Software Requirements Specification

for

Yogashala website

Version 1.0 approved

Prepared by

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Yogashala

20.08.21

Contents

1 Introduction

1.1 Purpose

The purpose of this product is to act as a Point of Sales (POS) for the sale of their products. The customer requires a dynamic website to be created to achieve the same. This document is intended to be used by the members of the project team that will implement and verify the correct functioning of the system. Unless otherwise noted, all requirements specified here are high priority and committed for release 1.0. The document contains the functional behavior and non-functional requirements of the system project. The document also contains the guidelines for system engineers and programmers to start working and accomplish the project in a given time frame.

1.2 Document Conventions

The format of this Software Requirement Specifications for the Yogashala website is simple and elegant. In general, this document follows the IEEE formatting requirements. Boldface and indentation are used on general topics and specific points of interest. The rest of the document is written using the standard font, Arial italics font size 11, or 12 throughout the document for text. The document text is single-spaced and maintains the 1" margins found in this template. For Section and Subsection, the title template is followed.

1.3 Intended Audience and Reading Suggestions

The types of readers to whom the document is intended for are:

a) **The developer:**
   The developer will be able to understand the functional requirements for the software to be developed and the scope of the project. He will also get to know the time frame and the deliverables of the software.

b) **The Project manager:**
   The Project managers can check if the project's requirements have been understood and the timeline of deliverables is clearly defined.

c) **The tester:**
   A tester will be able to identify the basic test cases the software should satisfy and will be able to check if the software has been developed according to the specifications.

In case of any suggested changes on the requirements listed on this document should be included in the last version of it so it can be a reference to the development team and validating teams.

1.4 Product Scope

The customer requires a website to be developed which would act as a POS. The company's clients would login to this website to check out the company's products and purchase them. The company members could login to facilitate the activities of the company. During the current pandemic crisis, the customers cannot physically go to the studio to book and practice yoga. The company tries to break the barrier of the pandemic and help people practice yoga at the ease of their homes. Thus, this website where people can book and attend the yoga classes of our company is essential for it to satisfy its customer's needs.

This website attempts to bridge the gap between the company and its customer by offering various services and packages through an online portal. The website notifies the customer about the classes they have scheduled. It also generates the links customers have to join to attend online sessions. The website also facilitates online payment for the packages chosen.

1.5 References

- a) IEEE 830-1998 standard for writing SRS documents.
- b) IEEE Std 1233, 1998 Edition, IEEE Guide for Developing System Requirements Specification
- c) Project requirements collected from the company - https://1drv.ms/w/s!ArqzfHzA4Mjs0QwlV14OmPaGHkI4?e=6tF542

2 Overall Description

2.1 Product Perspective

The Yogashala website is a self-contained product that is neither a subproduct nor a part of any larger web systems. This website assists the Yogashala company in managing the advertising of their services, selling of their products, generation of bills, class schedules, and workflow of the organization. The inbuilt statistics controller provides reports on which courses are popular and which class timings are the most sought after. These statistics would help the company to remodel its products to cater to its customers.
The administrator will have control over which packages are available to the consumer and will be having edit access to the master timetable. He will also be able to generate statistical reports if and when required. The teachers can view a list of classes they have to teach which can be sorted based on date or time. The teachers will be able to take attendance using the website itself, and they could additionally apply for rescheduling of classes which the administrator will approve. The customers will be able to register for packages and book classes using the website.

