MY AESTHETIC BROW STUDIO APPOINTMENT SYSTEM

A Project Study Presented to the
College of Informatics and Computing Sciences
Batangas State University
Batangas City

In Partial Fulfillment of the Requirements for the Courses:
IT311: Systems Administration and Maintenance
IT312: System Integration and Architecture
IT313: System Analysis and Design
IT314: Web Systems and Technologies

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I. INTRODUCTION

A. Project Context

Web applications have helped simplify many of the tasks we do on a daily basis that have made our lives easier. These applications are widely used to help us solve problems. In the past, these appointment processes were done manually and that is why there were a lot of cases of overbooking or forgetting to cancel appointments that can free up space to schedule another in its place. To eliminate human error due to configuration appointments manually, a web application is being developed to facilitate the planning process. Also considering the crowd of lives that many of us lead today, an online management system makes perfect sense, it frees up precious time not only for loyal customers but also for new clients and people who intend to embellish their faces.

Everyday we live in a generation where we can do and see everything on the internet as part of our life, making it easier for us to get and find what we want. MY Aesthetic Brow Studio is a clinic where they can fix and get clients' eyebrows done and because of this, there are many clients who want to come here and get their services. Because of the influx of clients who came suddenly, they are having a hard time entertaining them because they haven't scheduled yet and this is the clinic's problem. The proponents then come up with the appointment webpage system which is a visible solution to the clinic's problem.

B. Purpose and Description

The project is focused on developing a system that will help the clients access the clinic with the desired schedule. If we go back to the traditional way of getting a schedule, clients go to the clinic and talk with the assigned front desk staff. The clients will say their desired date and time and the staff will say their availability or either they just can give a flier of their schedules. Now that we are living in a modern-day walk-in is no longer being done now and that's why my group led to this project. The system allows the clinic to easily communicate with clients and discuss their chosen times and date. Especially since we are in a new normal where all of us are adjusting to the new protocols and relying on the internet as a major way to connect and communicate.

The main benefactors of the proposed project are the client or possessor of the MY Aesthetic Brow Studio and their customers. Online appointments help the admin or the client of the chosen business clinic to manage and monitor the customer who wants to set an appointment for their service. The webpage is convenient for customers because it can help them save time and effort to avail of the clinic service. This proposed webpage can also benefit future proponents that seek references and ideas for creating web page projects.

C. Objective

The system's main goal is to develop and put into use a web-based system for managing clients in the studio. Specifically aims to achieve the following goals:

- To develop a system that enables users to possess management over their appointment-creating service.
- To facilitate the customer with real-time aid planning
- To manage employees' resources required for managing appointments
- To make utilization of online platforms for fewer client inconvenience and high productivity.

D. Scope and Limitations

The system website focuses on scheduling appointments for the clinic studio chosen by the proponents, MY Aesthetic Brow Studio. The subject matter focuses on creating and logging in accounts for clients, displaying available time for appointments, reserving time slots, storing records in a database, and finally, providing a report for the clinic studio.

The system also has its limitations. The appointment web page system restricts any kind of online payment. Any sort of computation is beyond the scope of the web page project.

II. SYSTEM ANALYSIS

II.1. Development Model

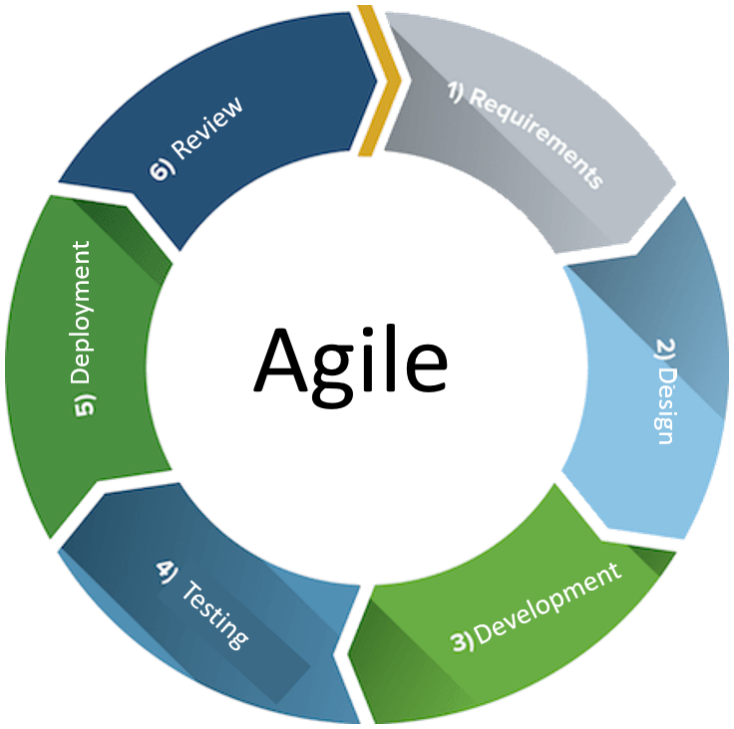


Figure 2.1. Agile Development Mode

1. **Requirements**

The phase in which requirements are identified such as data or information that will be gathered for the creation of the MY Aesthetic Brow Studio Appointment Webpage System. To ensure the precision and validity of the proposed webpage system, requirements must be critiqued.

2. **Design**

In this phase, the formulation of the design for the webpage system happens. The gathered requirements are the basis or foundation for the design making of the proposed project.

3. **Development**

This is where the appointment web system establishes. Creation of the interface and other functions of the system relative to the planned webpage design.

4. **Testing**

This is where the inspection and analysis of the established appointment webpage system is.

5. **Deployment**

The phase at which point the system is eventually utilized on the web and can already be used.

6. **Review**

In this phase, the progress of the entirety of the appointment webpage system is evaluated and analyzed to see whether the progress that is made corresponds to the requirements for the proposed project.

II.2. Development Approach

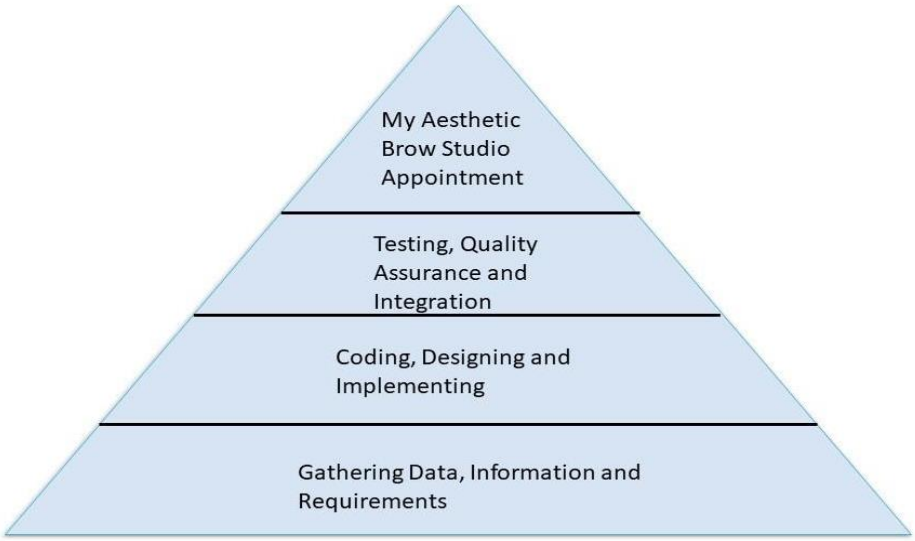


Figure 2.2. Bottom-Up Approach

A bottom-up development technique was employed by the researchers and developers, which involves increased developer involvement in the creation of the web system. The group came to a consensus on the system's optimum use and design by combining their experience and working together.

Prior to creating the web system's core features and functionalities, the developers initially constructed the pages, designs, and layouts. The lower-level functions are individually tested first because they are needed to support the higher-level functions. The entire system is formed as those smaller components are integrated. Overall, the team's collaboration is enhanced by this bottom-up approach, and they feel more invested in the project's creation.

II.3. Schedule and Timeline

To ensure that the web system will be ready by the deadline, Gantt charts are used to take track of both the tasks that have to be completed that week.

Activities	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Planning						
Analysis						
Designing						
Development						
Testing						
Development						

Table 2.1: Gantt Chart

II.4. Project Teams and Responsibilities

This section shows the project teams and responsibilities of the proper distribution of work that will benefit the whole team. Table 1 will show the titles and contact numbers of the staff that will serve as points of contact for the system integration, the name, and their responsibilities for creating this system.

