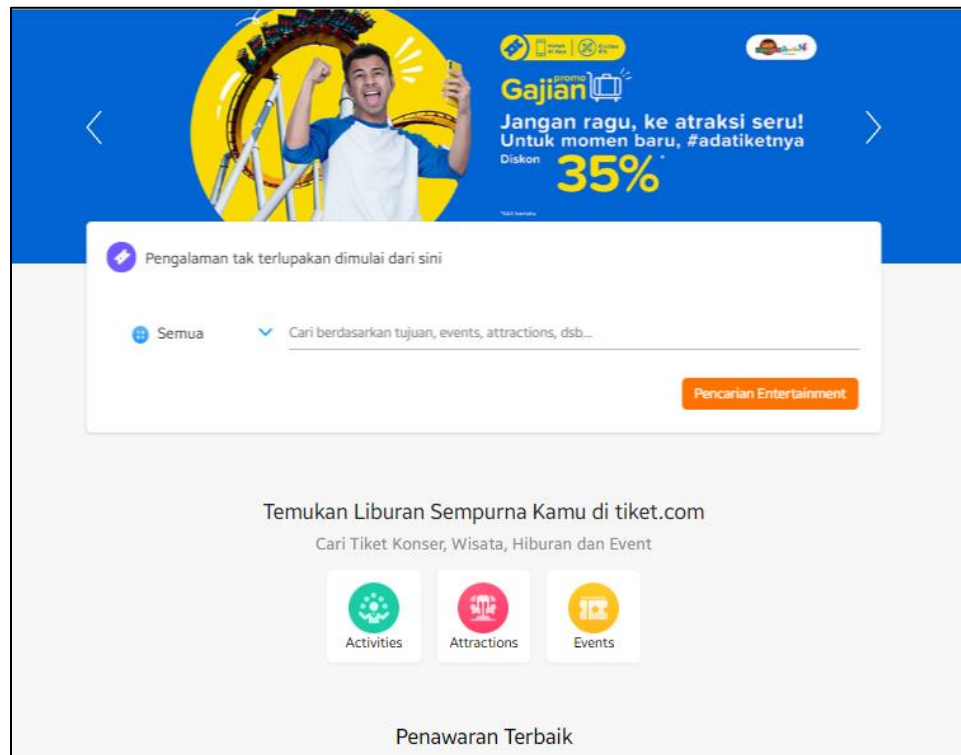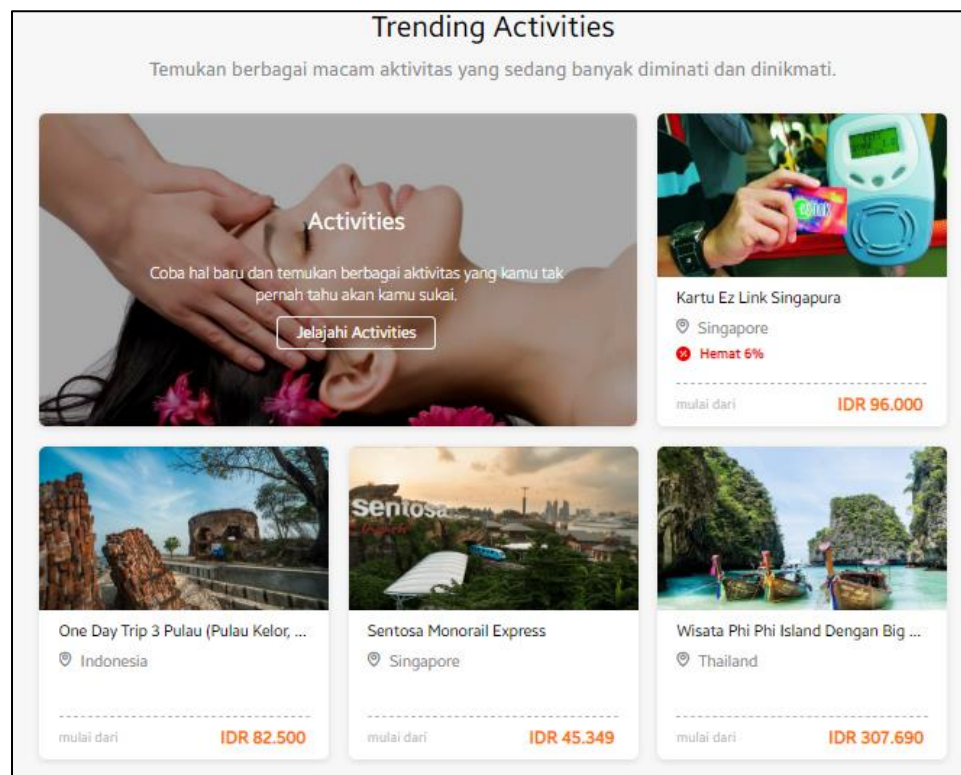
11. Event Page

