Universiti Malaysia PAHANG

Engineering • Technology • Creativity

SDD Document SEM II 20222023

e-Munakahat System (EMUN)

Group Name

1. Muhammad Amir Bin Mohamed Ali [CB21060]
2. Ahmad Suffian Bin Md Noor Suhaime [CB21137]
3. Chua Kian Pheng [CB21106]
4. Nik Alia Syafiqah Binti Nik Azuri [CB21035]
5. Shammene A/P Muneesvaran [CB21018]

Quantum Corp

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1. INTRODUCTION

1.1 Purpose

This software design document (SDD) serves as a blueprint for the development of the e-Munakahat System (EMUN). It outlines the software design process, including the software's architecture, modules, interfaces, and data structures. The primary purpose of an SDD is to ensure that the software development team and stakeholders understand the design of the software application and how it will function.

The software design document (SDD) is a communication tool between the development team and stakeholders, ensuring everyone is on the same page regarding the software's design and implementation. It will also help the stakeholders to understand any limitations or assumptions that may impact the system's performance or usability, which will help the stakeholders to make informed decisions and better plan for the project. This will also help to ensure that the final product meets the needs of the users and the jurisdiction.

1.2 System Identification

The Software Design Document (SDD) belongs to the “e-Munakahat System” (EMUN).

Table 1.1 Document Identity.

<table>
<tr><th>System title</th><th>e-Munakahat System</th></tr>
<tr><td>System abbreviation</td><td>EMUN</td></tr>
<tr><td>System identification number</td><td>SDD_EMUN_QC_2023</td></tr>
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<tr><td>Subsystem Abbreviation</td><td>IC</td></tr>
<tr><td>Package ID</td><td>SDD-REQ-100
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<tr><td>REQ</td><td>Requirement</td></tr>
<tr><td>100</td><td>Package number</td></tr>
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<tr><td>Use Case ID</td><td>UC101-EMUN-001
Meanings for terms used:
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<tr><td>UC</td><td>Use Case</td></tr>
<tr><td>1</td><td>Number of the system module</td></tr>
<tr><td>01</td><td>Number of use case within a module in the subsystem</td></tr>
<tr><td>EMUN</td><td>e-Munakahat System (System name)</td></tr>
<tr><td>001</td><td>Document release number</td></tr>
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Meanings for terms used:
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<tr><td>UC</td><td>Use Case</td></tr>
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<tr><td>01</td><td>Number of use case within a module in the system</td></tr>
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</table></td></tr>
<tr><td>Document Identification System</td><td>SDD_EMUN_IC_2023_V1.0</td></tr>
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Symbol/Number	Meaning
EMUN	It represents the system name which is e-Munakahat System (EMUN)
SDD	It represents the software design document (SDD)
QC	It represents the company name which is Quantum Corp SDN. BHD.
2023	It represents the year where the system has been released.
V1.0	V represent the word “Version” of the system while 1.0 is the general version of the system. The number will increase by 0.1 if there any updates or bugs fixed.

1.3 System Overview

Our system is a web-based system to support the Pahang Wedding management system. The purpose of the system is to provide a solution for managing wedding registration and operations efficiently. Users can use this system for marriage registration and information retrieval. It also eases the government to collect granular data on weddings in Pahang and store the information for future use. This system is handled by the Quantum Corp company. This system contains various functionalities such as user registration, marriage application, marriage registration, marriage preparation course, proof of payment, request for marriage, marriage card, marriage consultation, and special incentives for the bride and groom.

There are five modules in this system which are:

1. Registration and handle user profile

The initial stage of using the system is applicant registration, which is required for applicants to enter the system. It contains private information such as an Identity Card number, phone number, email address, and password. Since registration is based on the user's IC number, a unique number with no duplicates, each user has just one account for the system. Once the applicant's registration is successful, they can log in to access the system's contents after completing the registration process. The admin can register new staff through the admin dashboard. Once registration for staff is successful, they will be granted access to the system. The system also allows users (applicants & staff) to modify their profile details to update their information. In case the applicant has forgotten their password, they will be able to reset their password. Apart from that, the admin can update staff and applicant details through the admin dashboard.

2. Attend the marriage preparation course with proof of payment and to request a marriage.

   After users register and login into the account, the users can proceed to the next step where they can apply for the marriage registration course. As a marriage registration course is an important step for the e-Munakahat system will update the name list of applicants. The system will show if the user has already paid for the course or not. So, then the staff can print the proof of payment and send the receipt to the applicants. The system shall allow the admin to manage the marriage preparation course details such as date, time, and where the course will be conducted. While the staff will handle the things that are related to the user or applicants. Approve the applications in the system and print the applicants' name list for the course for every session. If the applicant presents on the course day, the staff can approve their marriage course certificate. After the course ends, the applicants will be represented with the certificate. The staff can update the applicant's name from the system for obtaining the marriage course certificate. Next step for the applicant is request their marriage from E-Munakahat system.

3. An application to register a marriage within or outside the country, as well as a voluntary marriage, and to produce the marriage card or certificate with proof of payment.

   Marriage registration is split into two processes which are voluntary and authorized registration. User needs to pass a pre-marriage course to be able to register their marriage. Voluntary registration is for the older generation who live far away from town and did not register when they married. For authorized registration, the user must prepare various forms and information in which the template is provided in the system. After staff from JAIP has approved the marriage registration, it will notify the user so that they know their marriage registration has been approved.

4. Register for a marriage consultation with a service advisor.

   A consultation module is a module where the user can make an appointment to seek advice or to get a divorce. This module requires the users to enter their personal information and also their spouse information including their marriage information and upload related documents as proof. Staff can view the application made by the user and will decide whether to approve the appointment and responsible to assign consultant and slot to the consultation session. Staff are also responsible for managing the list of consultants and their information in this module. The staff can edit, add, and delete the consultants' information in the system.