II.4.1. Responsibilities

In this section, identify the System Proponent, the name of the responsible or issuing organization, and the titles and telephone numbers of the staff who serve as points of contact for the system integration. It should also include who has approval authority for each

unit of the system. If this activity is contracted out, list the names and phone numbers of the contractor responsible for the development and integration.

Title	Name	Contact Details
Lead Developer	Malaluan, Arvin C.	20-03723@g.batstate-u.edu.ph
System Designer	Esguerra, Jenina G.	20-05284@g.batstate-u.edu.ph
System Analyst	Sandoval, Ezaira C.	20-02306@g.batstate-u.edu.ph
Researcher and Documenter	Esguerra, Jenina G. Pugoy, Ivy D. Sandoval, Ezaira C	20-05284@g.batstate-u.edu.ph 20-01448@g.batstate-u.edu.ph 20-02306@g.batstate-u.edu.ph

Table 2.2. Responsibilities

Approval Authority	Roles	Subject
Owen Patrick Falculan	Instructor	Web Systems and Technologies
Jefferson I. Cañada	Instructor	System Analysis and Design
John Robert Atienza	Instructor	System Integration and Architecture
Jei Pastrana	Instructor	System Administration and Maintenance

Table 2.3. Approval Authority

II.4.2. Activities and Tasks

The tables below provide the major requirements needed for the integration of the web system. It includes the task to be accomplished, the required resources needed to accomplish the task, the key personnel that is responsible for the specific major task, and the criteria to successfully complete the task. Major tasks are drawn down from planning, researching information for the system's content, initial testing, and overall testing for the integration of the system's functionalities.

1. **Topic Analysis and Planning**

Accomplished Tasks	Come up with the topic to be proposed
Key Person(s)	Esguerra, Jenina Malaluan, Arvin Pugoy, Ivy Sandoval, Ezaira
Resources Required to Accomplish the Task	Internet Connection Store around the area Related topic to the system
Criteria for Completing the Task	Brainstorming with the members The project should be useful and must solve the given problem It should be timely and automated
Evaluation	Everyone participates in giving ideas and suggesting about the topic. The topic is decided.

Table 2.4.

2. Gathering Data Information

Accomplished Tasks	Got the client Proposal got approved Some contents are gathered
Key Person(s)	Esguerra, Jenina Pugoy, Ivy Sandoval, Ezaira
Resources Required to Accomplish the Task	Internet Connection, Contacting, and visiting the clinic
Criteria for Completing the Task	Make them agree to be the developer's client Gather Information about the clinic
Evaluation	The clinic agreed to be the developer's client. The proposal has been approved.

Table 2.5.

3. Creating a Model

Accomplished Tasks	Reference model in making a web system is created.
Key Person(s)	Malaluan, Arvin
Resources Required to Accomplish the Task	Internet Connection, Laptop/Computer, Other websites similar to the topic, Web Designs
Criteria for Completing the task	Making a reference when creating the web system
Evaluation	The web system model is successfully created as a reference in creating the web system.

Table 2.6.

4. Designing of Web System

Accomplished Tasks	Web System Design Font, Size, Color, Grids, Containers, Styles
Key Person(s)	Malaluan, Arvin Esguerra, Jenina
Resources Required to Accomplish the Task	Internet Connection, Laptop/Computer, W3schools website, Chrome, YouTube, HTML, CSS, Visual Studio, Bootstrap
Criteria for Completing the Task	Study the tutorials Make a Design
Evaluation	The system's appearance is getting better as it is continuously developing.

Table 2.7.

5. Documentation

Accomplished Tasks	Providing appropriate documentation of each unit for integration.
Key Person(s)	Esguerra, Jenina Pugoy, Ivy Sandoval, Ezaira
Resources Required to Accomplish the Task	Internet Connection, Laptop/Computer, Web system
Criteria for Completing the Task	Run and use the system Document every part and function of it.
Evaluation	Documentation is updated with every accomplishment of the system.

Table 2.8.

6. Unit Testing

Accomplished Tasks	Testing every function of the web system
Key Person(s)	Malaluan, Arvin Esguerra, Jenina Pugoy, Ivy Sandoval, Ezaira
Resources Required to Accomplish the Task	Internet Connection, Laptop/Computer, Web system
Criteria for Completing the Task	Test the functions that are done to evaluate its outcome.
Evaluation	Every function got an error sometimes but it eventually got fixed.

Table 2.9.

7. Database and Backend Implementation

Accomplished Tasks	Established software requirements
Key Person(s)	Malaluan, Arvin

Resources Required to Accomplish the Task	Internet Connection, Laptop/Computer, YouTube, HTML, CSS, Visual Studio
Criteria for Completing the Task	To make a database that will serve as a content handler of the web system's information.
Evaluation	Database is implemented Functions are created and validated

Table 2.10.

8. Qualification Testing

Accomplished Tasks	Testing some part of the system that uses functions
Key Person(s)	Esguerra, Jenina Malaluan, Arvin Pugoy, Ivy Sandoval, Ezaira

Resources Required to Accomplish the Task	Internet Connection, Laptop/Computer, Web system
Criteria for Completing the Task	Debugging
Evaluation	Errors are seen and eventually fixed.

Table 2.11.

9. Integration of Web System Functions

Accomplished Tasks	Creating the whole web system.
Key Person(s)	Malaluan, Arvin
Resources Required to Accomplish the Task	Internet Connection, Laptop/Computer, Function of Web system
Criteria for Completing the Task	Connecting every function that creates the web system
Evaluation	The web system is created.

Table 2.12.

10. Deploying Web System

Accomplished Tasks	Deploying the web system
Key Person(s)	Malaluan, Arvin
Resources Required to Accomplish the Task	Internet Connection, Laptop/Computer, Web system
Criteria for Completing the Task	Deploying the web system in free hosting manner
Evaluation	It seen when searching in the searching

Table 2.13.

11. Overall Testing

Accomplished Tasks	Using the web system
Key Person(s)	Esguerra, Jenina Malaluan, Arvin Pugoy, Ivy Sandoval, Ezaira

Resources Required to Accomplish the Task	Internet Connection, Laptop/Computer, Web system
Criteria for Completing the Task	Debugging Finding flaws in the system
Evaluation	Errors are encountered but get fixed at the same time.

Table 2.14.

III. SYSTEM DESIGN

III.1. System Analysis and Design

An efficient appointment system encourages more organized attendance and better care for chronic and other cases where follow-up is important. The system contributes positively to the appointment of the in improving accessibility of customers and consequently their satisfaction. It aims to introduce Appointment Scheduling that would ease off the appointment scheduling journey for users and pave the path to a experience.

This will be a big help to all users that are having trouble looking for a clinic. Making it hassle-free for everyone as they can make an appointment anytime and anywhere.

III.1.1. Functional Requirements

Functional Requirements describe how a product must behave, and what its features and functions are. A function is nothing but inputs to the software system, its behavior, and outputs.

1. **Administrator of MY Aesthetic Brow Studio**
    1.1. The admin account is already registered to the database.
    1.2. The admin can see the pending appointment that is requested by the customers.
    1.3. The admin can either approve or marked the appointment done.
    1.4. The admin can see and modify the database of the entire system.
2. **User**
    2.1. The user can view the homepage.
    2.2. The user can register, log in, and log out of the system.
    2.3. The user can verify their identity using authentication.
    2.4. The user can book, edit or update, and cancel their appointment.

III.1.1. Non-Functional Requirements

1. **Usability**

    1.1. The system is simple to use, making it user-friendly for the customers and appointment service administrator.

    1.2. The system is accessible via an internet connection.

    1.3. The user can easily utilize the system because of the good design and quick response of all buttons.

2. **Security**

    2.1. The appointment service admin will only have access to the database and the capacity to update the system data, ensuring data protection.

    2.2. The system needs a password for you to be registered and make any appointment reservations.

3. **Performance**

    3.1. The home-page load time must be less than 2 seconds for customers to access the website via a steady internet connection.