Figure 15. Event Page

Figure 16. Event Trending Activities Section

- **Specifications**
  - o Display **Quick Box Event ticket**.
  - o Display trending activities, attractions, events.
  - o Display event promo using **infinite slider**.
  - o Redirect to **event search page**, if user click search button.

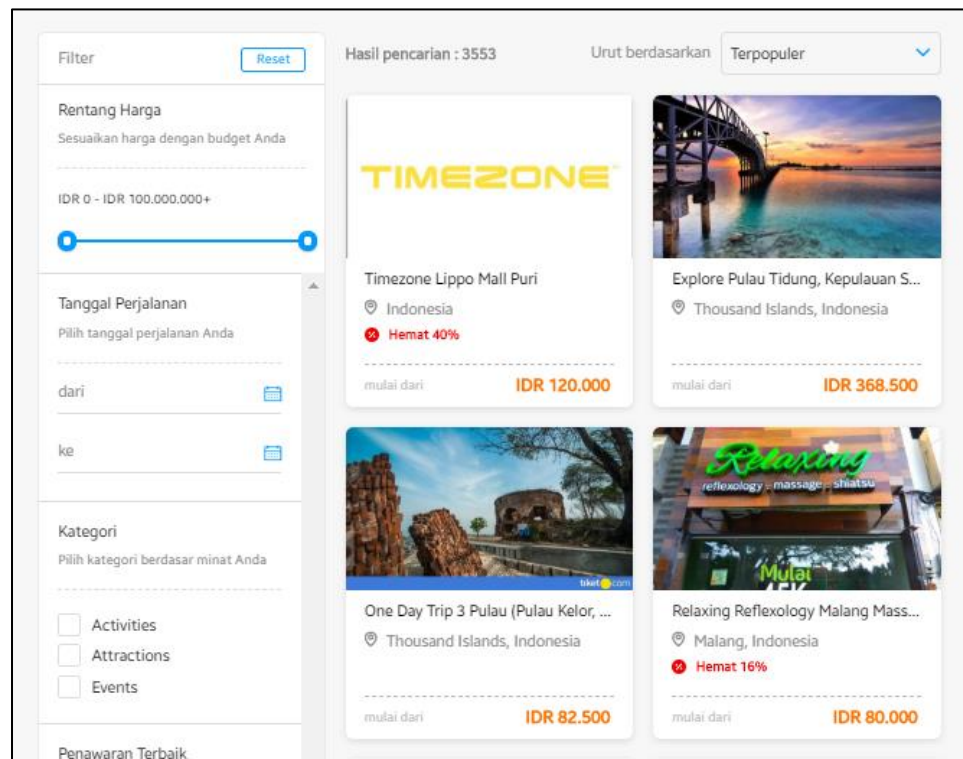## 12. Event Search Page

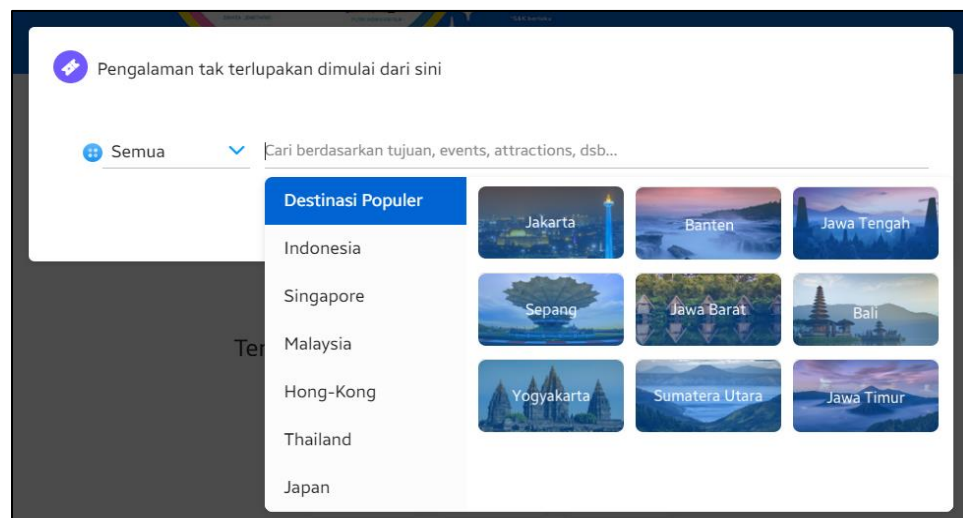*Figure 17. Event Search Page*

Figure 18. Event Search Quick box

- **Specifications**
  - User able to filter the event by **price, category, destination**.

- Group city of destination by country.
- Display list of events with common information such **images, name, location, discount, price**.
- Redirect to **event detail page.**