5. Application for special incentive for the bride and groom

The marriage registration system features a special incentive module that enables users to apply for incentives, provided they meet the necessary prerequisites. This module allows individuals to input their personal information and upload necessary documents, making the process more streamlined. Additionally, the staff side of the platform allows for the review of applications and ensures that the process is efficient and user-friendly. The special incentive module in the marriage registration system also includes a notification feature that keeps applicants informed about the status of their applications. Once the staff reviews the application, the applicant will receive a notification, either confirming their approval or outlining the reasons for the denial. This ensures that applicants are aware of the status of their application in a timely and efficient manner."

1.4 Referenced Document

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3. Layered Architecture. (2021, November 11). Retrieved May 2, 2023, from https://www.baeldung.com/cs/layered-architecture.

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5. Simple PHP MVC Framework Example. (2023, May 26). Retrieved May 28, 2023, from https://phpflow.com/php/simple-mvc-architecture-example-in-php/.

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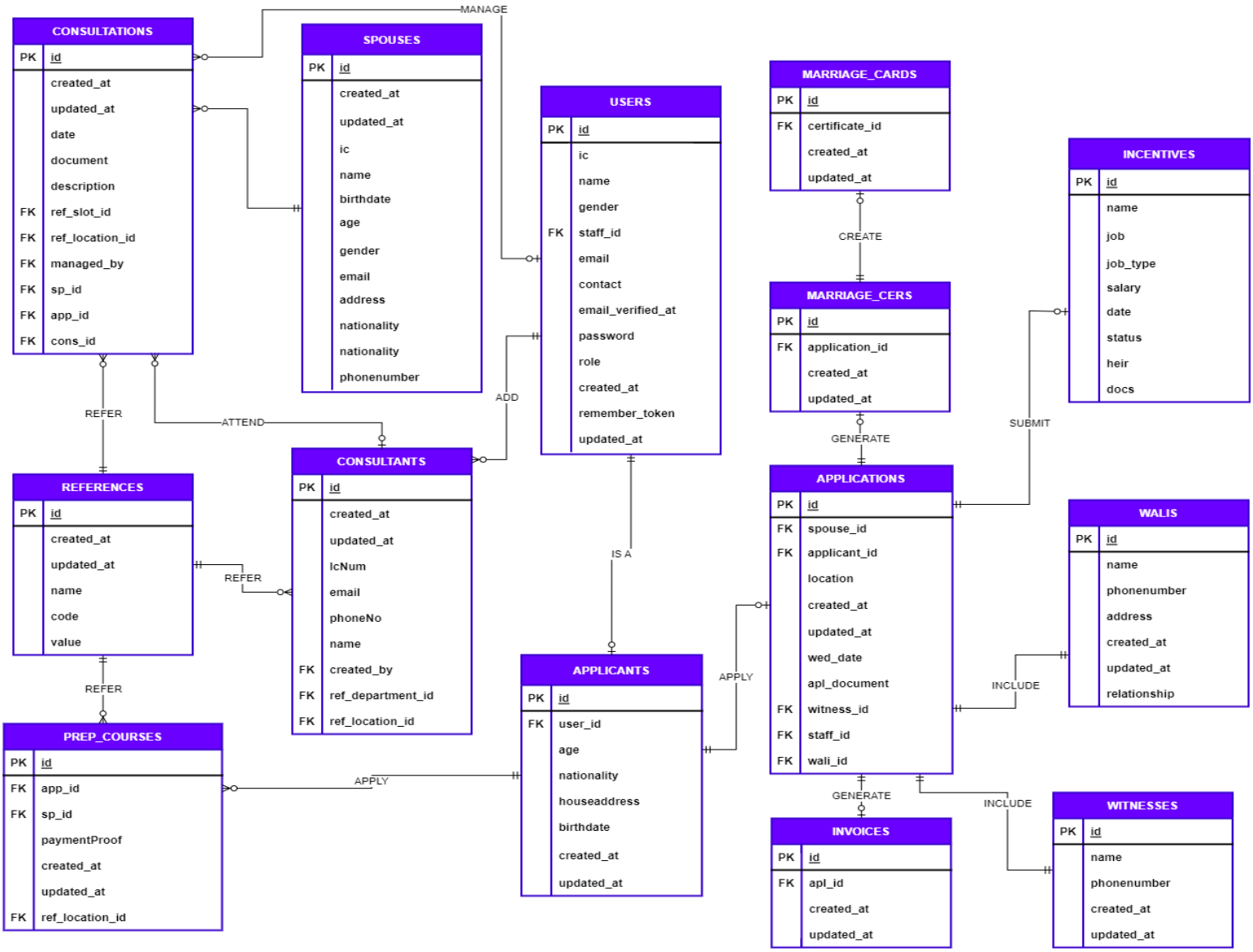
2. DATA DESIGN

2.1 Entity Relationship Diagram (ERD)



2.2 Data Dictionary

2.2.1 USERS

Field Name	Description	Data Type	Constraint
id	User's ID	BIGINT	PK
ic	User's IC	VARCHAR (12)	NOT NULL, UNIQUE
name	User's name	VARCHAR (255)	NOT NULL
gender	User's gender	VARCHAR (8)	NOT NULL
staff_id	Staff's ID	VARCHAR (10)	
email	User's email	VARCHAR (255)	NOT NULL, UNIQUE
contact	User's contact	VARCHAR (15)	NOT NULL
email_verified_at	User's email verification dates	TIMESTAMP	NOT NULL
password	User's password	VARCHAR (255)	NOT NULL
role	User's role	TINYINT	NOT NULL
remember_token	Users remember token	VARCHAR (100)	
created_at	User's created date	TIMESTAMP	NOT NULL
updated_at	User's updated date	TIMESTAMP	