    3.2. The system’s functionalities are always operational.

4. **Maintainability**

    4.1. The system will be simple to maintain when unexpected errors and bugs occur.

    4.2. The system can be stored within a specific time frame.

    4.3. The system's quick execution will be maintained.

5. **Localization**

    5.1. The system must operate, particularly in the designated location or within its parameter, which is Batangas.

III.2. Data Flow Diagram

The context level diagram and data flow diagram of the system that explained the interaction between the system and the users were illustrated in Figure 3.1 and Figure 3.2.

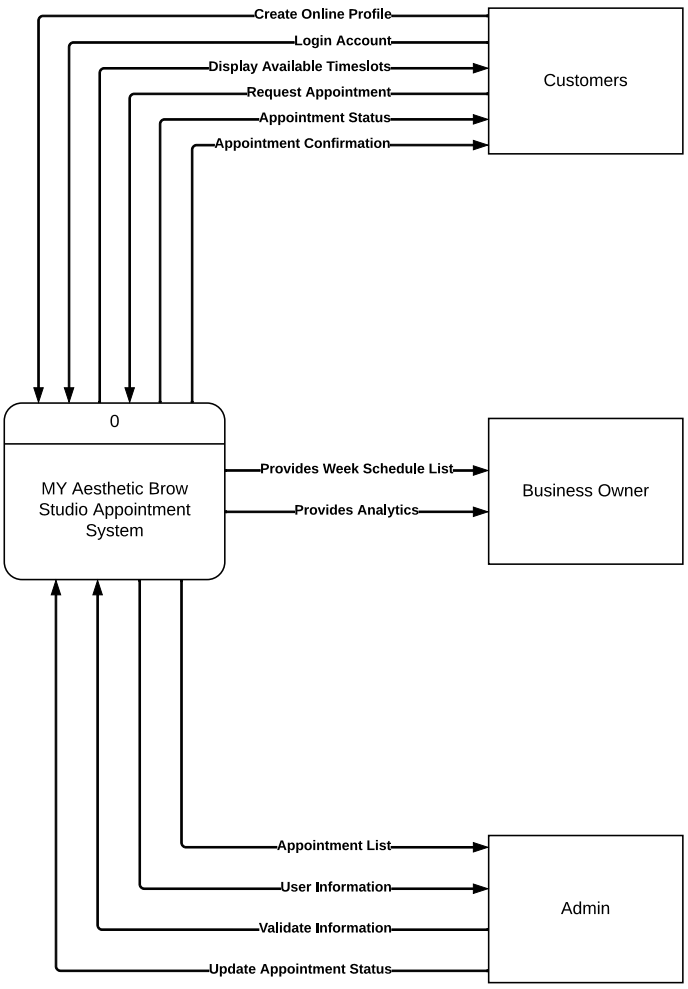


Figure 3.1 Context Diagram of the Proposed System

Figure 3.1 shows the context diagram of the proposed system which will outline the flow and relationship between entities. Figure 3.1 shows three defined external entities which are admin, system, and business owner. The users can create an online profile, log in to an account, and request an appointment through the system. The system then will display time slots, update appointment status for the customers, provide a weekly schedule list, analytics for business owners, and send appointment lists, and user

information to the admin for validation and confirmation of appointment requests.

Context diagrams are primarily used for identifying the scope of the project which is why the proponents deemed it necessary to create this diagram as they can also be used by others to understand more about the project.

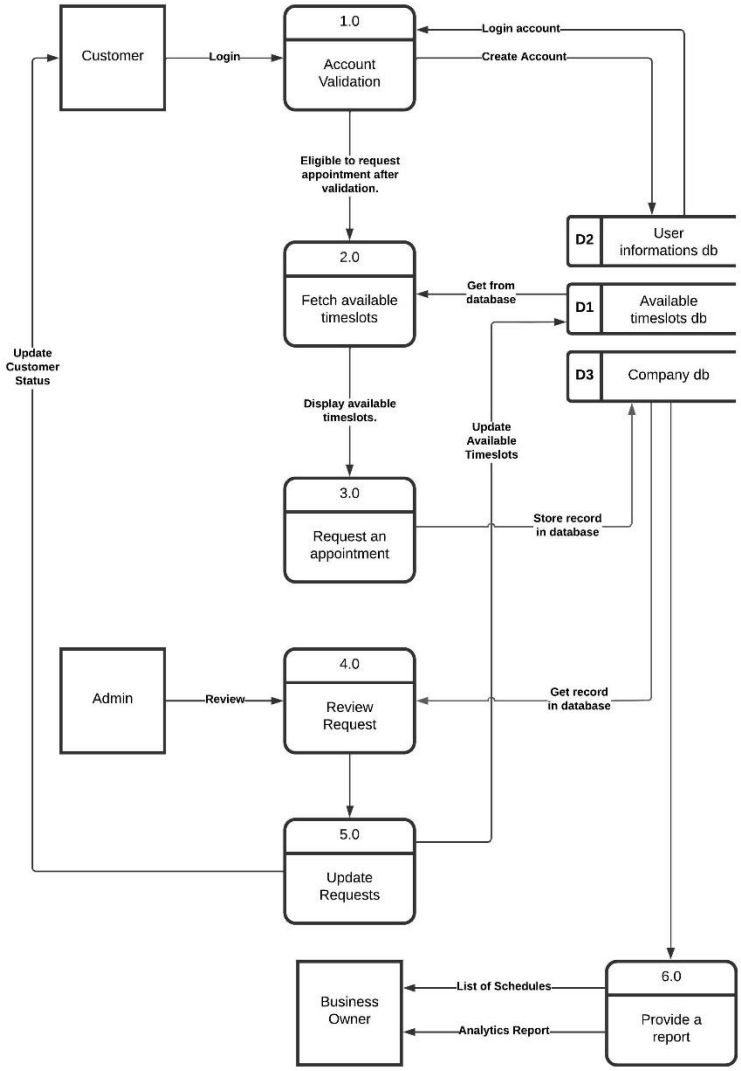


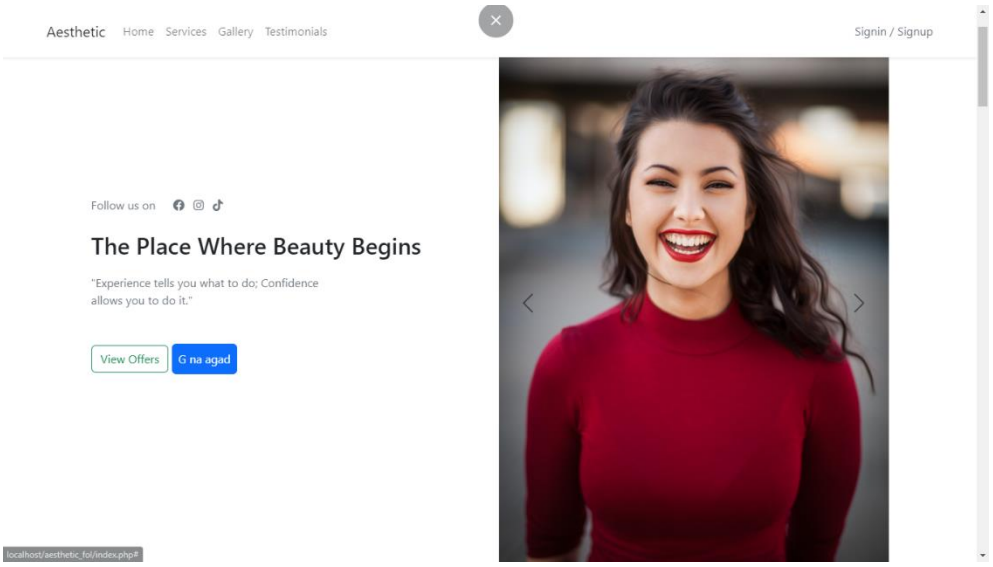
Figure 3.2 Data Flow Diagram Level-0

Figure 3.2 shows a more in-depth explanation of how the system will work which is presented in a Level-0 diagram. Process 0 was broken down into 6 major processes involved in the project, validating accounts, displaying available time slots, requesting appointments, reviewing requests, updating records, and providing reports.