- **Using** steps **when user want to** buy ticket(s).
- Use **infinite scrolling** concept for this page to load all the events.
- User will be **notify** when **newest event** has occurred based on **the filter**.
- **Notification** user must be **real-time**.
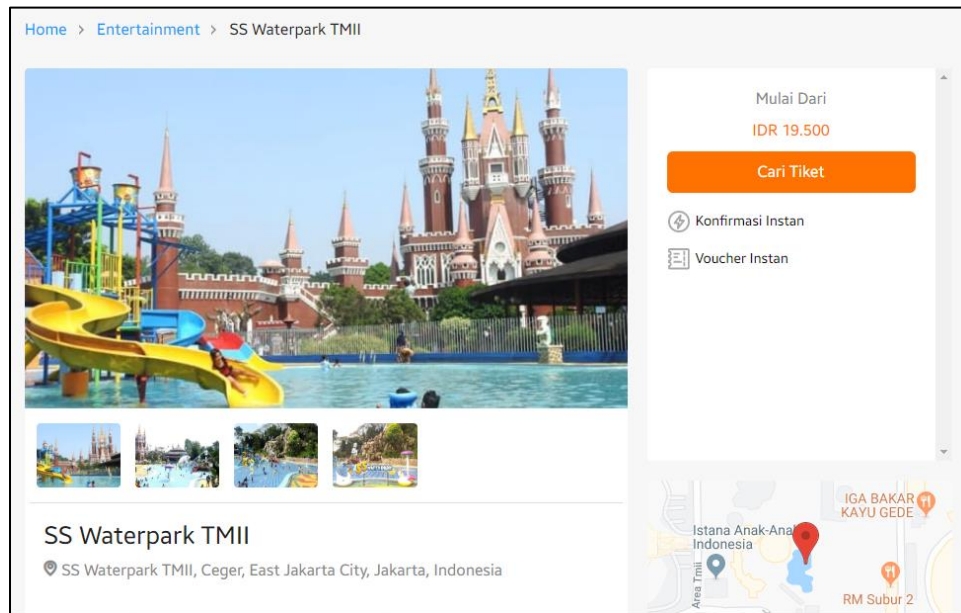
13. Event Detail Page

Figure 19. Event Detail Page

- **Specifications**

- Display event images maksimum **6 photos**.
- Display event images using **read more**, and show it in **slideshow**, if photos greater than 6.
- Display event location at **maps**.
- User can search ticket base on **date**.
- Redirect to **checkout page**, if button order clicked.

     o   Display some information using **tab pane**.

