iOS Development (MAPD714)

Project: <u>Cruise App</u>

Submitted to: Prof. Vinayagathas Vaithilingam

By:

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1. Project Description

The goal of our project, the "Cruise App," is to create a thorough and user-friendly mobile application that makes it easier for vacationers to research, pick, and book cruises. This app will enable customers to easily plan their cruise holidays by offering comprehensive cruise information, configurable booking options, secure payment processing, and transparent booking summary. It places a strong emphasis on ease, accessibility, and customer happiness.

1.1. Project Scope

1) **Scope Overview:** The "Cruise App" project entails building a feature-rich iOS software that provides customers with a simple platform for booking and arranging cruises. Our project prioritizes user-friendliness, simplicity, and security to offer a smooth experience from cruise selection to payment. The range of services encompasses choosing a cruise, accommodating guests, safe payment methods, and clearly displaying reservation details.

2) **Scope Objective:**
   a) **Cruise Selection and Customization:** The main goal is to give consumers the freedom to investigate and select from a wide range of cruise possibilities, accommodating various preferences and travel experiences.
   b) **Customization of Guest Information:** Users will have the freedom to create personalized and inclusive experiences by defining the number of guests, including adults and children, and confirming whether any visitors are Seniors (over 60).
   c) **Secure payment processing:** Our project seeks to build a reliable payment system that will allow customers to conduct secure transactions using a variety of payment methods.

1.2. Project Objective

1) **Object overview:** The "Cruise App" project has specific goals that are intended to give users a streamlined and dependable platform for organizing and making cruise reservations. The following are the main goals of the project:
   a) **User-Friendly Interface:** Create an intuitive and aesthetically pleasing mobile application interface to make it easier for users to navigate and improve their overall experience.
   b) **Transparent Booking Information:** By presenting a thorough checkout summary, the project aims to give transparent booking information. Important information such client information, cruise type, destinations visited, cruise duration, number of guests, number of nights, and total cost will be included in this summary.

c) Efficient Booking Process: By streamlining cruise selection, guest customisation, and safe payment handling, we hope to develop an effective and convenient booking experience that will eventually save users time and effort.

In conclusion, the "Cruise App" project we're working on intends to provide users with a simple, secure way to book cruises. We aim to deliver a seamless booking experience that satisfies the expectations of people planning outstanding cruise vacations by putting a strong emphasis on user friendliness, transparency, and efficiency.

2. Specification/Requirements

1) **Cruise Selection and Customization:**
   a) Numerous cruise alternatives are available for users to browse and choose from.
   b) The number of adults and children travelling can be specified by users.
   c) Users can verify whether any passengers are elderly citizens (over 60).
   d) There are numerous sorts and locations for cruises.

2) **Guest Information Management:**
   a) Name and address information are among the personal details that users can submit and edit.
   b) The customer's city and nationality are gathered by the app.
   c) The number of visitors—adults, children, and elders (if any)—can be specified by users.

3) **Secure Payment Processing:**
   a) Users have a variety of payment methods to select from, including credit cards and electronic wallets (like Apple Pay).
   b) Credit card data, including the card number, card type, and expiration date, is securely gathered and validated by the app.

4) **Checkout Summary Display:**
   a) The "Reserve" button triggers the app to show a thorough checkout report.
   b) The following details are included in the checkout summary:
      i) Customer Name
      ii) Customer Address
      iii) City and Country
      iv) Type of Cruise
      v) Visiting Places
      vi) Cruise Duration
      vii) Number of Guests (Adults and Kids)
      viii)   Number of Nights
      ix) Total Price

5) **User Account Management:**
   a) Accounts can be made by users and managed by them.
   b) Logging in allows registered users to access their booking history.
   c) Options for account recovery and password reset are available.

3. Roles and Responsibilities

1) **Bhargav (Project lead, UI/UX, Developer):**
   a) **User Account Management Module:** Create the user registration, login, and account management features in the user account management module. Make sure the user onboarding process runs smoothly.
   b) **UI/UX Feedback:** Provide input on the overall user interface and user experience on a regular basis, offering design recommendations for enhancements.
   c) **Payment Processing Integration:** Ensure a seamless and safe payment experience for users by overseeing the integration of secure payment processing.

2) **Khanjan (Developer, UI/UX Contributor):**
   a) **Checkout and Payment Module:** Develop the functionality for checkout and payment processing, making sure that payment information is gathered safely.
   b) **Backend Data Handling:** Implement the system for storing and retrieving backend data to support user accounts, cruise reservations, and customer information.
   c) **Quality Assurance:** To ensure quality, thoroughly test both frontend and backend functionality, locating and fixing any problems or faults.