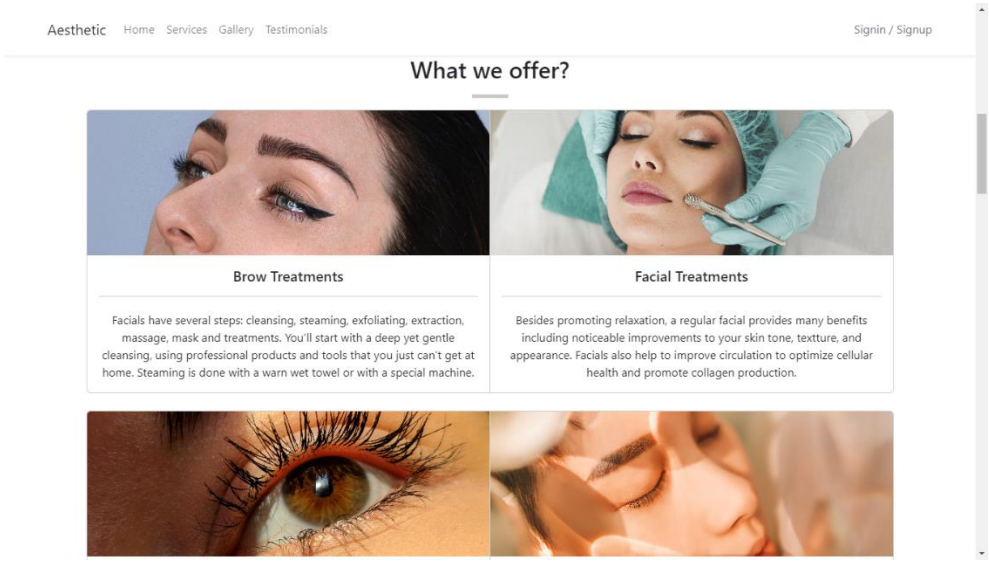
As shown in the figure, the customer gets validated first before the system displays available time slots from the data store. If the customer tries to make an appointment without getting validated, the user would be redirected to a login form before he/she makes a request. After requesting, it will be stored in a separate data store which will, later on, be accessed by the admin to review the request. After the admin decides to either reject or approve the request, it will update the available time slots, company database, as well as the customer involved. And lastly, the system will generate a report of schedules and analytics which will be sent to the business owner.

III.3. Graphical User Interface

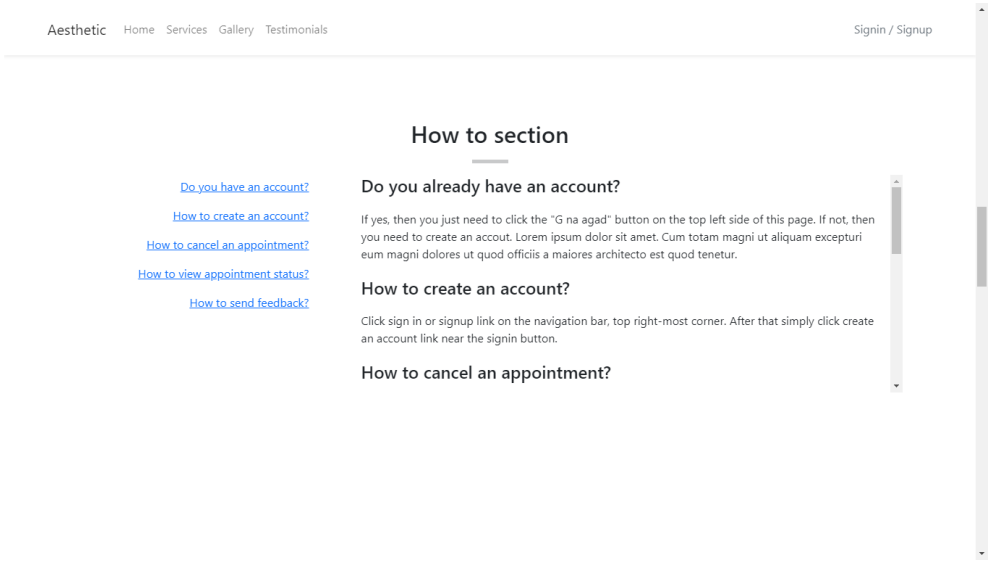
The following screenshots are the actual interface of the web system.



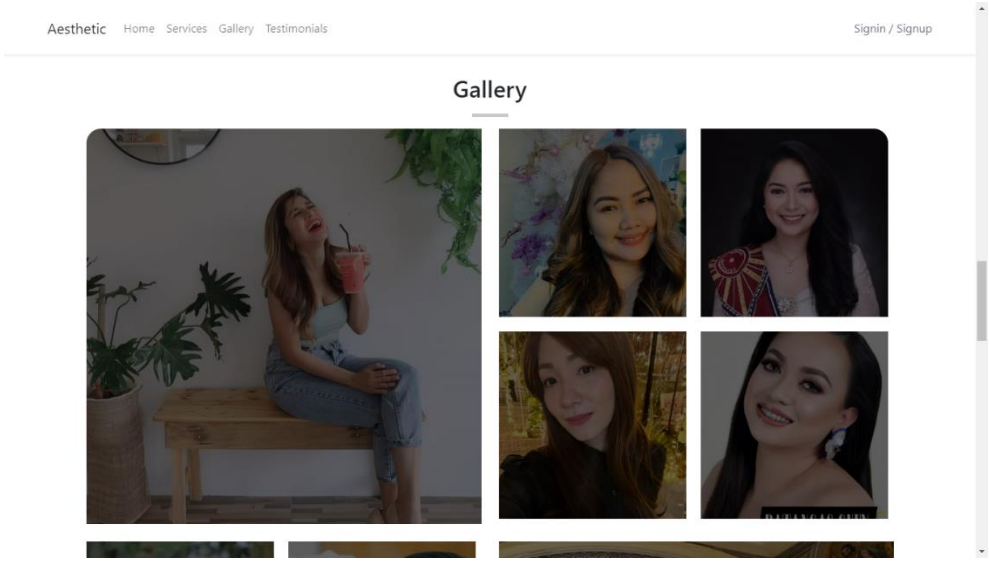
Home page and first page. The face of the web system. This is a short and simple design which aims to get the interest of the user.



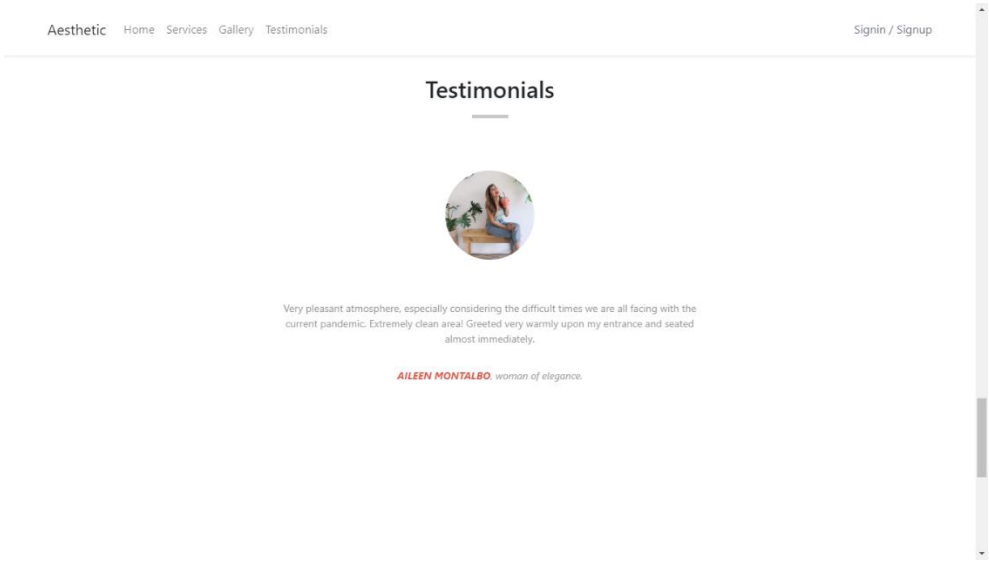
Services. It is where the information about what we offer to the customers is.