14. Chats Page

Figure 20. Message page example

- **Specifications**
  - Display all unread messages when page opened.
  - Display chat list with common information such as people display picture, people name, last chat occurrence in *month-year* format, last chat content, payment status, and payment price.
  - When chat list hovered, show star button.
  - When star button **clicked**, **mark** the chat as **starred chat.**
  - User can filter the chats by all messages (default), starred, unread.
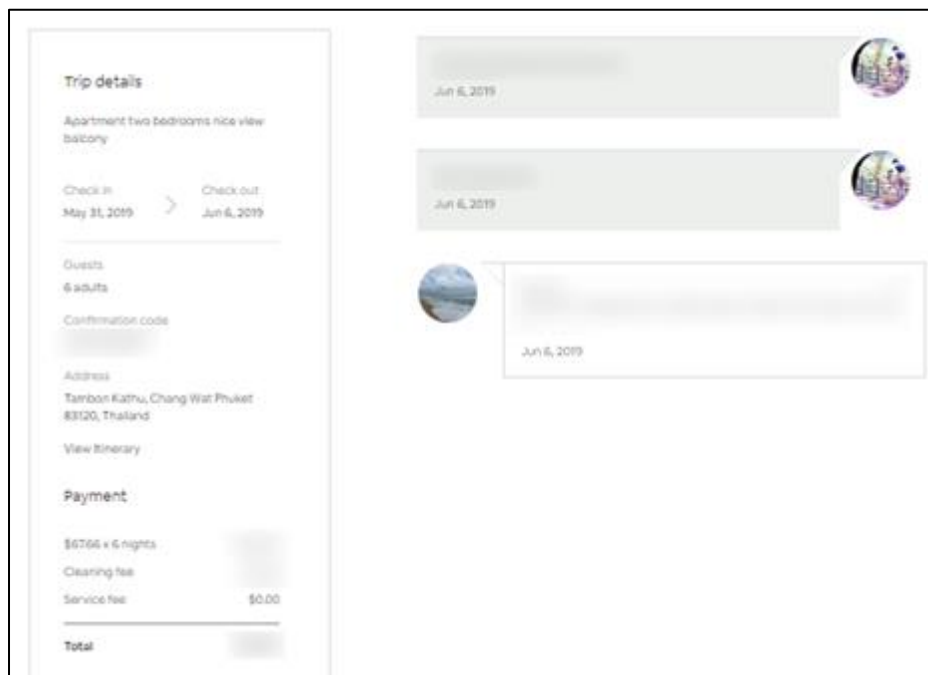
15. Chat Detail Page