2.2 Product Functions

All functions of the Yogashala website will be performed in the following order:

a) Customer Portal:
- Order placement for Yogashala offered services via the website
- Online payment for the confirmation of the purchase of those services
- Generation of Electronic invoice on confirmation of payment
- List class timing slots
- Book classes at available slot
- Update class timetable
- Provide an online live class link

b) Teacher Portal:
- View the list of classes that need to be conducted on any particular day
- Configure zoom meet link
- Apply for rescheduling of classes
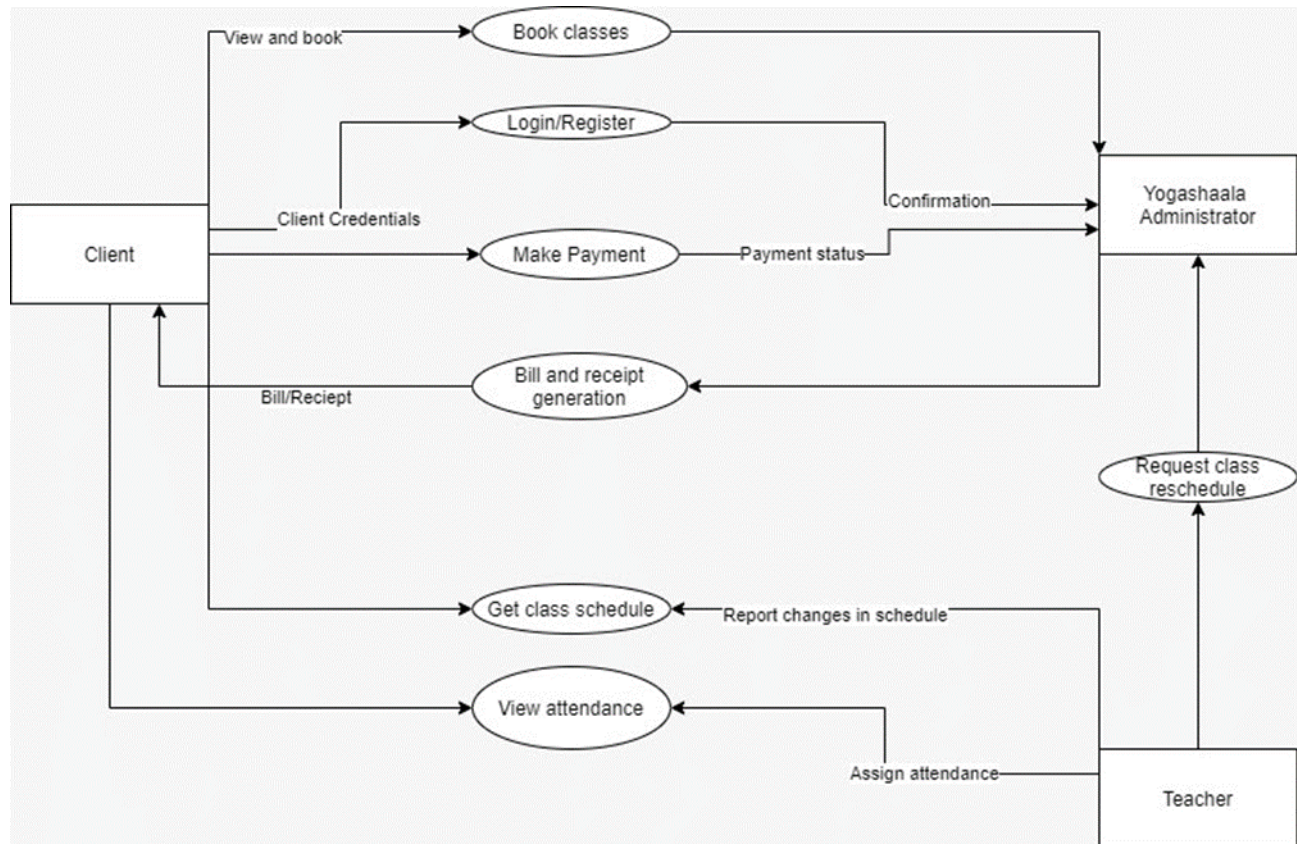- Upload attendance

c) Administrator Portal:
- View and edit Master timetable
- Add, edit and delete teacher accounts
- Respond (accept/reject) to class rescheduling requests
- Add, edit and delete package information

