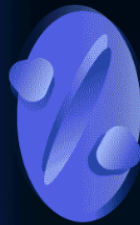




SOFTWARE ENGINEERING ACADEMY



SOAL SELEKSI

GENERAL SUBMISSION

The full description of the General Submission can be accessed at:

[General Submission Academy COMPFEST 16](#)

Technical Challenge: SEA Salon

Introducing SEA Salon, a rising star in the salon industry known for their outstanding services and excellent reviews. With a rapidly growing clientele and a stellar reputation, SEA Salon is your premier destination for all your beauty needs. Because of this, SEA Salon has gained a lot of customers. To handle the new customers, the SEA Salon management team has decided to develop a new SEA Salon Application.

This app lets users easily browse available services, select their preferred stylist, and book appointments quickly. With a user-friendly interface and seamless booking integration, making a reservation with a top stylist has never been easier!

The task will be divided into five progressive levels. The higher the level, the more points you can earn. Note that each level builds on the previous one, so you must complete the earlier levels before proceeding to the higher ones.

Level Overview

1. Level 1: SEA Salon Home Page (10 pts)
2. Level 2: Interactivity! (20 pts)
3. Level 3: Reservation System (5 + 15 pts)
4. Level 4: Authentication System (20 + 5 pts)
5. Level 5: Advanced Reservation System (15 + 10 pts)

Level 1: SEA Salon Home Page (10 pts)

Today marks the beginning of the school holidays. Last week was the final day of school, leaving your schedule wide open. Suddenly, an email from someone named Thomas pops up in your inbox. "Who is this Thomas?" you wonder as you open the email. To your surprise, it's from the manager of SEA Salon! He is requesting that you develop an application for SEA Salon. Since you're on holiday and have been learning about Software Engineering, you eagerly agree to

take on the project. The next day, Thomas sends you another email with the details of the application. The contents are as follows.

1) Create a homepage for SEA Salon

Your task is to create a homepage for the SEA Salon application that highlights the salon's name, slogan, services offered, and contact details. The details are provided below. This page should contain static content; no dynamic data is required at this stage.

- Name: SEA Salon
- Slogan: "Beauty and Elegance Redefined"
- Services:
 - Haircuts and Styling
 - Manicure and Pedicure
 - Facial Treatments
- Contact Details:
 - Thomas
 - Phone Number: 08123456789
 - Sekar
 - Phone Number: 08164829372

Thomas wishes you the best luck. With a clear purpose and plenty of free time, you feel confident that you can create something truly impressive for SEA Salon.

Level 2: Interactivity! (20 pts)

After working long and hard on the application, you've finally made a working application! You named it version 1.0. You are very proud of what you've achieved. Now, it's time to send the application to Thomas for him to review. The day after sending the email, you received a reply from Thomas. He is very pleased with your application! However, he requested one more thing: Interactivity! He wants the users to be able to leave reviews on the salon. Due to some restrictions, he said the reviews don't need to sync to a database yet. The full details are as follows.

1) Implement a customer review system

Your task is to create a review system for customers. As of now, the reviews don't need to sync with a database. You only need to store the reviews in a state. For the review, customers can rate the salon from 1 to 5 and also leave a comment. The full review model is as follows.

- Customer Name
- Star Rating: From 1 to 5

- Comment: Simple text, no need for rich text

Thomas wishes you good luck on the application. He also advises you not to be afraid of criticism and to use it to improve yourself. With this in mind, you are filled with determination to enhance your application.

Level 3: Reservation System (5 + 15 pts)

While working on the application, you suddenly receive another email from Thomas. The subject line reads, "URGENT!" You panic momentarily, wondering what went wrong. After reading the email thoroughly, it turns out SEA Salon is becoming more popular. The reservation system they had been using is now unreliable due to the increase in customer traffic. Thomas is asking you to implement a reservation form within the application.

1) Create a reservation form (5 pts)

Your task is to create a form in the application for users to put in their details and make a reservation. Because of this urgency, the form does not need to be very complex. However, you need to sync it with a database of your choice. Once the form is submitted, it should appear in the database. The form fields are as follows.

- Name
- Active Phone Number
- Type of service: Haircuts and styling, manicure and pedicure, or facial treatments
- Date and Time: Each session is one hour long, open from 9.00 a.m. until 9.00 p.m.