Figure 21. Chat Detail Example

- **Specifications**
  - Display trip details.
  - For trip details, display check-in time, check-out time, confirmation code, place address, and payment details.
  - For payment details, total fee, cleaning fee, service fee and total fee.
  - Display **chat box** so that user can **send message.**
  - **Validate** send message **button** only **enable** when the message content **not empty.**
  - Make sure user could **send picture.**
  - When chat that contain **picture**, and the **picture clicked**, display **modal** that show the **picture** in **full screen.**
  - The **picture** also could be **downloaded** by user.
  - Display chat sort by last sent in descending order.
  - Distinguish between sender and receiver chat. From the picture above, the chat was distinguished with **left-right chat model**. You're free to use any model or design to distinguish the chat.
  - For each chat, display **chat content**, **sender display picture**, and **message send time**.
  - Make sure user could **upload short-video**. The **maximum duration** for the **video** is **10 seconds**.
  - When chat that contain **video**, and the **video clicked**, display **modal** that show & play the **video** in **full screen.**
  - The **video** also could be **downloaded** by user.
  - The chat must be display in **real-time**.
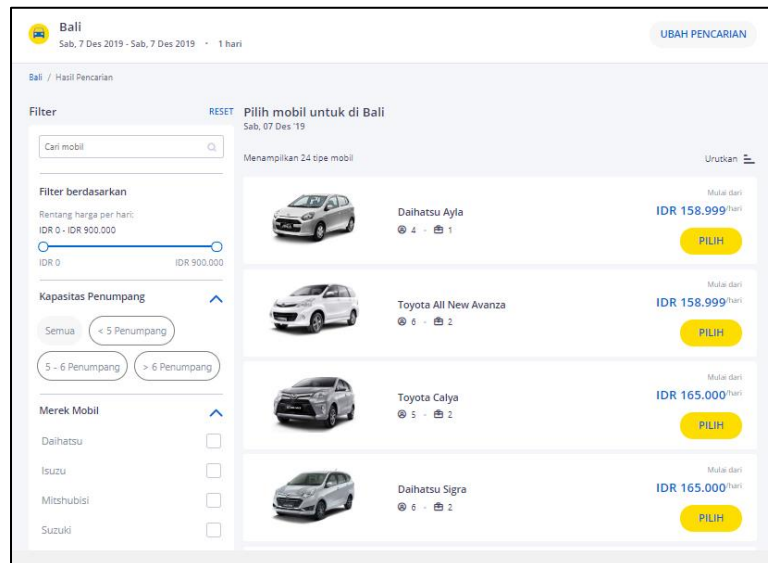
16. Rent Page

Figure 22. Rent Page

- **Specifications**
  - User able to filter the rent car by **price, brand, model, capacity.**
  - Display list of rent car with common information such **image, model, price, passenger, luggage.**
  - Display choose button to buy.
  - Display breadcrumb contains detail of order.

Figure 22. Breadcrumb Rent Page

  - Redirect to **checkout page**, if user click choose button.
  - Use infinite scrolling concept for this page to load all the rent cars.
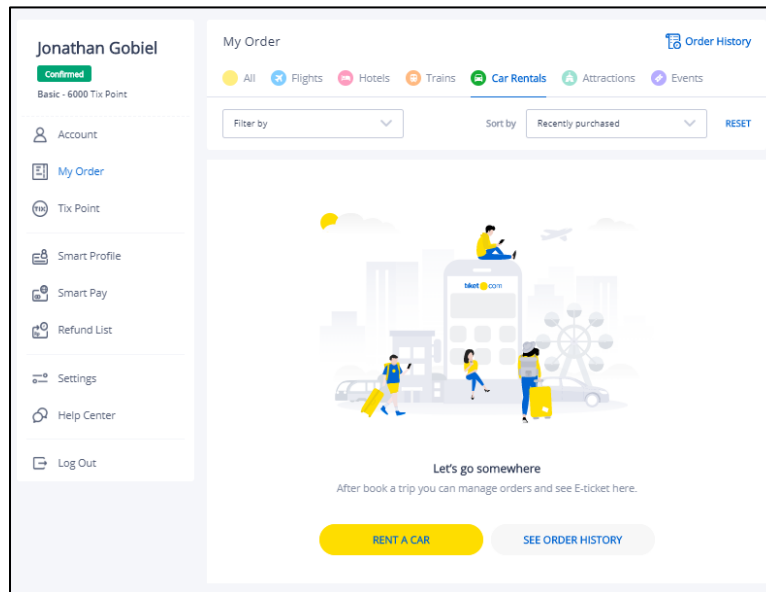
17. My Order Page
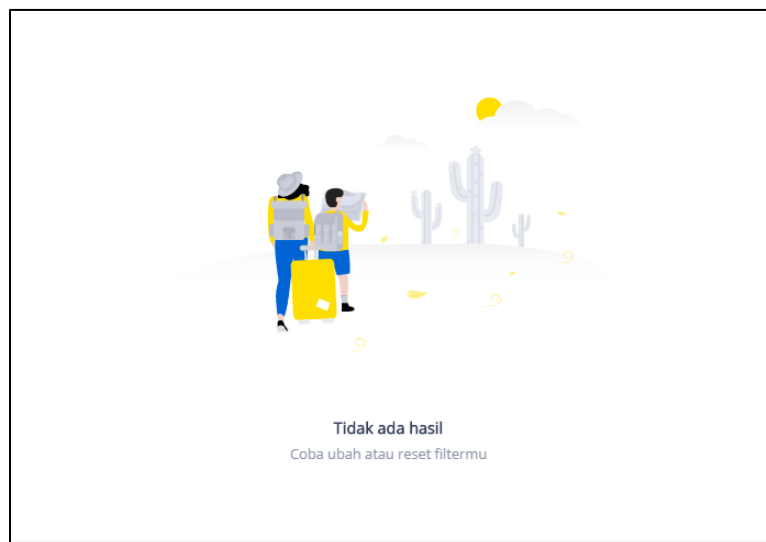