2.2.2 APPLICANTS

Field Name	Description	Data Type	Constraint
id	Applicant's ID	BIGINT(20)	PK
user_id	User ID	BIGINT(20)	Not null
age	Applicant's age	INT(10)	
nationality	Applicant's nationality	VARCHAR(255)	
houseaddress	Applicant's house address	VARCHAR (255)	
birthdate	Applicant's birthdate	DATE	
created_at	Applicant's created time	TIMESTAMP	Not null
updated_at	Applicant's updated time	TIMESTAMP	

2.2.3 CONSULTATIONS

Field Name	Description	Data Type	Constraint
id	Consultation ID number	BIGINT (20)	PK
created_id	Consultation created date	TIMESTAMP	NOT NULL
updated_at	Consultation update date	TIMESTAMP	
date	Consultation appointment date	DATE	NOT NULL
ref_slot_id	Consultation slot	BIGINT (20)	NOT NULL
description	Consultation description	TEXT	NOT NULL
document	Consultation document file path	VARCHAR (255)	NOT NULL
ref_location_id	Consultation location	BIGINT (20)	NOT NULL
managed_by	Staff who managed the consultation	BIGINT (20)	
sp_id	Spouse ID	BIGINT (20)	NOT NULL
app_id	Applicant ID	BIGINT (20)	NOT NULL
cons_id	Consultant ID	BIGINT (20)	

2.2.4 CONSULTANTS

Field Name	Description	Data Type	Constraint
id	Consultation's id	BIGINT (20)	PK
created_at	Consultation's created time	TIMESTAMP	NOT NULL
updated_at	Consultation 's updated time	TIMESTAMP	
IcNum	Consultant's IC number	VARCHAR (255)	NOT NULL
name	Consultant's name	VARCHAR (255)	NOT NULL
email	Consultant's email address	VARCHAR (255)	NOT NULL
ref_department_id	Consultant's departments	BIGINT (20)	FK, NOT NULL
ref_location_id	Consultant's working location	BIGINT (20)	FK, NOT NULL
phoneNo	Consultant's phone number	VARCHAR (255)	NOT NULL
created_by	Staff who register the consultant	BIGINT (20)	FK, NOT NULL

2.2.5 APPLICATIONS

Field Name	Description	Data Type	Constraint
id	Application's ID	INT	PK
spouse_id	Spouse ID	INT	FK
applicant_id	Applicant ID	INT	FK
location	Application location	VARCHAR (50)	NOT NULL
created_at	Application's created time	TIMESTAMP	NOT NULL
updated_at	Application 's updated time	TIMESTAMP	
wed_date	Wedding date	DATE (50)	NOT NULL
apl_document	Application's document	DOCUMENT	
witness_id	Witness ID	INT	FK
staff_id	Staff ID	INT	FK
wali_id	Wali ID	INT	FK

2.2.6 PREP_COURSES

Field Name	Description	Data Type	Constraint
id	Course ID	INT	PK
app_id	Applicant ID	INT	FK
sp_id	Spouse ID	INT	FK
paymentProof	Course payment proof receipt	DOCUMENT	
created_at	Course's created time	TIMESTAMP	NOT NULL
updated_at	Course 's updated time	TIMESTAMP	
ref_location_id	Marriage preparation course location	BIGINT (20)	FK, NOT NULL

2.2.7 SPOUSES

Field Name	Description	Data Type	Constraint
id	Spouse's ID	BIGINT (255)	PK
created_at	Spouse's created time	TIMESTAMP	NOT NULL
updated_at	Spouse's updated times	TIMESTAMP	
ic	Spouse's IC	VARCHAR (12)	NOT NULL
name	Spouse's name	VARCHAR (255)	NOT NULL
birthdate	Spouse's birthdate	DATE	NOT NULL
age	Spouse's age	INT	NOT NULL
gender	Spouse's gender	VARCHAR (8)	NOT NULL
nationality	Spouse's nationality	VARCHAR (15)	NOT NULL
address	Spouse's address	VARCHAR (255)	NOT NULL
email	Spouse's email address	VARCHAR (255)	NOT NULL
phonenumber	Spouse's phone number	VARCHAR (15)	NOT NULL

2.2.8 INVOICE

Field Name	Description	Data Type	Constraint
inv_Num	Invoice Number	INT	PK
apl_Num	Application Number	INT	FK
inv_date	Invoice Date	DATE (50)	

2.2.9 INCENTIVE

Field Name	Description	Data Type	Constraint
id	Incentive id	INT	PK
name	Incentive Applicant name	STRING	FK
job	Job	VARCHAR (255)	
job_type	Job Type	VARCHAR (255)	
salary	Salary	DOUBLE	
date	Incentive Application Date	DATE (50)	
status	Approve status	VARCHAR(255)	
heir	Heir	VARCHAR(255)	
docs	Incentive Documents	BLOB	
created_at	Incentive created time	TIMESTAMP	NOT NULL
updated_at	Incentive updated time	TIMESTAMP	

2.2.10 WALI

Field Name	Description	Data Type	Constraint
wali_IcNuM	Wali's IC number	VARCHAR(60)	PK
wali_name	Wali's name	VARCHAR(60)	
wali_phonenumber	Wali's phone number	VARCHAR(60)	
wali_address	Wali's address	VARCHAR(200)	
wali_relationship	Wali's relationship	VARCHAR(60)	

2.2.11 WITNESS

Field Name	Description	Data Type	Constraint
wit_IcNuM	Witness's IC number	VARCHAR(60)	PK
wit_name	Witness's name	VARCHAR(60)	
wit_phonenumber	Witness's phone number	VARCHAR(60)	
wit_address	Witness's address	VARCHAR(200)	

2.2.12 MARRIAGE_CER

Field Name	Description	Data Type	Constraint
CER_Num	Certificate's number	INT	PK
apl_Num	Application's number	INT	FK
cer_issue_date	Certificate's issue date	DATE	