2.2.1 Data Flow Diagram - Level 0
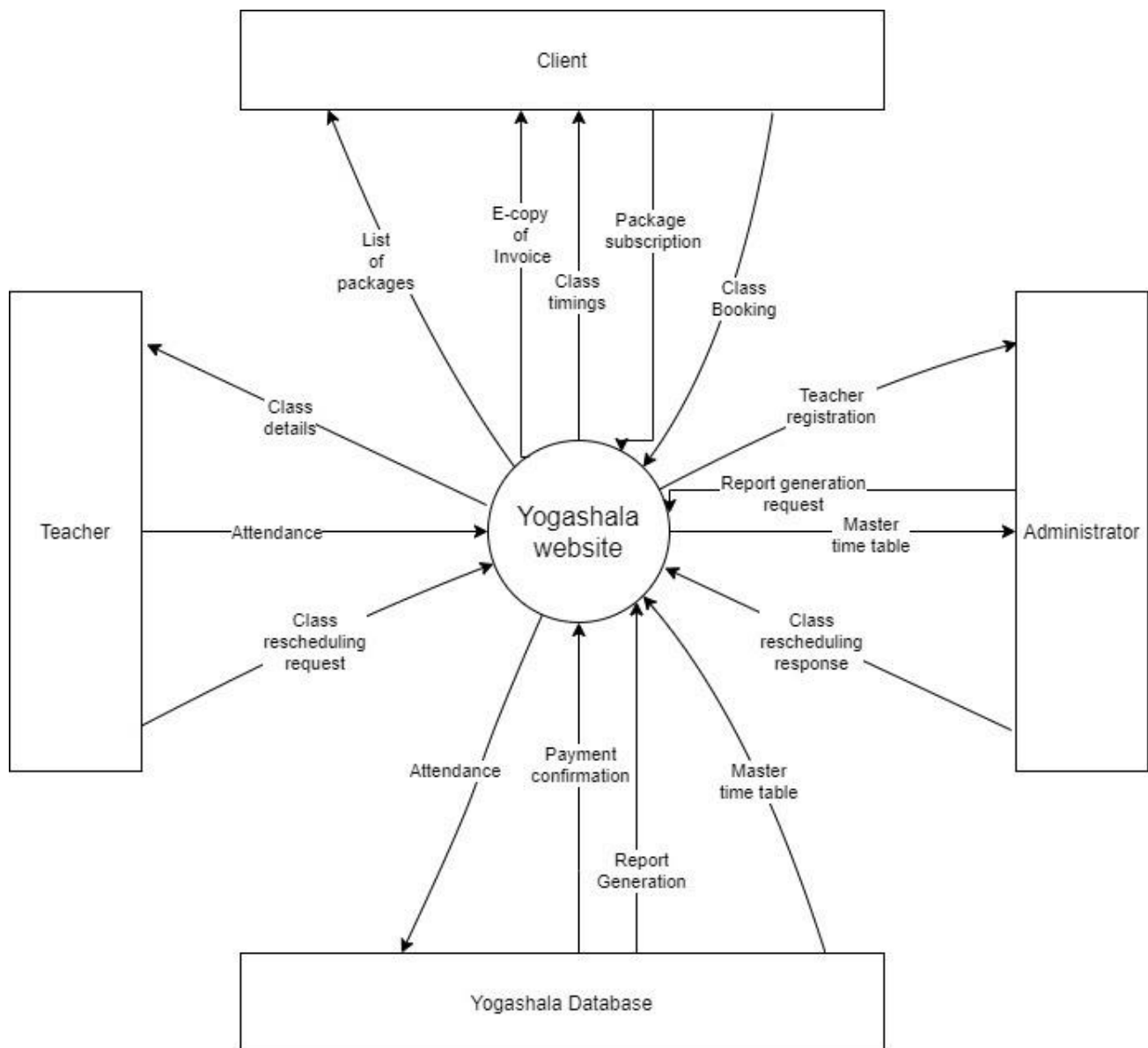
2.2.2 Data Flow Diagram - Level 1

2.3 User Classes and Characteristics

There are three major actors (or classes of users) involved in the project. They are:

a) **The Customer Class:**
Customers can access the system using their smartphones or desktop computers that have an internet connection. The customer accesses the website to go through the various services being offered and choose how many ever they are interested in. Additionally, they would use the website to schedule class timings at their leisure and will be able to obtain the online class meet links for the same. The customer would receive alerts on expiring packages and reminders on upcoming classes.