3) **Kajal (UI/UX Designer, Developer):**
   a) **Cruise Selection Interface:** The user interface for exploring and choosing cruise alternatives should be designed and developed. Make sure the layout is simple and pleasant to the eye.
   b) **Interactive Prototypes:** Create interactive prototypes for important app screens to allow for user testing and design improvement.
   c) **User Experience Enhancement:** Continually improve the user experience by concentrating on the navigation, layout, and aesthetic components to maximize usability.

4. Research

1) **Cruise Critic:** A well-known cruise booking software called Cruise Critic offers details and booking alternatives for a variety of cruise lines and locations.
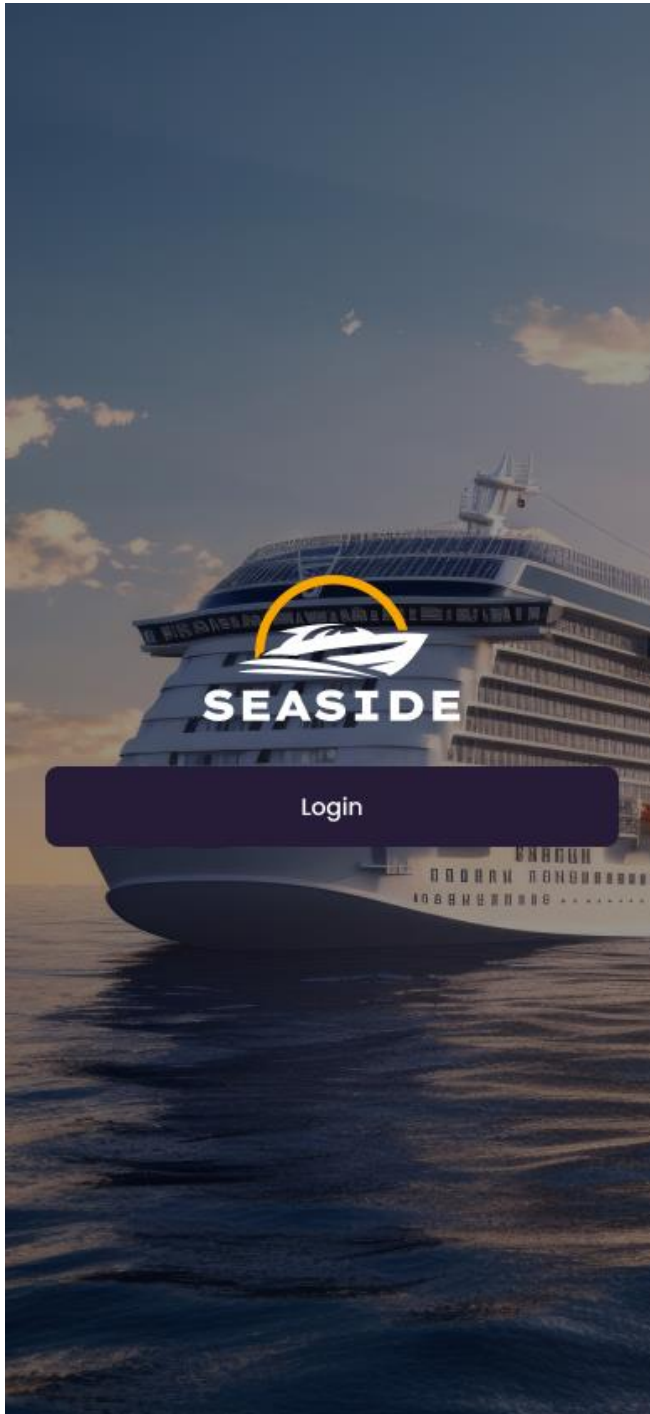   a) **Key Features:**
      i) **Comprehensive Cruise Listings:** Provides comprehensive details on a range of cruise companies, ships, itineraries, and locations.
      ii) **User Reviews and Ratings:** Users are given the opportunity to read and post reviews and ratings for cruises, offering insightful commentary.
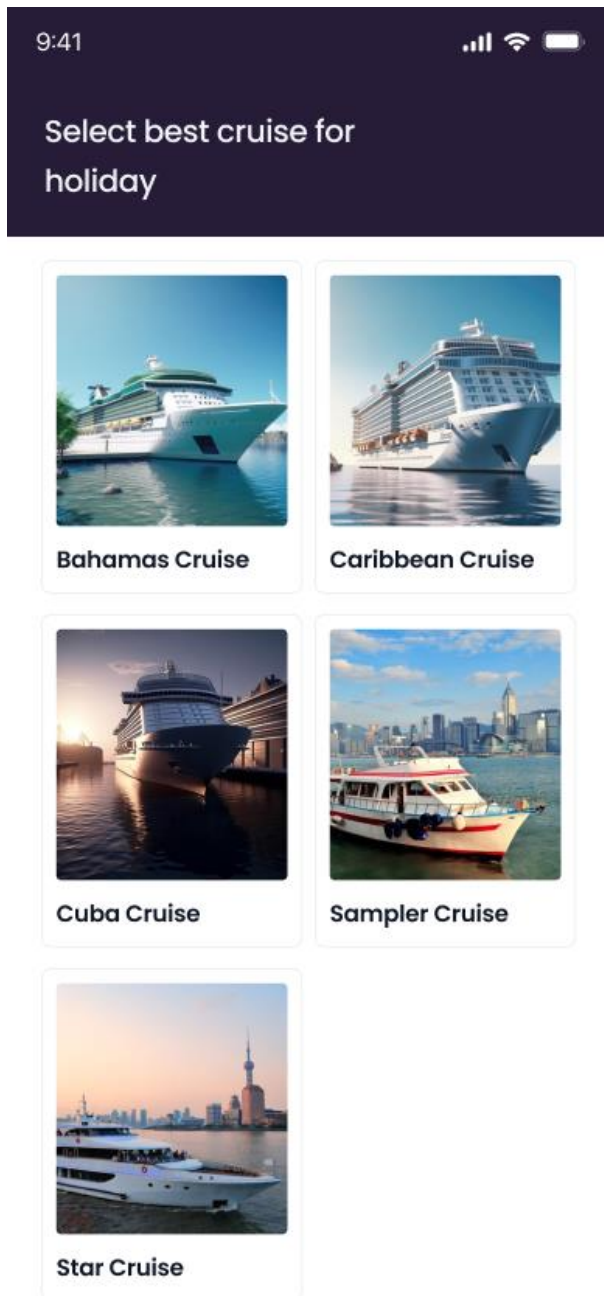
   iii) Cruise Forums: Forums for discussing cruises, exchanging advice, and asking questions are available.