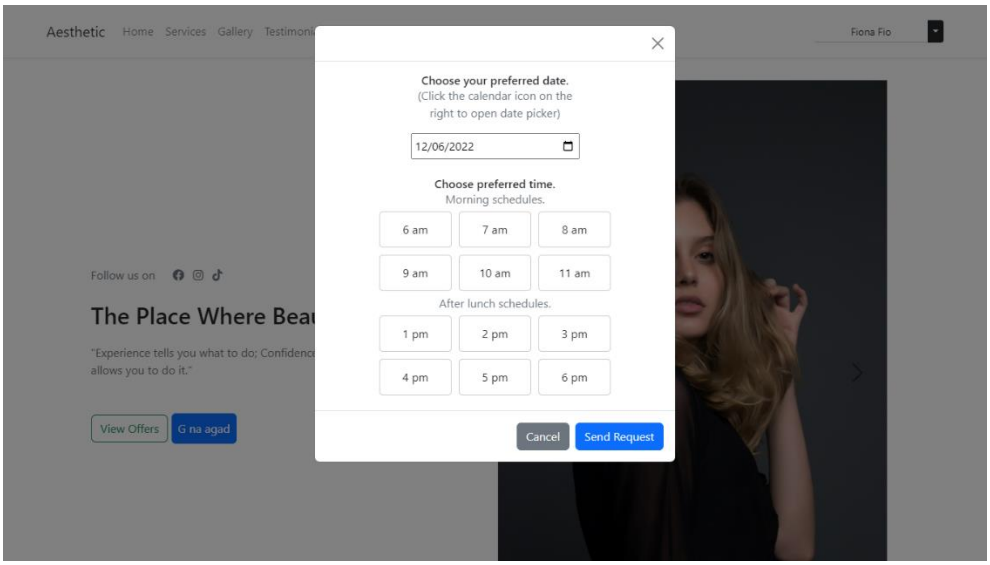
How to section. A simple section which aims to tell what the users' might do when they face certain problems while using the website;



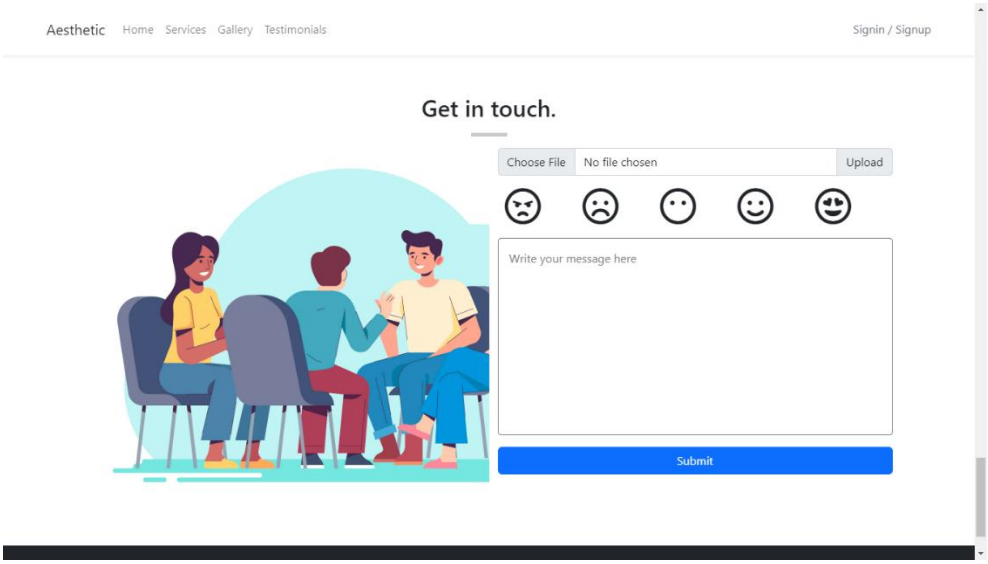
Gallery. It shows the pictures of the recent clients of the MY Aesthetic Brow Studio



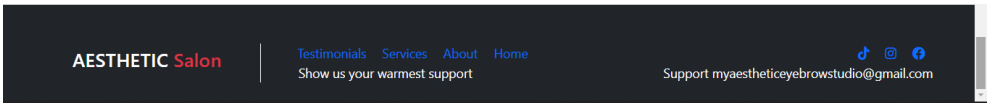
Testimonials. It is where the client's testimonials are.



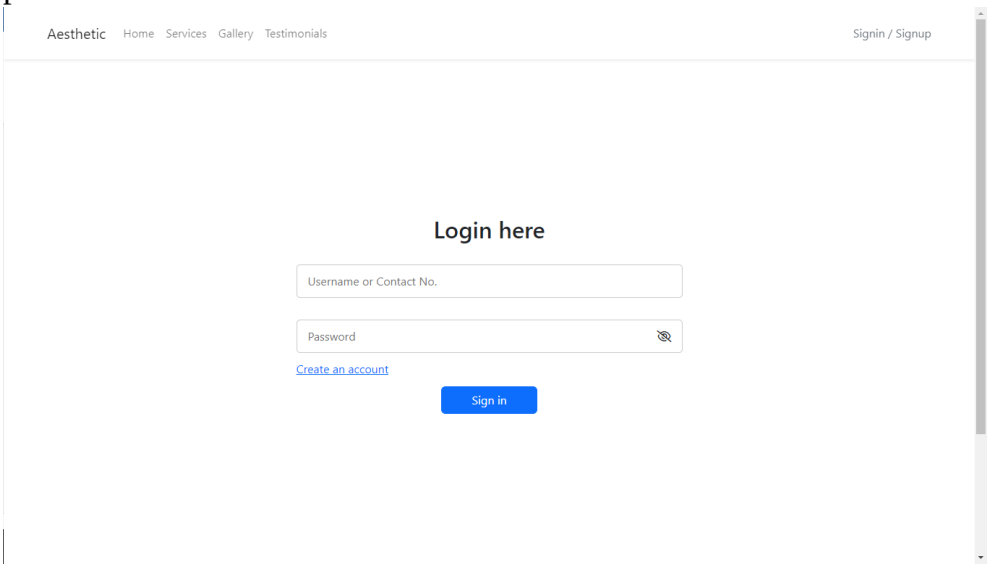
G na agad. It is where the client wants to book an appointment. They can choose what date and time they want to book.



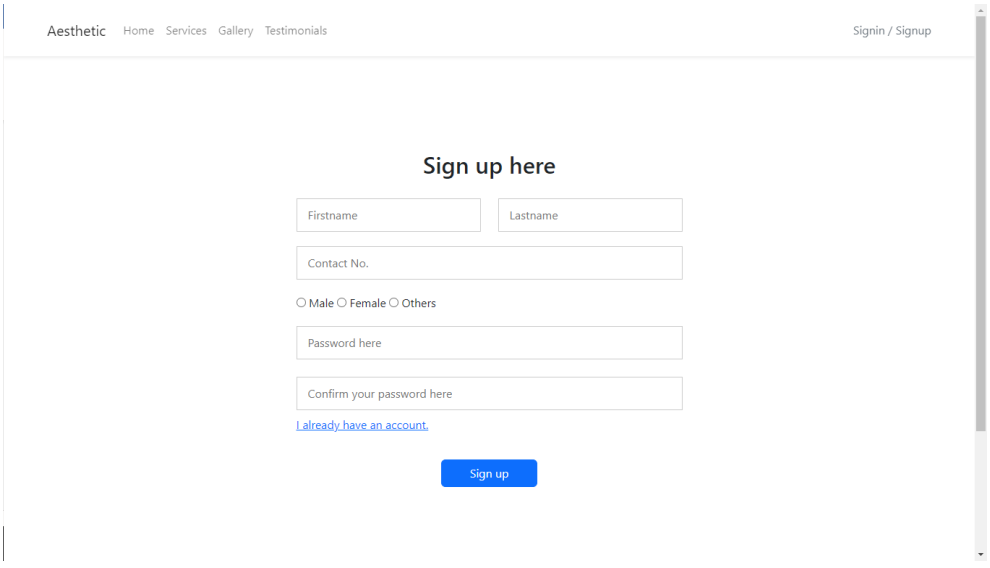
Get in touch. It is where you can message the studio if you want problems, comments, and suggestions.



Navigation and Footer. Mainly used to browse other links or move scroll position.