Figure 22. Order Page

Figure 23. Empty Order Icon

- **Specifications**
  - User able to choose the ticket by **all, flight, hotel, train, rent car, attraction, event.**
  - Filter can applied by using **tab pane**.
  - User able to filter by **month, and period**.

- User can sort by **newest, and date**.
- User can **reset** the filter.
- User can see his/her order **history**.
- User can filter his/her **history** by **product type, month, period**.
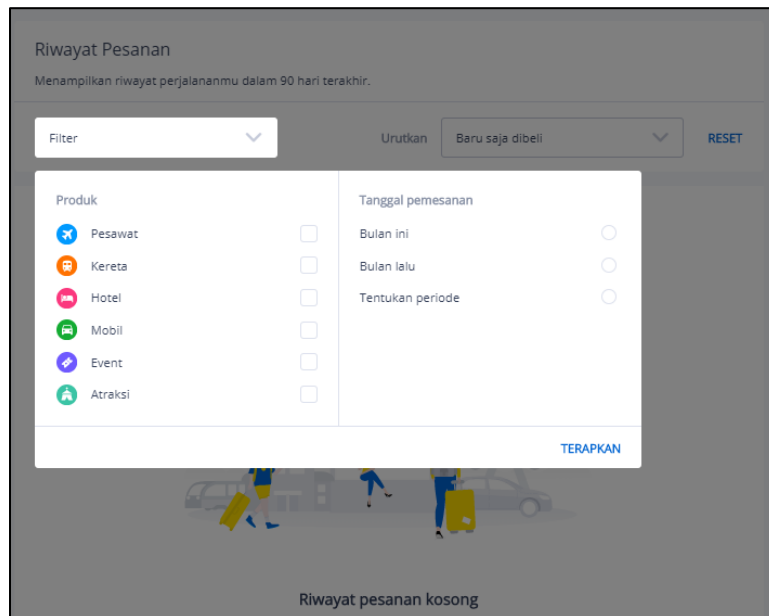

Figure 24. Empty Order Icon

18. Account Page

Figure 25. Account Page

- **Specifications**
  - User can connected with **Facebook, Google**.
  - **Auto fulfill** personal information form.
  - Display sign that **email, or phone** already **verified**.
  - User can manage his/her profile configuration.
  - User can setting his/her main language.
  - User can **subscribe** newsletter (will **notify to email**, when **promo** has **occurred**).
  - User can change his/her email, or phone number.
  - Make sure **phone number** is **not fake**.
  - System will **re-verify**, If user change his/her email or phone number.