   iv) Cruise Deals and Alerts: Offers notifications for discounts and cruise bargains under the heading "Cruise Deals and Alerts."

2) **Carnival Hub: The official app for Carnival Cruise Line, Carnival Hub, provides customers with a smooth cruise experience.**
  a) **Key Features:**
   i) **Pre-Cruise Planning:** Enables cruisers to arrange activities, meals, and shore excursions in advance.
   ii) **Onboard Messaging:** Communication amongst passengers on the same trip is made possible by onboard messaging.
   iii) **Real-time Cruise Information:** Offers details about aboard entertainment, cuisine, and activities.
   iv) **Booking and Reservations:** Enables travellers to make reservations for shore excursions, fine dining, and spa services.

3) **Royal Caribbean International:** The app from Royal Caribbean International improves the cruise experience for its customers.
  a) **Key Features:**
   i) **Pre-Cruise Check-In:** This feature enables travellers to finish the check-in process before boarding.
   ii) **Digital SeaPass:** Offers a digital version of the SeaPass card, which serves as a hotel key and a means of payment when at sea.
   iii) **Activities and Dining Reservations:** Book onboard activities, dinner reservations, and showtimes using the activities and dining reservations feature.
   iv) **Cruise Planner:** Onboard activities can be scheduled and managed using the interactive cruise planner.

- **Influence on App Development:** The examination of these current cruise applications offers numerous perceptions and affects on the creation of app:
  - i) **Comprehensive Information:** We will make sure that app offers thorough information about cruise alternatives, locations, and cruise lines, similar to what Cruise Critic does.
  - ii) **User Reviews and Ratings:** Include a tool for user reviews and ratings to foster customer feedback and increase confidence.
  - iii) **Pre-Cruise Planning**: Take into account including pre-cruise planning options like Carnival Hub, which let users schedule activities prior to their vacation.
  - iv) **Real-time Cruise Info:** Providing real-time information about onboard activities, food options, and entertainment in a manner akin to that of Carnival Hub.
  - v) **Booking & Reservations:** As with other cruise apps, customers should be able to reserve onboard activities, specialty meals, and shore excursions through the app.