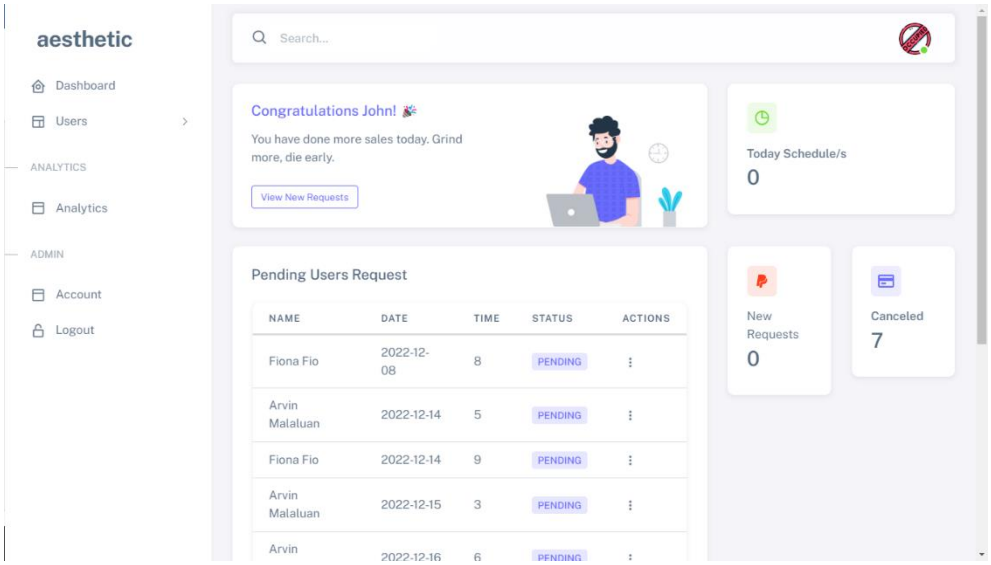


Login. It is a way to enter the personal account of clients wherein they need to sign in, to be able to set an appointment.

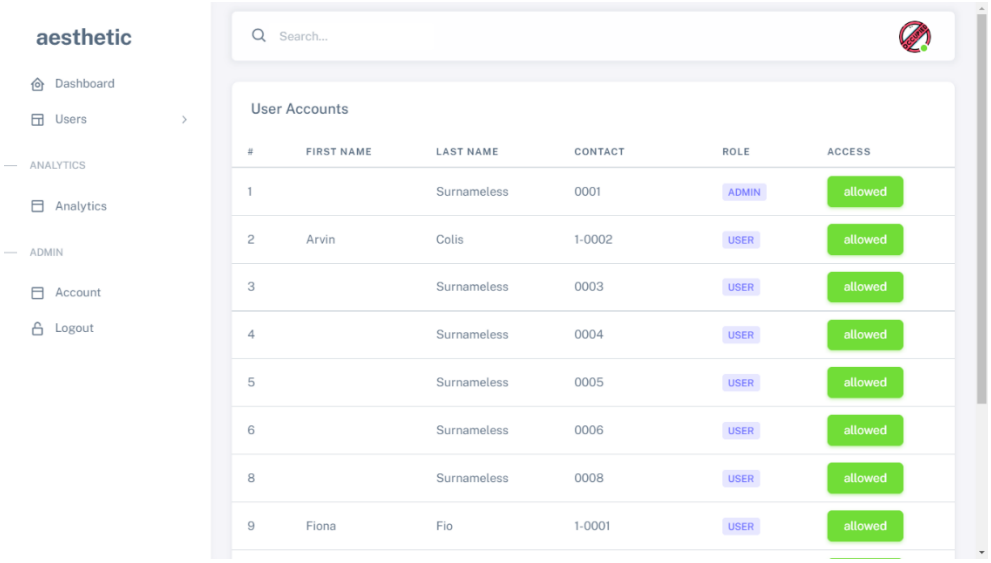


Signup. It is the form the clients need to fill out to set an appointment. It includes their first and last name, contact number, and password for security purposes.

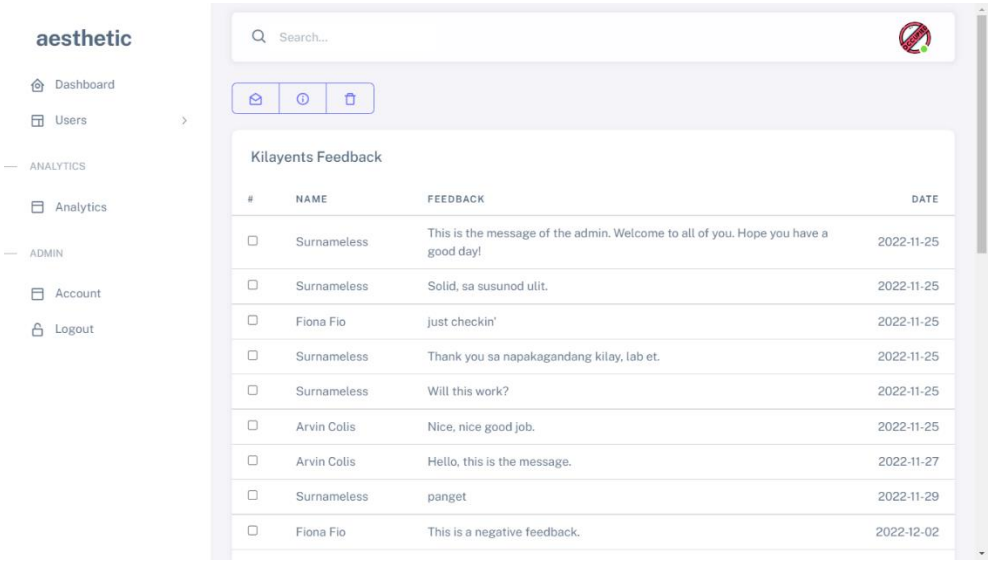
For Admin



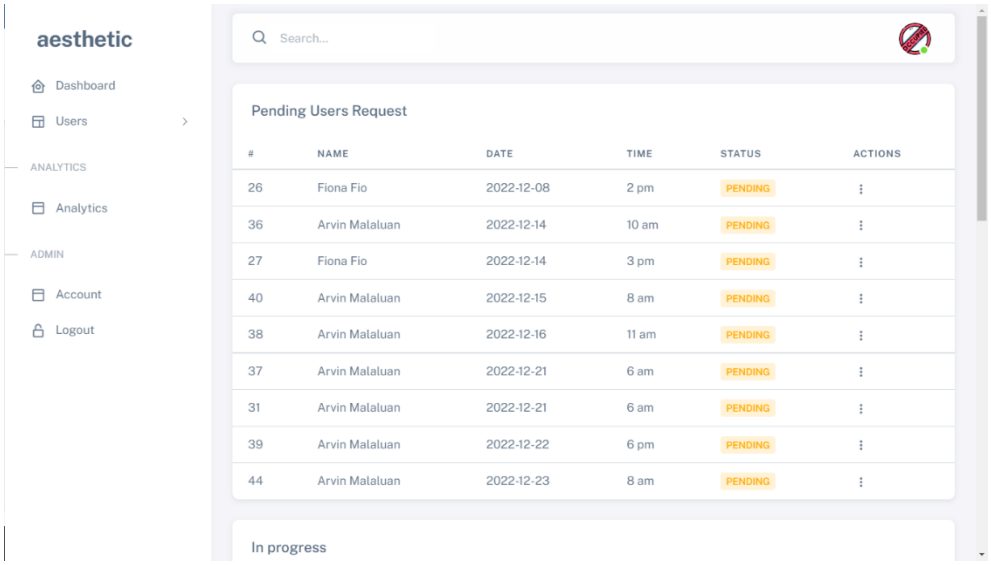
The dashboard. The landing page admins.



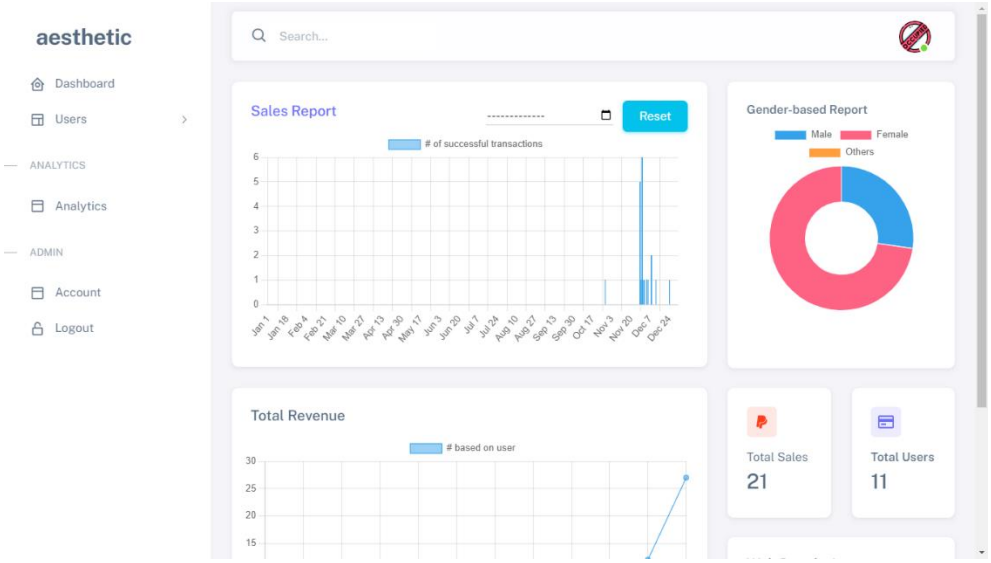
User Accounts. This is for the admin to restrict or allow users to interact with the system.