2.2.13 MARRIAGE_CARD

Field Name	Description	Data Type	Constraint
card_Num	Card's number	INT	PK
cer_Num	Certificate's number	INT	FK
card_issue_date	Card's issue date	DATE	

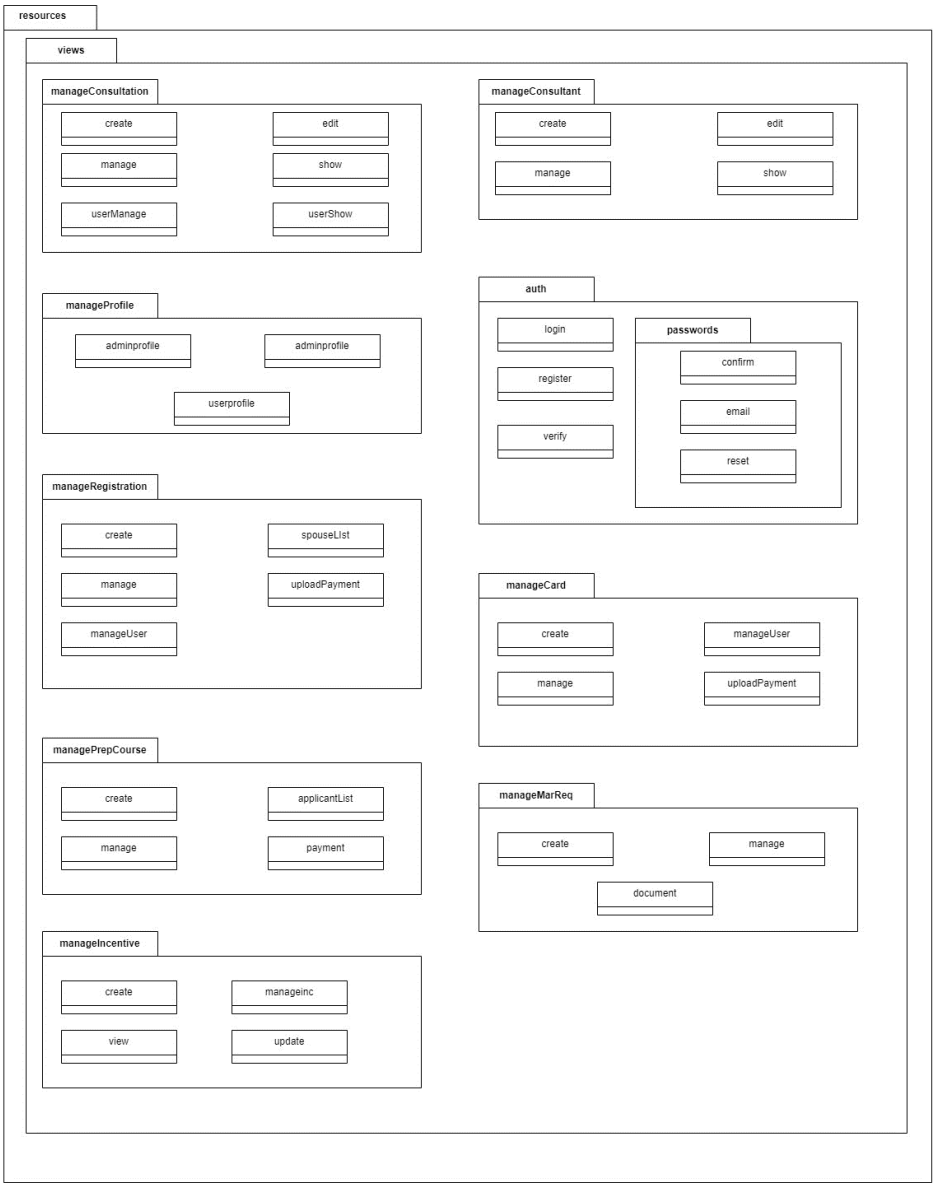
2.2.14 REFERENCES

Field Name	Description	Data Type	Constraint
id	References id	BIGINT (20)	PK
created_at	References created date	TIMESTAMP	
updated_at	References updated date	TIMESTAMP	
name	References name	VARCHAR (255)	NOT NULL
code	References code	VARCHAR (255)	NOT NULL
value	References value	VARCHAR (255)	NOT NULL

3. GENERAL ARCHITECTURE

3.1 Layered Architecture

3.1.1 Application Layer



3.1.1.1 Manage Profile [SDD-REQ-100]

Class Name	Description
adminprofile	A view class for admin to register staff in the EMUN system
staffprofile	A view class for staff to manage their profile in the EMUN system
userprofile	A view class for user to manage their profile in the EMUN system

3.1.1.2 Auth [SDD-REQ-200]

Class Name	Description
login	A view class for user, staff and admin login into the EMUN system
register	A view class for user to register into the EMUN system
verify	A view class for user to verify the account in the EMUN system
confirm	A view class for user to confirm the account in the EMUN system
email	A view class for user to enter the email to reset password in the EMUN system
reset	A view class for user to reset password in the EMUN system.