5. Prototypes

- https://www.figma.com/file/cDiX0kAC1rX35NAadMvEyS/Sea-Side---Cruise-App?type=design&node-id=33-314&mode=design&t=kE16YAcAzKJ8zZ40-0

- **Initial Page**

- **Welcome page**

- **Cruise description page**

Caribbean Cruise   ★ 4.8

📍 Yogyakarta, Indonesia

Amet minim mollit non deserunt ullamco est sit
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Amenities   Show More

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Wifi	Dinner	AC	Spa

Location

Review

Maman Sutarman   ★ 4.8
20 November 2022

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duis enim velit mollit"

Maman Sutarman   ★ 4.8
20 November 2022

"Amet minim mollit non deserunt ullamco est sit
aliqua dolor do amet sint. Velit officia consequat
duis enim velit mollit"

Show All Reviews

$ 50.22   Reserve Now
Per Night Per Person

- **Booking page**

9:41

Fill Form

Name

Emily Cooper

Destination

Toronto

Address

4140 Parker Rd. Allentown, New Mexico 31134

Number of kids

25

Number of kids

25

Phone number

+91 956237152

Check In

16 Nov 2022

Check Out

18 Nov 2022

Anyone Travelling Over 60

● Yes   ○ No

Submit

- **Payment details page**

9:41

< Payment

Price Detail

Subtotal	$ 231
Discount	-$ 2
Tax	Included
Protection	Free

Total **$ 229**

Choose Payment Method

Master Card ⦿

PayPal ○

Visa ○

Name on card

Emily

Card number

25

CVV
***

Expiry Date
03/23

Confirm

▪ **Confirm payment and checkout page**

9:41

< Payment

Caribbean Cruise

📍 Yogyakarta   ⭐ 4.8

16 Nov 2022 – 18 Nov 2022

Passanger Detail

Samuel Jakson

✉ samuaelj@mail.com   📞 (+64) 819283 1283

📍 4140 Parker Rd. Allentown, New Mexico 31134

👥 Number Of Guests : 15   🌙 Nights : 1 Day 2 Night

Payment Detail

🔴 Master Card

Subtotal $ 231

Discount   -$ 2

Tax   Included
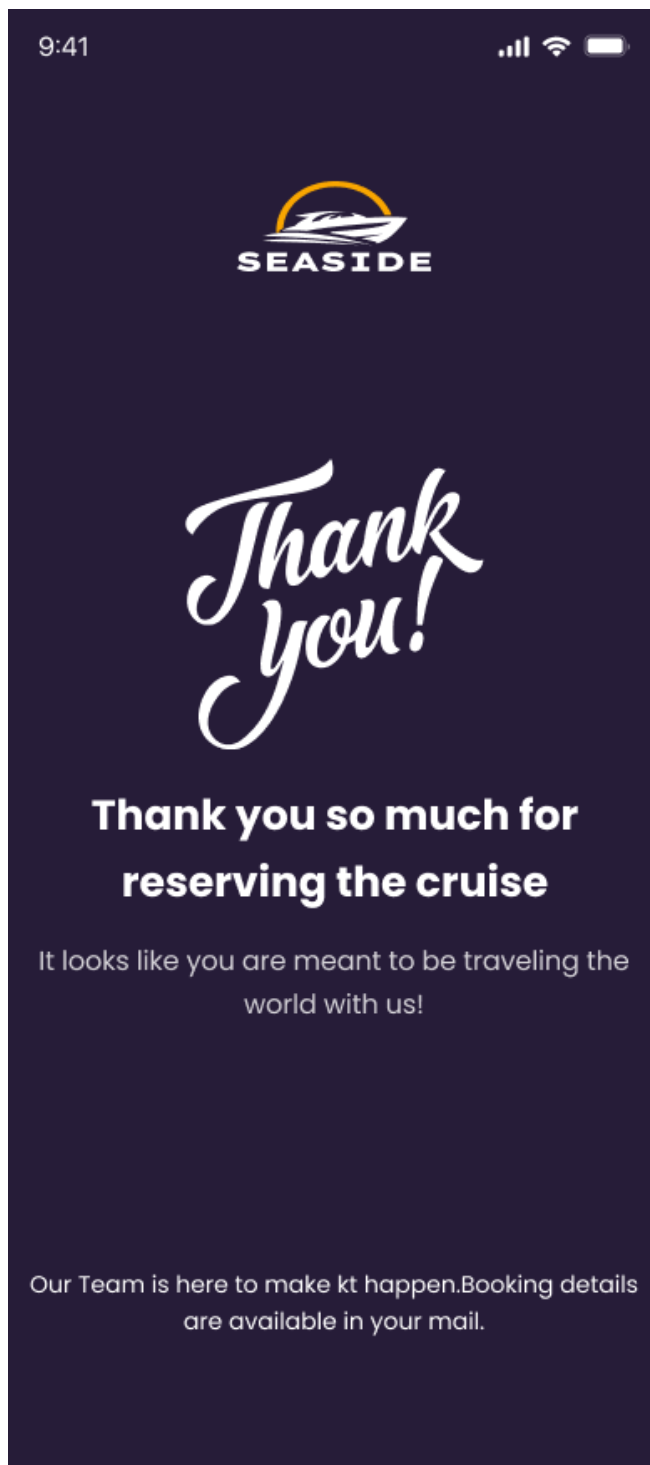
Protection   Free

- -

Total   **$ 229**

Choose Other Method

Checkout

- **Acknowledgment of successful booking**

6. Project Plan

1) **Milestone 1 – Mockups, Requirements Analysis, Team Project Plan, and Prototypes (Weeks 1-5)**
   a) Analyze the project requirements in detail.
   b) Observe and learn from the current cruise booking apps.
   c) Define the objectives, functional requirements, and scope.
   d) UI/UX mockups and prototypes should be made depending on the requirements received.
   e) Review and refine the user experience and design.
   f) Create a prototype and test it with users.
   g) Create a collaborative project plan that outlines roles, responsibilities, and job allocation.
   h) Specify the testing and development processes that will be used.
   i) Create a final project timeline with deadlines and milestones.

2) **Milestone 2 – Implementation of Selected Features and Functionalities (Weeks 6-8)**
   a) Week 6-7: Frontend Development
      i) Start building the Cruise App's front end.