Figure 26. Setting Account Page

19. Blog Page
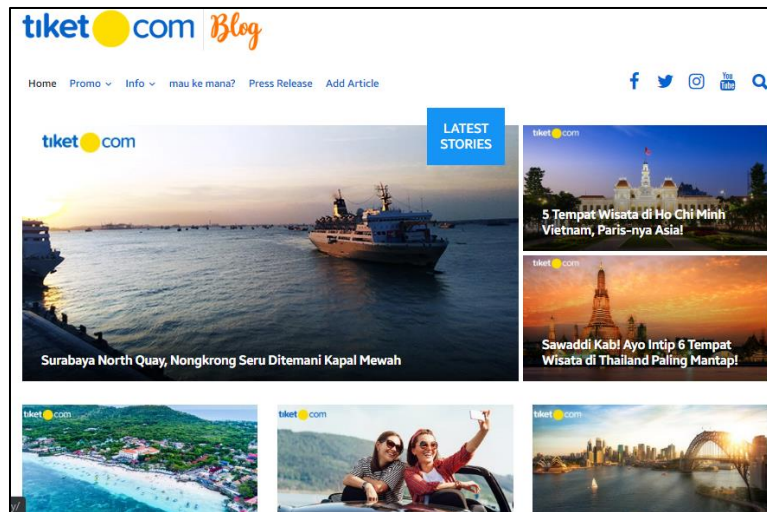
Figure 27. Blog Page

- User can see stories base on category.
- All stories loaded by infinite scrolling.
- User will be **notify** if **new post** has **occurred**.
- If user click, add article menu, **add article modal** will be **popup**.
- User can add some articles.
- Please using **text editor,** you are **not allowed** using **library** like **tinymce, wysiwyg, etc**

20. Blog Detail Page

Figure 28. Blog Detail Page

- User can share the article with social media (**facebook**, **Whatsapp**, **Line**)
- Post detail data should be displayed:
  - **Images**
  - **Title**
  - **Content**
  - **Count Views indicator**

21. Promo Page

Figure 11. Promo Page
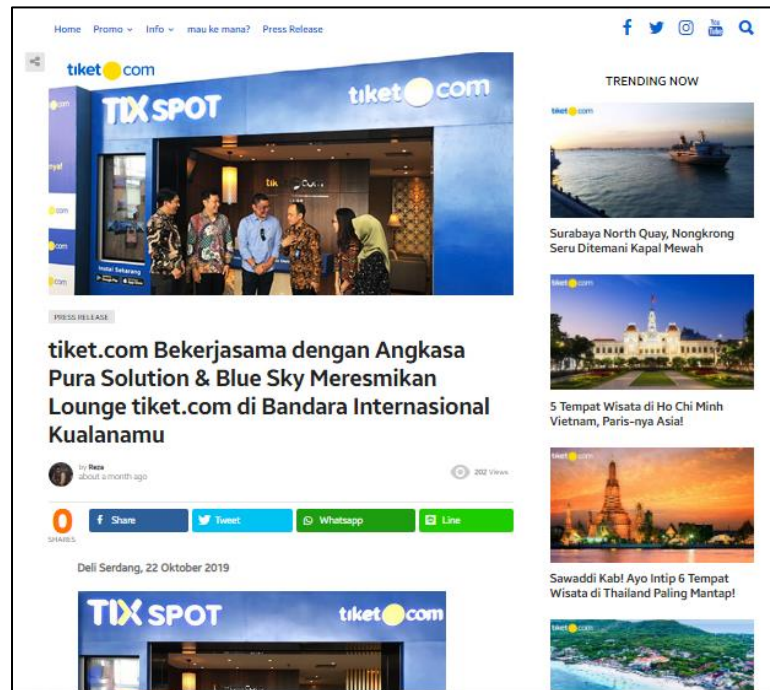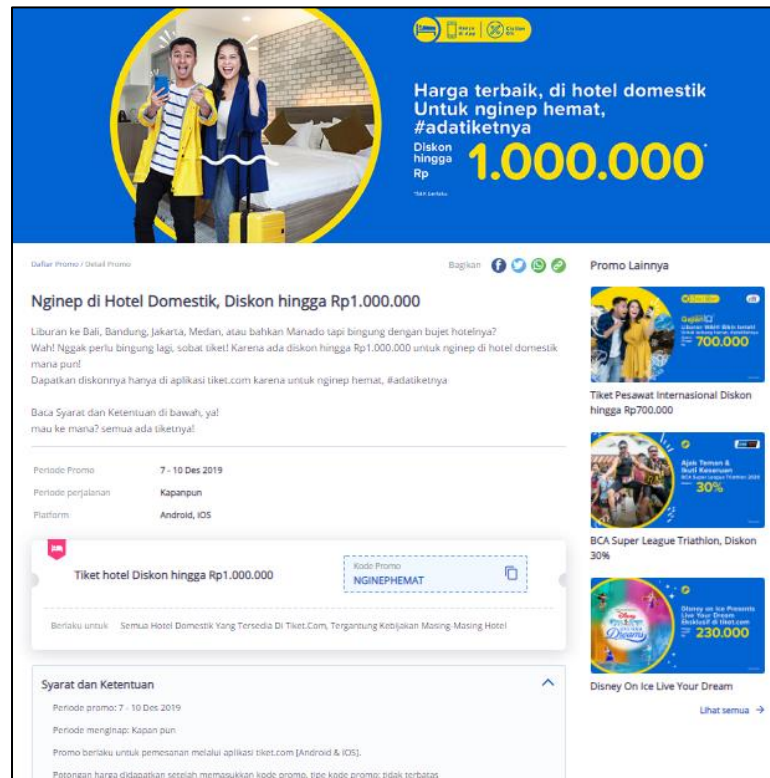
- User can see detail of promo
- User can share the promo to media social (**facebook**, **whatsapp**, **copy link**).
- User can see other promos.