3.1.1.3 Manage Preparation Course [SDD-REQ-300]

Class Name	Description
create	A view class for applicant to register the marriage preparation course by fill in the form
manage	A view class for applicant display the information regarding to marriage preparation course
applicantList	A view class for JAIP staff to see the list of applicants that apply marriage preparation course
payment	A view class for applicant to submit proof of payment

3.1.1.4 Manage Marriage Request [SDD-REQ-400]

Class Name	Description
create	A view class for applicant to register the marriage application by fill in the form
manage	A view class for applicant edit their information
document	A view class for applicant to submit document

3.1.1.5 Manage Registration [SDD-REQ-500]

Class Name	Description
spouseList	A view class that displays the spouse's information and allow the user to search, edit, delete, print and submit
create	A view class that allows the user to create a marriage registration application
manage	A view class that displays the user's marriage registration application and allow staff to accept or reject
manageUser	A view class that displays the marriage registration application
uploadPayment	A view class that displays payment receipt request and allow the user to upload their receipt

3.1.1.6 Manage Card [SDD-REQ-600]

Class Name	Description
create	A view class allow the user to request for the marriage card
manage	A view class that displays the user's marriage card application and allow staff to accept or reject
manageUser	A view class that displays the marriage card application
uploadPayment	A view class that displays payment receipt request and allow the user to upload their receipt

3.1.1.7 Manage consultation [SDD-REQ-700]

Class Name	Description
create	A view class to display form to allow the user to fill information details
show	A view class to allow JAIP staff to view the information of the application
edit	A view class to allow JAIP staff to fill user appointment detail and approve their application
userManage	A view class to allow user to check the list of consultation applications made
userShow	A view class to allow user to view the information of the application made
manage	A view class to display the list of application and allow JAIP staff to manage the consultation application

3.1.1.8 Manage consultant [SDD-REQ-800]

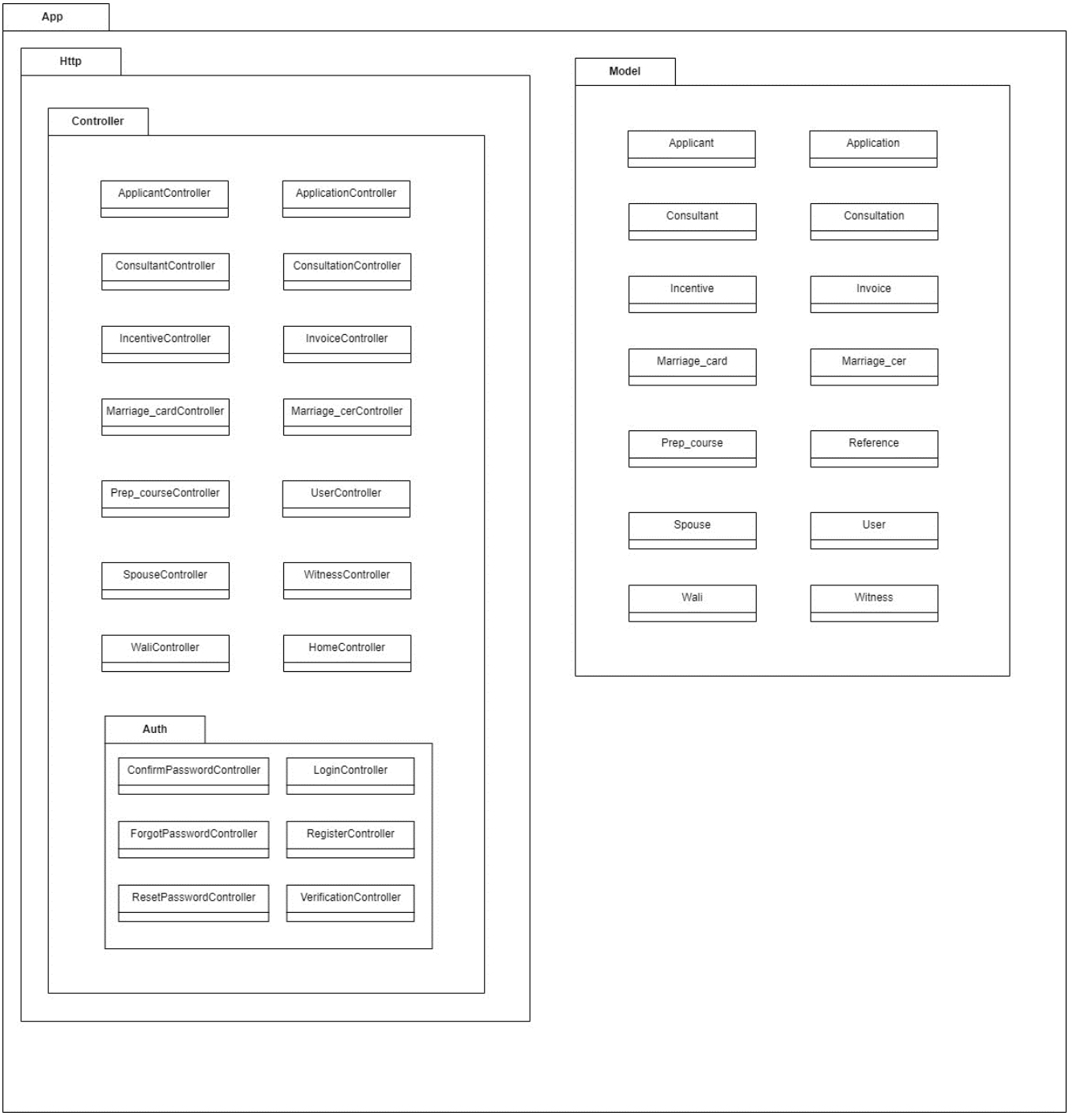
Class Name	Description
edit	A view class to allow JAIP staff to update the consultant's information
manage	A view class to allow JAIP staff to manage the list of consultants
create	A view class to allow JAIP staff to enter information of new consultant
show	A class that handles the consultant information

3.1.1.9 Manage Incentive [SDD-REQ-900]

Class Name	Description
create	A view class that displays the apply incentive page upon request which includes an application form
view	A view class that displays the user's incentive application details, hence information in a specified format
update	A view class that displays the user's information and allows the user to edit their information
delete	A view class that displays the user's information and allows the user to delete their information