      ii) Put your attention on user sign-up, cruise selection, and simple user interfaces.
      iii) Regularly evaluate your work and make UI/UX improvements.
   b) Week 8: Backend Development and Database setup
      i) Build the infrastructure for the backend, including the data storage and retrieval systems.
      ii) Create databases to manage customer and cruise information.
      iii) Ensure secure data handling practices.

3) **Milestone 3 – Implementation of Selected Features and Functionalities (Weeks 9-10)**
   a) Week 9: Payment processing integration
      i) Integrate safe payment processors, such as Apple Pay and credit cards.
      ii) Make that the security of payment processing complies with industry requirements.
      iii) Start putting in place features for guest data.
   b) Week 10: Development continues
      i) Keep working on the remaining features.
      ii) User account management and additional UI/UX improvements should be prioritized.
      iii) start the initial testing of the functions you implemented.

4) **Milestone 4 – Implementation of Data Source, Fetching, and Displaying Data (Weeks 11-12)**
   a) Week 11: Backend data handling
      i) Implement backend functions for data retrieval and storage.
      ii) Make sure that the front end and the back end are synchronizing data smoothly.
      iii) Conduct a test run of the data handling procedures.
   b) Week 12: Quality assurance and testing
      i) Test the program carefully for usability, security, and functionality.
      ii) Find and fix any bugs or problems.
      iii) Start testing integration with external services, such as payment gateways.

5) **Final Version – Integration, Testing, and Beta Application Delivery (Weeks 13)**
   a) Week 13: Integration and Final testing and refinements
      i) Integrate every element of the Cruise App, including data extraction and payment processing.
      ii) Complete end-to-end testing should be done.
      iii) Create a beta version of the app.

6) **Final Submission and Presentation (Week 14)**
   a) Week 14: Submission and Presentation
      i) Assemble the project's supporting materials, such as design documents and user manuals.
      ii) Get ready to submit the project's final version.
      iii) Make a presentation that highlights the project's goals, successes, and highlights.

7. Reference

[1] https://www.cruisecritic.com
[2] https://www.cruisehive.com/18-must-know-things-about-carnival-hub-app/22834
[3] https://www.royalcaribbean.com
[4] https://www.royalcaribbeanblog.com/2022/03/01/whats-included-your-royal-caribbean-cruise-fare
[5] https://www.cambridge.org/core/journals/journal-of-hospitality-and-tourism-management/article/abs/responsible-cruise-tourism-issues-of-cruise-tourism-and-sustainability/7DC8234DDFDD3736150DB96C2F300099
[6] https://www.sciencedirect.com/science/article/abs/pii/S027843191731037X