b) **The Teacher class:**
Customers can access the system using their smartphones or desktop computers that have an internet connection. The teacher accesses the website to view the list of classes they have been scheduled for that particular day. Additionally, they will be able to apply for rescheduling of classes and request substitute teachers as placeholders.

c) **The Administrator class:**
Customers can access the system using their smartphones or desktop computers that have an internet connection. They access the website to confirm payments, accept/reject rescheduling requests, teacher account registration, and report generating requests.

2.4 Operating Environment

a) **Hardware environment:**
There are no particular hardware requirements as this is a cloud service-based product that does not need any special equipment to be accessed.
b) **Software environment:**
The website will be created using web development tools such as Html, CSS3, and JavaScript. The backend processes that facilitate data processing is developed using Django Python and MongoDB

2.5 Design and Implementation Constraints

a) The core system and its user interfaces are compatible with smartphones and desktop computers.
b) The compatibility of the backend and frontend technologies to different browsers.

2.6 User Documentation

Upon deployment of the project, the teachers and the administrators would be given a detailed demo on how to use the website and exercise maximum utilization of its features. The web pages dedicated to the clients/customers are extremely user-friendly and can be intuitively navigated.

a) FAQ
b) Contact Us

2.7 Assumptions and Dependencies

The assumption is that every client will have some internet-connected computation device and will have basic computer proficiency to access the website

The website has a few dependencies as cited below:
   a) The client's access to class timings for a package depends on the administrator confirming their payment and updating the same.
   b) The teacher's income depends on the administrator's approval of their attendance and overtime records.
   c) The client's access to the website depends on the hosting service is active and running.
      .

3 External Interface Requirements

3.1 User Interfaces

3.1.1 Customer Interface:

This interface will contain the following pages:

a) Services Information:
This web page contains a list of images and details regarding the services offered by the Yoga training center. Upon selecting a particular service, it would redirect them to a separate page containing further details about the selected service. There would be a "Subscribe" button to the right of the page. On choosing the subscribe option, the users would be directed to the Booking page, which would then be followed up by payment options.

b) Class Booking:
This web page contains a list of classes along with the time they are to be conducted with regards to the services that the customer had chosen. Adjacent to each class timing, there will be a "book now" button, which on selection will help the users to book the time slot.

c) Timetable:
This web page contains a list of classes that the customer has booked and has to attend. There will be an "attend class" button right next to each class which will turn blue during respective class hours. Upon clicking this button, the customer will be redirected to the zoom meeting where the online classes shall be conducted. Adjacent to this button, there will be a "Cancel class" button that will be active until 1hr before the start of the class. This option allows the user to cancel their class and offering the user more flexibility.

d) Transaction history:
This web page will contain the electronic invoices of all the payments that have been confirmed and will contain the history of the customer Interface. This interface will contain the following pages having their characteristics and features

3.1.2 Teacher Interface:

This interface will contain the following pages:

a) **Class information:**
This webpage will be designed like a timetable that contains the classes the teacher/instructor should conduct on an hourly basis. Once they click on the scheduled class, the teacher will be directed to the zoom meeting page. The meet link will be updated to the user's page from here.

b) **Class rescheduling:**
This is the second part of the Class information page where the teacher requests timings for a class to be changed. This request can only be granted by the administrator.