3.1.2 Business Services Layer

3.1.2.1 Controller [SDD-REQ-1000]



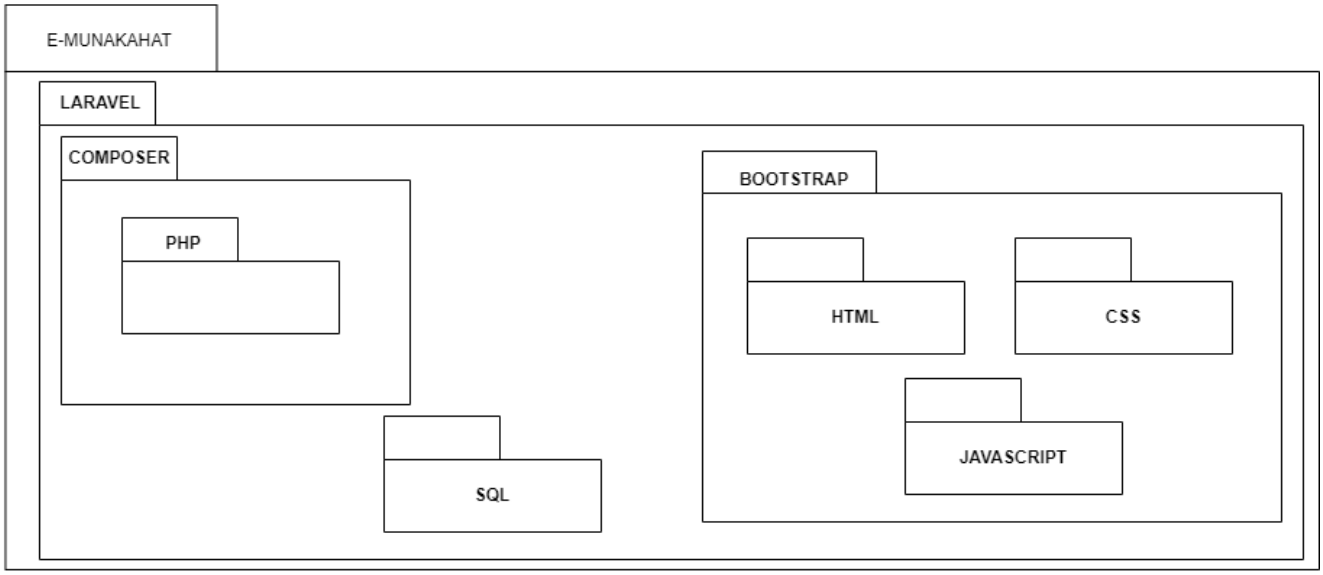
Class Name	Description
ApplicantController	Handles the logic and actions related to managing applicants in the application. Contains methods for creating, updating, and deleting applicant records, as well as retrieving applicant information.
ApplicationController	Manages the application-related functionality within the application. Contains methods for handling the creation, editing, deletion, and retrieval of application records.
ConsultantController	Responsible for handling the actions and operations related to managing consultants in the application. Contains methods for creating, updating, deleting, and retrieving consultant information.
ConsultationController	Handles the actions and operations associated with managing consultations in the application. Contains methods for scheduling consultations, updating consultation details, and retrieving consultation information.
IncentiveController	Manages the logic and actions related to incentives in the application. Contains methods for creating, updating, deleting, and retrieving incentive records.
InvoiceController	Handles the actions and operations related to managing invoices within the application. Contains methods for creating, updating, deleting, and retrieving invoice records.
Marriage_cardController	Manages the functionality associated with marriage cards within the application. Contains methods for creating, updating, deleting, and retrieving marriage card records.
Marriage_cerController	Handles the actions and operations related to managing marriage ceremonies in the application. Contains methods for creating, updating, deleting, and retrieving marriage ceremony records.
Prep_courseController	Responsible for managing the functionality related to preparation courses in the application. Contains methods for creating, updating, deleting, and retrieving preparation course records.

SpouseController	Manages the functionality and operations related to spouses within the application. Contains methods for creating, updating, deleting, and retrieving spouse records.
UserController	Handles the actions and operations related to managing users within the application. Contains methods for user registration, authentication, updating user information, and retrieving user details.
WaliController	Manages the logic and actions associated with managing walis (guardians) within the application. Contains methods for creating, updating, deleting, and retrieving wali records.
WitnessController	Handles the actions and operations related to managing witnesses within the application. Contains methods for creating, updating, deleting, and retrieving witness records.
HomeController	Handles the main functionality and actions related to the home page or main dashboard of the application. Contains methods for retrieving and displaying relevant information on the home page.
ConfirmPasswordController	This controller is responsible for handling password confirmations and uses a simple trait to include the behaviour
ForgotPasswordController	This controller is responsible for handling password reset emails and includes a trait that assists in sending these notifications from your application to your users.
LoginController	This controller handles authenticating users for the application and redirecting them to your home screen.
RegisterController	This controller handles the registration of new users as well as their validation and creation.
ResetPasswordController	This controller is responsible for handling password reset requests and uses a simple trait to include this behaviour.
VerificationController	This controller is responsible for handling email verification for any user that recently registered with the application.