User Feedbacks. Fetch User Feedback or all the records from the database and display it in a tabular manner.



Pending requests. This is where the admin can update the data such as status, id, etc.



Analytics. Probably one of the most important files since it will hold sensitive information.

IV. SYSTEM INTEGRATION

This appointment system is the simplest way to make sure our customers don't need to spend time waiting on the premises until it's their turn to be served. Customers can schedule their arrival close to their appointment time, which can considerably reduce their waiting time and therefore help to prevent crowding in the waiting room. In this way, a service provider can keep control of the customer flow and optimize the resources, while also reducing or even eliminating unexpected crowds.

IV.1. Integration Support

This section describes the support software, materials, equipment, and facilities required for the integration, as well as the personnel requirements and training necessary for the integration.

IV.1.1. Resource and their Allocation

Facility	Address	Monthly Rent	Total Rent
Dormitory	Capitol Hills Compound, Hilltop, Brgy. Kumintang Ibaba, 4200 Batangas City	1,400	5,600

Personnel	Designation	Monthly Wage	Total Wage (for the period of the project)
Malaluan, Arvin	Lead Developer	35,000	70,000
Esguerra, Jenina	System Analyst	31,000	62,000
Pugoy, Ivy	System Analyst	31,000	62,000
Sandoval, Ezaira	Software Tester	30,000	60,000

IV.1.2. Training

MY Aesthetic Brow Studio Manual

Table 4.5 Table of contents of the sample training manual

The table of contents of the sample client training manual is shown in Table 4.5. The client training manual contains instructions on how to use the system's various functions, such as accepting or refusing user requests for appointments based on a valid reason. Arvin Malaluan will deliver the free

training on the first floor of the My Aesthetic Building in Batangas City, Batangas.

IV.1.3. Testing

Test ID	Tester	Description	Expected Outputs	Actual Outputs	Test Results
01	Esguerra, Jenina	Clicking Login Page	Login Page	Login Page	Passed
02	Esguerra, Jenina G.	Click Sign up	Display signup section and hide login section.	Sign up section.	Passed
03	Pugoy, Ivy D.	Home page	Home page	Home page	Passed
04	Pugoy, Ivy D.	Clicking profile page	if logged in	Profile page	Passed
			if not logged in	Login page	Passed
05	Malaluam, Arvin C.	Appointment Page	if logged in	Appointment page	Passed
			if not logged in	login page	passed

For admin

06	Malaluan, Arvin C.	Redirecting to admin page (if an account is set as admin)	Admin page	Admin page	passed
07	Malaluan, Arvin C.	Dashboard			passed
08	Sandoval, Ezaira C.	Checking user accounts page	User account page	User account page	passed
09	Pugoy, Ivy D.	Checking user appointment requests page	User appointments page	User appointments page	passed

10	Esguerra, Jenina G.	Migrating to feedback page	User feedback page	User feedback page	passed
11	Sandoval, Ezaira C.	Moving to analytics	Analytics	Analytics	passed
12	Sandoval, Ezaira C.	clicking admin profile page	admin profile page	admin profile page	passed

Table 4.6. Evaluating System Links

Table 18 shows the results about the evaluation on system links. The system is expected to perform the way it is supposed to and should redirect users to the correct links. The system passed all the tests conducted by.

Test ID	Tester	Description	Expected Outputs	Actual Outputs	Test Results
01	Esguerra, Jenina G.	Signing In			
		if one field is empty	will not log in	did not log in	passed
		if username does not exist	will not log in	did not log in	passed
		if password is incorrect	will not log in	did not log in	passed
		if username and password is correct	will log in	logged in	passed
02	Pugoy, Ivy D.	Signing up			
		one field is empty	will not process information	did not process inputted information	passed
		contact number is already used	will not process information	did not process inputted information	passed

		two password fields does not match	will not process information	did not process inputted information	passed
		no errors	will process and create the account	did process and create account	passed
03	Malaluan, Arvin C.	Setting Appointment			
		no time selected	will not process request	did not process the request	passed
		no date selected	will not display available time slots	did not display available time slots	passed
		no errors	display available time slots	displayed the available time slots	passed
04	Malaluan, Arvin C.	Displaying correct time slots			
		cross the time which is already taken	taken slots will not be clickable	buttons were disabled	passed
		no errors	process the request	request was processed	passed
05	Esguerra, Jenina G.	Sending feedbacks			
		no errors	send the message	message sent	passed
06	Sandoval. Ezaira C.	Updating personal information			
		username is taken	will not process the update	did not process the update	passed
		photo is too large	will not process the update	did not process the update	passed
		photo file format is not allowed	will not process the update	did not process the update	passed

		phone number is already used	will not process the update	did not process the update	passed
		have an error	will not process the update	process the update error: with the image	failed
		no errors	will process the update	process the update	passed
07	Pugoy Ivy D.	Logging out			
08	Sandoval Ezaira C.	Testing Navigation			

Table 4.7 Functionality Testing.

Table 4.7 displays the results of the conducted functionality testing. The proponents have seen a minor error which is about the system processing the text inputs even though there is an error with the image. The error is usually about the size which is passed the declared maximum value. The system passed almost all of the functionality testing and will improve on the part that has small errors.

Test ID	Tester	Description	Expected Outputs	Actual Outputs	Test Results
01		Fetching Data from the database using several methods			
02		Select statements	displays value	displays value	passed
03		Join statements	displays selected table values	displays selected value from the joint table	passed
04		Pushing data in the database			

05		duplicate unique value	will not push the record/s	did not push	passed
06		mismatched parameters count	will not push the record/s	did not push	passed
07		no errors	will push the records	push the record/s	passed
08		Modifying records			
09		Update statement	updates a value in the database	update	passed
10		single row update	updates a value in the database	update	passed
11		multiple rows update	updates selected values in the database	update	passed

Table 4.8. Database Testing

Table 20 displays the results of the conducted database testing. This is to ensure that the records will be stored in the proper table. The system passed all the tests with regard to database functionality.

IV.1.4. Change procedures and history.

Include all changes made during the unit testing. This information should be included in the Configuration Management Plan and updated during the Development Phase.

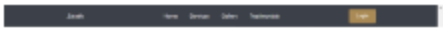
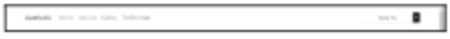
Change Request	
Date: 12/01/2022	**Team Leader:** Jenina Esguerra
Design change request from: Ivy Pugoy	
Details of Previous Procedure: In the home page, we have this huge navigation bar which is about 80px in height and 20px font-sizes and color was slightly off. Ivy Pugoy thinks that we need to decrease it in order to make it more aesthetically pleasing.	
Details of Change Required: Decrease navigation bar height along with its components and change background color to white to make it proportional.	
New Design Verification: 12/02/2022 - Ezaira Sandoval	
New Design Verification: 12/02/2022 - Ezaira Sandoval	
Remarks:	
Approve changes: Yes	
Date Approved: 12/02/2022	
Person approved: Jenina Esguerra	
Designation: Lead Developer	
Screenshots	
Before 	After 

Table 4.9. Change Request for navigation bar.

In this table is the request of Ms. Pugoy to make changes in the navigation bar. She noticed that the sizing was slightly off, which is why she made the request. The request was verified by Ms. Sandoval which was later on approved by Ms. Esguerra.