2) Integrate customer review system with database (15 pts)

Remember how in level 2 you are tasked to create a customer review system? Your task is to integrate a database to persist the reviews so that it won't go away once you restart the application. The model is the same as in level 2.

Thomas apologizes for the abrupt update. He is counting on you to improve the application. With a smug face, you say to yourself, "I can do this all day."

Level 4: Authentication System (20 + 5pts)

Once done with the reservation form, you send the next version of the SEA Salon application, version 2.0, to Thomas. He once again apologizes for the abrupt request but is very pleased with how quickly you implemented the changes.

For a while, you don't hear from Thomas. Then one day, another email arrives. This time, Thomas is requesting an authentication system to secure user data and ensure that only authorized users can access certain features of the app. The details are as follows.

1) Implement an authentication system (20 pts)

At this level, you are tasked to implement a login system for users. The user model is as follows.

- User ID
- Full Name
- Email
- Phone Number
- Password (bonus points for password hashing)
- Role (Customer or Admin)

a) Customers

The first type of users is Customers. Customers are main users of the SEA Application. Users can only register as customers. Once logged in, customers will be redirected to the customer dashboard page. On this page, customers can make reservations and view details of their past reservations.

b) Admins

The second type of users is Admins. Users cannot register as admins; instead, there is only one admin, Thomas, whose details you must hardcode. Once logged in, the admin is redirected to the admin dashboard page.

- Full Name: Thomas N
- Email: thomas.n@compfest.id
- Phone Number: 08123456789
- Password: Admin123

On this page, admins can add new services to the salon, requiring two inputs: the name of the service and the duration of the session. The model for a service should include the service name and the duration per session.

2) Implement member only reservation (5 pts)

As of now, anyone can make reservations at SEA Salon. Your task is to integrate the login system you've built so that only members can make reservations. There are no changes to the reservation form fields.

Thomas is very satisfied with the progress of the SEA Salon application and trusts you to make these improvements.

Level 5: Advanced Reservation System (15 + 10 pts)

Thanks to your efforts, SEA Salon has grown exponentially! To meet demands, the management of SEA Salon decides to open branches in several locations. But there is a problem. The SEA Salon application only supports one branch! Therefore, Thomas is asking for your help once again. The details are as follows.

1) Improve admin dashboard (15 pts)

At this level, you are tasked to create an admin dashboard with the ability to create new branch locations. This feature allows admins to create a new branch with a name and opening/closing time. The details for each branch location should include:

- Branch name
- Branch location
- Opening time
- Closing time

Currently, the admin dashboard is outdated and only supports adding services to a single salon. You will need to adjust this feature to support multiple branches, ensuring that each branch can offer different services.

2) Implement advanced reservation system (10 pts)

The current reservation system does not require users to specify a branch location, since there was only one branch. Now that SEA Salon has grown, the reservation system needs to have a branch selection. Note that, at this stage, each branch offers different services, has different opening and closing times, and each service varies in duration.

Thomas is counting on your expertise to make the SEA Salon application a robust tool that supports the salon's growth and continued success.

After completing the final feature request, your holiday draws to a close. You send a heartfelt thank you to Thomas for the incredible opportunity to work on the SEA Salon application. In response, Thomas expresses his gratitude for your hard work and dedication, wishing you all the best in your future endeavors. As you prepare to return to your regular routine, you feel a deep sense of accomplishment and excitement for the possibilities that lie ahead in your journey as a software engineer.

Assessment Components:

1. Completeness of the criterias on each level
2. Clean code

3. Clean project architecture
4. Responsive layout
5. Readme documentation

Additional Points (25 pts):

1. Good and intuitive UI (10 pts)
2. Deployment (15 pts): You have the freedom to choose any deployment method you prefer.

Delivery:

1. **Works on Any Machine:** Make sure your project can run on any machine, not just yours!
2. **Repository Hosting:** Push your project to a repository hosting service, such as GitHub or GitLab. Make sure your project visibility is set to public for access and review.
3. **README:** Include a detailed README in your project root explaining how to set up and run your application, also include any environment variables that are needed to run the application. **Errors in program assessment due to unclear instructions are beyond our responsibility.**

Additional Notes:

1. Feel free to use any kind of website or mobile framework. There are no limitations on what technologies you use to build your application.
2. Be creative with your application! The criterias provided functions as a blueprint for your application. Feel free to add more features you think fit well with your application.

Examples:

1. <https://www.irwanteam.com/>
2. <https://johnnyandreas.com/en/home-en/>