3.1.2.2 Model [SDD-REQ-1100]

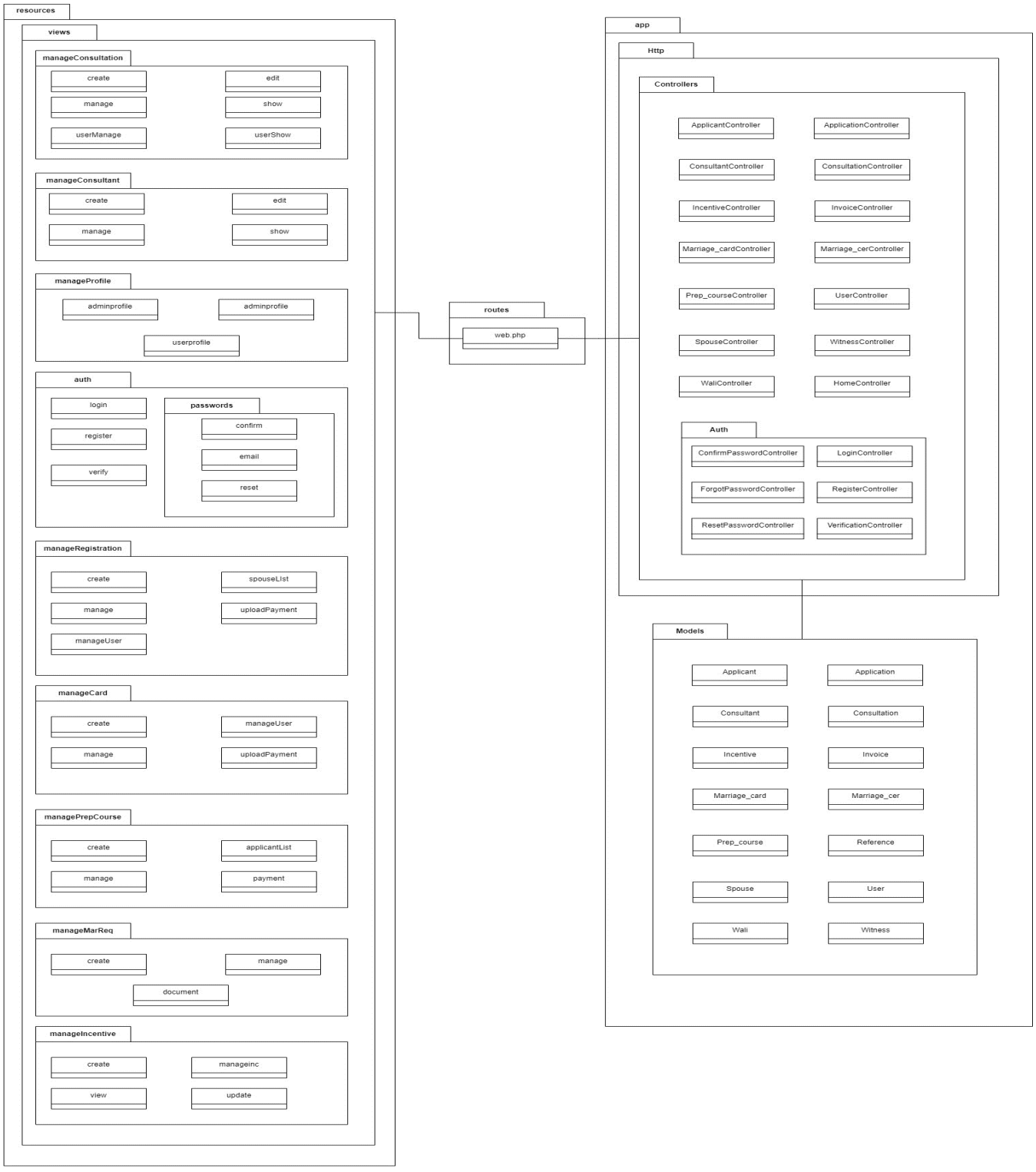
Class Name	Description
Applicant	This class retrieve and store applicant details
Application	This class retrieve and store application details
Consultant	This class retrieve and store consultant details
Consultation	This class retrieve and store consultation details
Incentive	This class retrieve and store incentive details
Invoice	This class retrieve and store invoice details
Marriage_card	This class retrieve and store marriage card details
Marriage_cer	This class retrieve and store marriage certificate details
Prep_course	This class retrieve and store preparation course details
Reference	This class retrieve and store reference details
Spouse	This class retrieve and store spouse details
User	This class retrieve and store user details
Wali	This class retrieve and store wali details
Witness	This class retrieve and store witness details

3.1.3 Middleware Layer



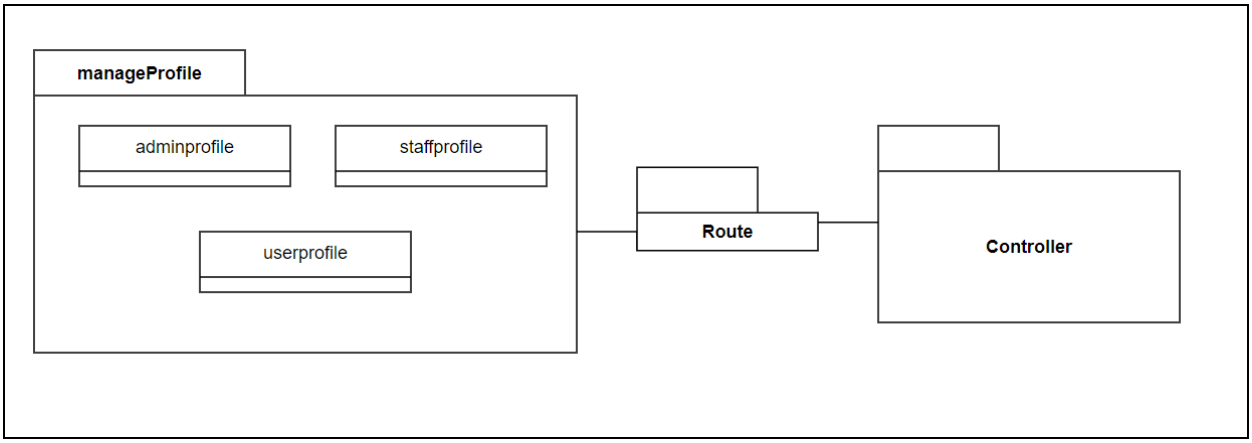
Package Name	Description
HTML	The package that contains of creating and design a website page
CSS	The package that contains of styling of the HTML package
JAVASCRIPT	The package that contains of enhancing the interactivity and functionality of website pages
LARAVEL	PHP web application framework. It contains various packages and classes for building web application.
PHP	The package that contains of code that builds dynamic web applications
SQL	The package that contains the database management