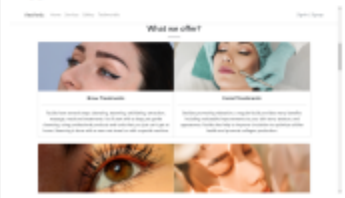
Change Request	
Date: 12/01/2022	**Team Leader:** Jenina Esguerra
Design change request from: Arvin Malaluan	
Details of Previous Procedure: We have a carousel from swiperjs for what we offer section and we think that it is one of the reasons why the website's loading time is slow so we implemented bootstrap cardsinstead of carousel.	
Details of Change Required: Remove the carousel from swiperjs and implement bootstrap cards.	
New Design Verification: 12/02/2022 - Ezaira Sandoval	
New Design Verification: 12/02/2022 - Ezaira Sandoval	
Remarks:	
Approve changes: Yes	
Date Approved: 12/02/2022	
Person approved: Jenina Esguerra	
Designation: Lead Developer	
Screenshots	
Before 	After 

Table 4.10. Change Request for Services section.

In this table is the request of Mr. Malaluan to make changes in the Services section. The performance was compromised due to the time the swiper needs before it functions well. The request was verified by Ms. Sandoval which was later on approved by Ms. Esguerra.

Change Request	
Date: 12/03/2022	**Team Leader:** Jenina Esguerra
Design change request from: Ezaira Sandoval	
Details of Previous Procedure: Similar to the problem we have encountered in what we offer, the carousel makes the web performance delayed.	
Details of Change Required: Remove the carousel from swiperjs and implement bootstrap carousel.	
New Design Verification: 12/03/2022 - Jenina Esguerra	
New Design Verification: 12/03/2022 - Jenina Esguerra	
Remarks:	
Approve changes: Yes	
Date Approved: 12/03/2022	
Person approved: Jenina Esguerra	
Designation: Lead Developer	
Screenshots	
Before 	After 

Table 4.11. Change Request for Services section.

In this table is the request of Ms. Sandoval to make changes in the Testimonials section. This is similar to the reason Mr. Malaluan submitted the change request, the only difference is, the carousel was not removed but changed from swiperjs to bootstrap to make it more lightweight. The request was verified by Ms. Esguerra which was also approved by Ms. Esguerra.

Change Request	
Date: 12/01/2022	**Team Leader:** Jenina Esguerra
Design change request from: Jenina Esguerra	
Details of Previous Procedure: The get in touch section is too plain and does not have a rate selection.	
Details of Change Required: Redesign the get in touch to add a little more life into it.	
New Design Verification: 12/02/2022 - Ezaira Sandoval	
New Design Verification: 12/02/2022 - Ezaira Sandoval	
Remarks:	
Approve changes: Yes	
Date Approved: 12/02/2022	
Person approved: Arvin Malaluan	
Designation: Lead Developer	
Screenshots	
Before 	After 

Table 4.12. Change Request for Services section.

The table shows the request of Ms. Esguerra to make changes in the Get in touch or contact us section. She believed that there is a need to include an image to make it look better. She also requests to add a rate part where the user selects the emotion that corresponds to his/her experience in the salon. The request was verified by Ms. Esguerra which was also approved by Ms. Esguerra.

V. SYSTEM ADMINISTRATION AND MAINTENANCE

Risk identification enables businesses to develop plans to minimize harmful events before they arise. The objective of this step is to identify all possible risks that could harm company operations, such as SQL injection attacks, cross-site scripting attacks, brute force attacks, infrastructure failures, fake appointments, and admin device loss.

V.1. System Administration and Maintenance

Category of Risk		
RID	**Type of Risk**	**Description**
RID 001	SQL Injection Attack.	Attackers are used to altering SQL statements set by the developers to fetch important details on the database.
RID 002	Cross-site Scripting Attack.	Similar to SQL Injection attacks, the only difference is that attackers inject malicious scripts that may possibly get the user's important browsing information.
RID 003	Brute Force Attack.	A method of forcibly cracking user login details.
RID 004	Power interruption.	Loss of power may lead to conflict in pushing data into the database.
RID 005	Loss of Connection.	Loss of connection may lead to conflict in pushing data on the database.
RID 006	Fake appointments.	An exercise similar to fake booking leads to profit loss.

RID 007	Admin's device was lost.	This is where someone gains access to the admin page due to the loss of the device by the admin.

V.2. Analyzing the Risk

After identifying the risk, analysis of the risk is a must. During the risk management process, members of the institution estimate the probability of each risk occurring and define the amount of severity of each risk.

V.2.1. Risk Assessment Matrix

RID	Risk Assessment Control Measure
RID 001	Med Risk
RID 002	Med Risk
RID 003	Med Risk
RID 004	Low Risk
RID 005	Med Risk
RID 006	Med Risk
RID 007	Med Risk

V.3. Evaluating the risk

After completing a thorough analysis of risk, they need to be ranked in order of severity and then prioritized. Provides likelihood of the system being affected by the certain risk provided.

RID	Impact	Likelihood	Impact	Likelihood	Risk Score
RID 001	Possible	Possible	3	3	9
RID 002	Possible	Rarely occur	3	2	6
RID 003	Possible	Rarely occur	3	2	6
RID 004	Major	Very unlikely	4	1	4

RID 005	Major	Rarely occur	4	2	8
RID 006	Major	Rarely occur	4	2	8
RID 007	Extreme	Very unlikely	5	1	5

V.4. Scope and Limitations

Once the risks have been analyzed and prioritized, it is time to act. Every risk to the organization or the project needs to either be eliminated or contained.

RID	Control
RID 001	Make the website temporarily unavailable. Implement system changes like: Escaping all user-supplied input.
RID 002	Make the website temporarily unavailable. Employ changes like multi-layer of defense, and certificate management system.
RID 003	Make the website temporarily unavailable. Implement changes like captcha and web application firewalls.
RID 004	Provide a generator to ensure that every data will be pushed.
RID 005	Provide a generator to ensure that every data will be pushed.
RID 006	Banning device public address. Implementing stricter policies when it comes to creating accounts.
RID 007	Logging out all sessions of the admin's account.

	Setting the admin device inactive to prevent attackers from making modifications.

V.5. Monitoring and Checking the Risk

Monitoring and checking the risk is the last part of the risk and management process and involves regular checking or surveillance. The results should be recorded and reported externally and internally.

REVIEWS OF RISKS & ISSUES

Review Frequency
The development-related risks and difficulties of the system are evaluated on a regular basis in order to categorize them as low, medium, or high-level risks and to provide suitable solutions in order to lessen the impact of these risks or the possibility that they will occur again.
Parties Responsible for Reviewing
Malaluan, Arvin C. Pugoy, Ivy D.

REPORTING

Review Frequency
It is essential to keep detailed records of all aspects of problems and threats, from their discovery to their resolution. The same principle applies to the reporting of all the actions that have been performed in relation to risk-related activities. It is done at the end of each phase of growth, and participants are tasked with writing and discussing various topics within the group.
Parties Responsible for Reviewing
Esguerra, Jenina G. Malaluan, Arvin C.

Pugoy, Ivy D. Sandoval, Ezaira C.

MONITORING

Review Frequency
Following the creation of each component of the system, the individuals who have been tasked with carrying out that development will be responsible for monitoring the potential occurrence of risks and issues. They consistently remind the developers to be conscious of the risks and issues that they have found in the process every time a new function is produced. This is because the risks and issues were discovered during the process. Even when problems have been eliminated, the group maintains a vigilant vigilance over the situation.
Parties Responsible for Reviewing
Malaluan, Arvin C.

V.6. Risk Assessment Matrix

This shows the risk assessment matrix used in evaluating risks during project development. A risk matrix is a simple, visual tool that you can use to determine levels of risk. Although there are some limitations to risk matrices – in part because of their simplicity – there are numerous benefits. For those working in risk management, as well as those in senior positions, they provide an accessible overview of the risks an organization faces, potentially making it easier to decide how risks should be dealt with.

Risk Assessment Control Measure			Severity				
From 1-4 = Low Risk							
From 5-10 = Med Risk			**Negligible**	**Minor**	**Moderate**	**Major**	**Extreme**
From 12-25 = High Risk			**1**	**2**	**3**	**4**	**5**
Likelihood (Probability)	**Very Unlikely**	**1**	1	2	3	4	5
	Rarely Occur	**2**	2	4	6	8	10
	Possible	**3**	3	6	9	12	15
	Likely Occur	**4**	4	8	12	16	20
	Occurs Frequently	**5**	5	10	15	20	25