3.1.3 Administrator Interface:

This interface will contain the following pages:

a) **Master timetable:**
This is a webpage that contains a week's consolidated timetable of the classes to be conducted along with details such as when is it scheduled and who should conduct each class. There will be an "Edit table" button that allows him to edit the details of the timetable.

b) **Class rescheduling:**
This is a webpage that allows the administrator to accept/reject class rescheduling requests. Once he presses the "accept" or "reject" button, he will be redirected to the Master timetable page with edit access to make the necessary changes.

c) **Account management:**
This is a webpage that allows the admin to create, edit and remove the teacher's/ the instructor's accounts.

d) **Service management:**
This is a webpage that allows the administrator to add, edit, and delete services that are offered by the company.

3.2 Hardware Interfaces

Since the application must run over the internet, all the hardware shall require to connect internet will be hardware interface for the system. As for e.g., Modem, WAN – LAN, Ethernet Cross-Cable

3.3 Software Interfaces

a) For database services, we will be utilizing the recent version of MongoDB.
b) For frontend webpage development we will use Html, CSS3, and JavaScript technologies.
c) For the backend webpage development, we will handle all the user classes requests using Django.

4 System Features

4.1 Subscribe Class

4.1.1 Description and Priority

This webpage will give customers the ability to subscribe to the packages offered by the company. It will display a list of packages that the customer can choose from.
Priority: High

4.1.2 Stimulus/Response sequences

When the user enters this web page, they will be greeted with a list of packages offered by the company.

Stimulus:
Customer taps on a package.
Response:
The website displays a small windowpane with a detailed description of the package along with class timings and validity period.

Stimulus:
Customer clicks on Subscribe option.
Response:
The website redirects the user to the Bookings page where online payment processes will take over once they select the payment medium.

4.1.3 Functional Requirements

a) The system will show a list of all the packages offered by the company along with the prices and details of the packages.
b) Tap on the package will display a popup containing the finer details of the package
c) Clicking the Subscribe button redirects to the payment page

4.2 Class Booking

4.2.1 Description and Priority

This webpage will display a list of classes and their timings that a user can choose from based on the package they choose.
Priority; Medium

4.2.2 Stimulus/Response sequences

When the user enters this webpage, a bunch of class timings will be displayed on an hourly basis.

Stimulus:
Customer clicks on the "Book now" button that is present to the right of each class timing.
Response:
If seats are still available the user should see a pop-up confirming the booking and will be redirected to the timetable webpage.
Alternate response:
If seats are not available then the user will be prompted with a "No more available seats to book" and be returned to the webpage to try booking another class.

Stimulus:
Customer enters web page after their package validity has expired to try and book a class.
Response:
The page will be empty and a message will be displayed stating "Not subscribed to a package"

4.2.3 Functional requirements

The webpage should display all the classes they can book based on their subscribed package.

4.3 Timetable

4.3.1 Description and Priority:

This webpage will display a variety of scheduled classes based on which type of user is viewing it
Priority: Medium

4.3.2 Stimulus/Response sequences

When the user enters this webpage, a table of class timings will be displayed on an hourly basis.

User type: Customer
Display content: It will display a table with the classes they have booked on an hourly basis

Stimulus:
Clicks on the "Attend class button".
Response:
If the customer clicks on this button during the scheduled class hours they will be redirected to the zoom meeting where the class is being conducted.
Alternate response:
If the customer clicks on the button before the scheduled class hours the "Class is not in session" message will be displayed.

Stimulus:
Clicks on the "Cancel class button".

Response:
If the customer clicks on this button anytime between the time of booking and up to 1 hour before the start of the class their class booking will be cancelled and they will not receive the meet link. The "Attend class" button will be disabled.

User type: Teacher/Instructor
Display content: It will display a table of classes they have to instruct/conduct on an hourly basis

Stimulus:
Clicks on the scheduled class.
Response:
If the teacher clicks on this button, he will be redirected to the zoom meeting configuration page where he sets up the meet and the link is automatically updated to the customer's timetable.

Stimulus:
Clicks on the "reschedule class" button.
Response:
If the teacher clicks on this button, he will be redirected to the Rescheduling page.