22. Manage Event

This feature is accessible for admin to manage events in this site. Admin can **insert** new event, **update** existing event, or **delete** existing event. Display all event events using grid template with pagination 10 items per page. Event can be searched based on price, date, category, destination. You are required to create your own text editor, and is not allowed to use library such as **tinymce**, **wysiwyg**, etc. Here's the criterias to insert/update post:

Field	Validation
Title	- Cannot be empty - At least 10 characters
Location	- Cannot be empty - Must be exists
Category	- Must be selected
Start Date	- Must be selected
Tickets	-
Thumbnail Picture	- Cannot be empty
Description	- Cannot be empty
Term & Conditions	- Cannot be empty

Data should be displayed on Event:
- Title
- Thumbnail Picture
- Location
- Date and time

23. Manage Flight

This feature is accessible for admin. This page can manage flight ticketing. The admin can **insert** new flight ticket, **update** existing flight ticket and **delete** existing flight ticket. Display all existing flight tickets with searching multiple query field and paginate 10 items per page. **Loading indicator** and using **prompt message** before delete are required for better UI/UX.

Data should be displayed:
- Flight Company
- Icon Company
- Depart Date
- Arrive Date
- Duration Time
- Price
- Flight Details timeline
- Transit

24. Manage Hotel

This feature is accessible for admin. This page can manage hotel reservation. The admin can **insert** new hotel ticket, **update** existing hotel ticket and **delete** existing hotel ticket. Display all existing hotel tickets with searching multiple query field and paginate 10 items per page. **Loading indicator** and using **prompt message** before delete are required for better UI/UX.

Data should be displayed:
- Hotel images
- Hotel location
- Hotel rating
- Hotel address
- Hotel facilities

- Hotel room types
- Hotel information

25. Manage Train

This feature is accessible for admin. This page can manage train ticketing. The admin can **insert** new train ticket, **update** existing train ticket and **delete** existing train ticket. Display all existing train tickets with searching multiple query field and paginate 10 items per page. **Loading indicator** and using **prompt message** before delete are required for better UI/UX.

Data should be displayed:
- Train name
- Depart time
- Arrive time
- Train class / type

26. Manage Blog

This feature is accessible for admin. This page can manage article. The admin can insert new article, update existing article and delete existing article. You are required to create your own text editor, and is not allowed to use library such as **tinymce**, **wysiwyg**, etc**.** Show all existing articles with searching multiple query field and paginate 10 items per page. **Loading indicator** and using **prompt message** before delete are required for better UI/UX.

Data should be displayed:
- Article thumbnail
- Title
- Category
- Content