User type: Administrator
Display content: It will display the master table which contains a week's worth of scheduled class timings along with details such as who is instructing the class.

Stimulus:
Clicks on the "Edit" button.
Response:
If the administrator clicks on the button, an option pane will pop up where the administrator will have to enter the details of the class that needs to be rescheduled and the new date and time it is to be scheduled. This change will be reflected in the customer's and teachers' respective timetables.

4.3.3 Functional Requirements

a) The system should display the correct and updated information to the appropriate user.
b) The administrator should make impromptu updates when it comes to rescheduling classes.
c) The teacher should configure the meet link preferably 5 mins before the start of the class to ensure class activities.

4.4 Reschedule class

4.4.1 Description and Priority

This webpage is only accessible to the teacher and the administrator. Based on who enters the site the webpage's functionality differs.
Priority: High

4.4.2 Stimulus/Response sequences

User type: Teacher
When they enter the webpage, a windowpane will be displayed where they have to enter the details of the class that needs to be rescheduled.

Stimulus:
Clicks the "Request rescheduling" button after entering respective details.
Response:
If the given details are not invalid then a pop-up message stating "Application request sent" should be displayed.

Alternate response:
If the given details are invalid appropriate error messages are shown.

4.4.3 Functional Requirements

The system must send a notification to the administrator when a class rescheduling request is sent
The teacher should enter valid details in the respective fields when applying for the class reschedule.

Further functionality is to be discussed and implemented. Hence they will be updated later in further revisions of the document.

5 Other Non-functional Requirements

5.1 Performance Requirements

a) The system shall always be online to facilitate timely updates to the timetable
b) Responses to subscribing services, booking classes, and rescheduling requests should be handled within 24 hours of query generation
c) Further requirements are yet to be decided

5.2 Safety Requirements

Authentication: The username and password are stored securely.

5.3 Security Requirements

There is a need for proper and encrypted login authentication for all user types to protect sensitive information from being hacked. Information transmission should be contiguous and secure to avoid disturbances in attendance recording and order billing.

5.4 Software Quality Attributes

5.4.1 Adaptability:

There can be a change in the packages and information stored in the database about employees and class timings.

5.4.2 Availability:

The system is up and running most of the time and the server is not down for more than a few minutes to avoid the inconvenience of the customers.

5.4.3 Correctness:

The bill generated should be accurate, changes in class timings should be updated and class seat availability should be up to date.

5.4.4 Flexibility:

If the need arises in the future, the software can be modified to change the requirements.

5.4.5 Interoperability:

The data is transferred from the customer's end to the database from which teachers' timetables can be derived This way data is transferred from one part of the system to another.

5.4.6 Maintainability:

The software can be easily repaired if a fault occurs.

5.4.7 Portability:

The software can be easily accessed on devices and would run smoothly according to the requirement.

5.4.8 Reliability:

No matter how many orders are placed, the system must give the correct results.

5.4.9 Reusability:

The current version can be used in future versions with more functionality added.

5.4.10 Robustness:

Software must have checks to ensure that user registration.

5.4.11 Testability:

All the requirements are fulfilled, response time is low, and all functions are working perfectly.

5.4.12 Usability:

The interface of the software must be simple and easy to navigate.

5.5 Business Rules

a) The administrators' interface contains the master timetable that can be viewed without giving any specific inputs.
b) Once the bill is paid the administrator can update the same and an invoice will be generated.
c) The administrator has access to perform add, edit and delete operations with regards to teacher's accounts, services offered and is authorized to make changes to the master timetable with regards to class rescheduling.
d) Teachers can upload attendance and configure the zoom meeting.
e) Customers can subscribe to services, book classes, and attend online classes.
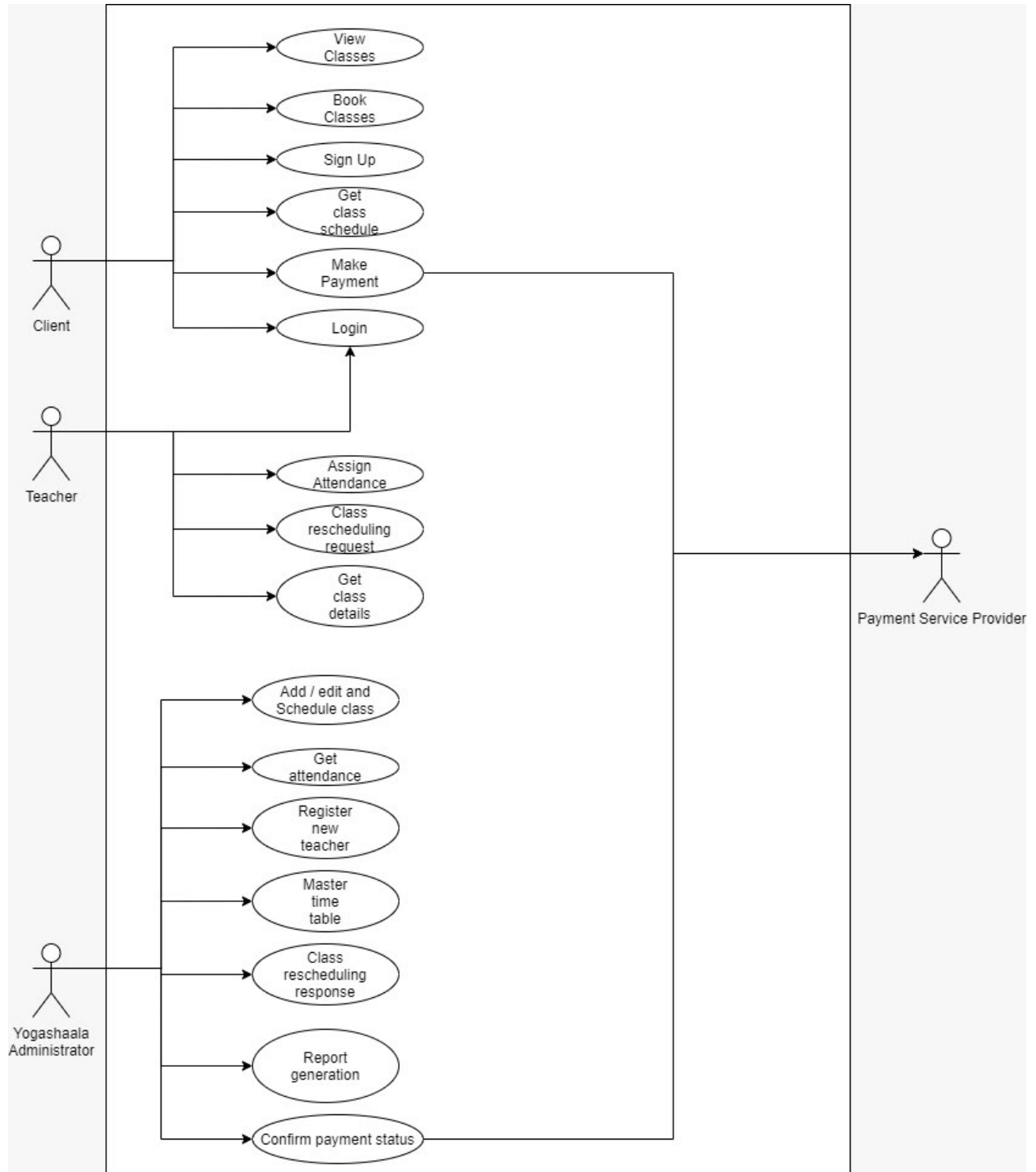
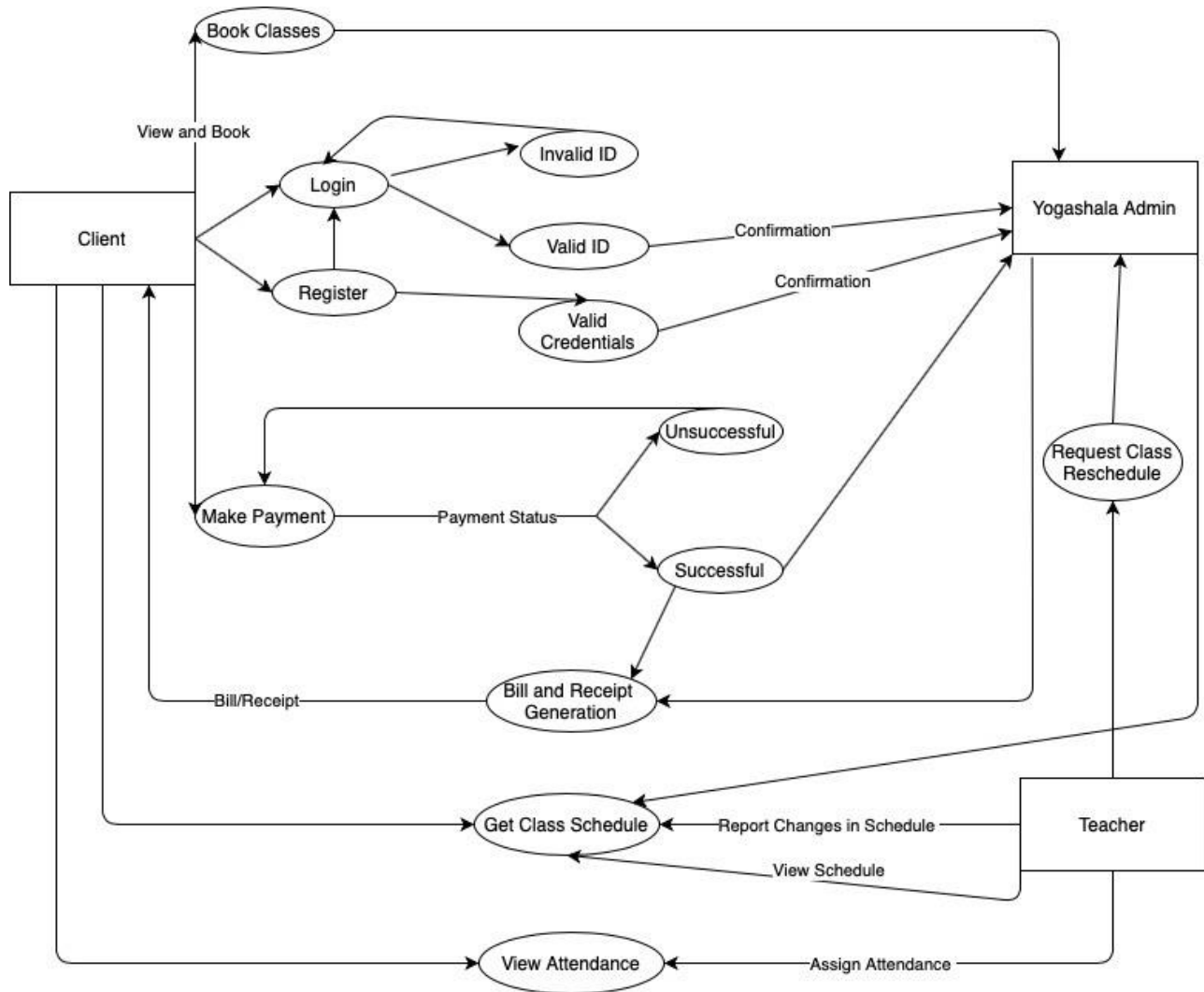# 6 Other Requirements

Appendix A: Glossary

Nil

Appendix B: Analysis Models

a) Use case diagram

b) Data Flow Diagram-Level 2

Appendix C: To Be Determined List

3.4 Communication devices - As the project is in its initial stages the protocols to be used and such networking features are yet to be discussed and decided upon.

7 Plagiarism Report

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