3.2 MVC Package Relationship



4. DETAIL DESIGN

4.1 manageProfile [SDD-REQ-100]



4.1.1 adminprofile [SDD-REQ-101]

Class Type	Boundary class	
Responsibility	An interface to display the staff registration page that provides form for admin to register Staff.	
Attributes	Attributes Name	Attributes Type
	ic name gender contact email	Varchar Varchar Varchar Varchar Varchar
Methods	Method Name	Description
	registerstaff()	To register new account for the staff.
	viewregisterstaff()	To view the staff register page

Algorithm	BEGIN System display staff register page. Admin enter staff information. Admin click register staff button. END

4.1.2 staffprofile [SDD-REQ-102]

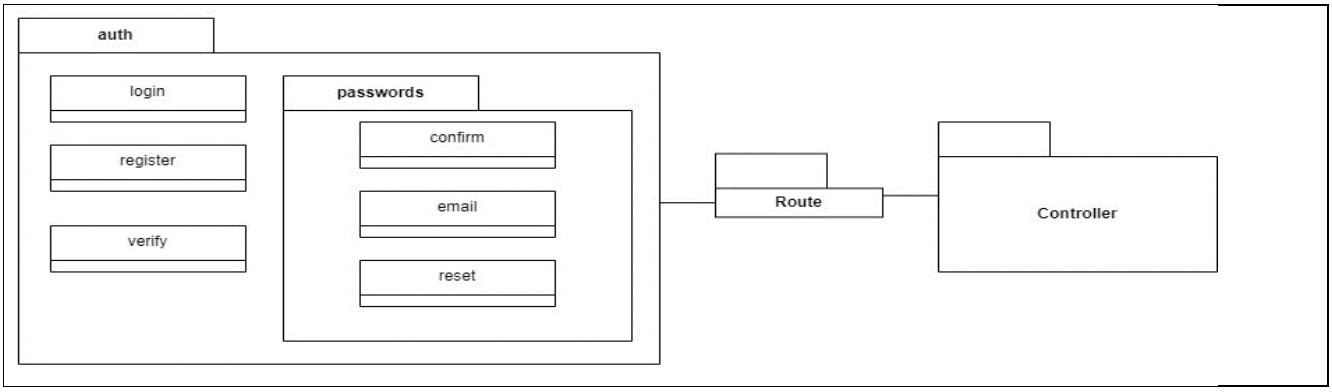
Class Type	Boundary class	
Responsibility	An interface to display staff user profile page that provides staff to update profile and change password.	
Attributes	Attributes Name	Attributes Type
	ic name gender contact email password	Varchar Varchar Varchar Varchar Varchar Varchar
Methods	Method Name	Description
	viewprofile()	To view the user profile
	changepassword()	To change the password of the account.
	updateprofile()	To update the detail of the profile

Algorithm	BEGIN
	System display user profile page
	IF staff make changes on user profile
	Staff click “Update Profile” button
	ELSE IF staff make changes on password
	Staff click “Change Password” button
	END IF
	END	

4.1.3 userprofile [SDD-REQ-103]

<table>
<tr><td>Class Type</td><td colspan="2">Boundary class</td></tr>
<tr><td>Responsibility</td><td colspan="2">An interface to display staff user profile page that provides staff to update profile and change password.</td></tr>
<tr><td rowspan="2">Attributes</td><td>Attributes Name</td><td>Attributes Type</td></tr>
<tr><td>ic
name
gender
contact
email
password</td><td>Varchar
Varchar
Varchar
Varchar
Varchar
Varchar</td></tr>
<tr><td rowspan="4">Methods</td><td>Method Name</td><td>Description</td></tr>
<tr><td>viewprofile()</td><td>To view the user profile</td></tr>
<tr><td>changepassword()</td><td>To change the password of the account.</td></tr>
<tr><td>updateprofile()</td><td>To update the detail of the profile</td></tr>
<tr><td>Algorithm</td><td colspan="2">BEGIN
System display user profile page
IF user make changes on user profile
User click “Update Profile” button
ELSE IF user make changes on password
User click “Change Password” button
END IF
END</td></tr>
</table>

4.2 auth [SDD-REQ-200]



4.2.1 login [SDD-REQ-201]

Class Type	Boundary class	
Responsibility	An interface to display the login page that provides form for user, staff and admin login into the system.	
Attributes	Attributes Name	Attributes Type
	ic password	Varchar Varchar
Methods	Method Name	Description
	reset_pass_controller()	To enable user reset their password by entering email address
	authentication_controller()	To receive the user input in userLogin

Algorithm	BEGIN
	Display a login form with input fields for IC number and password.
	if there is an error message then
	Display the error message.
	else if the user is already registered then
	Show an error message indicating that the IC number is already registered.
	end if
	Provide an option to remember the user's login.
	Allow the user to submit the form to the login route.
	if the user is new then
	Provide a link for user registration.
	else if the user forgot the password then
	Provide a link to the password reset page.
	end if
	END	

4.2.2 register [SDD-REQ-202]

<table>
<tr><td>Class Type</td><td colspan="2">Boundary class</td></tr>
<tr><td>Responsibility</td><td colspan="2">An interface to display the register page that provides a form for user to register into the system.</td></tr>
<tr><td rowspan="2">Attributes</td><td>Attributes Name</td><td>Attributes Type</td></tr>
<tr><td>ic
name
gender
contact
email
password</td><td>Varchar
Varchar
Varchar
Varchar
Varchar
Varchar</td></tr>
<tr><td rowspan="2">Methods</td><td>Method Name</td><td>Description</td></tr>
<tr><td>registeruser()</td><td>To enable user to register themselves</td></tr>
<tr><td>Algorithm</td><td colspan="2">BEGIN
Display a registration form.
Capture user inputs for IC number, name, gender, contact, email, password, and password confirmation.

Validate user inputs:
if any error occurs, display the corresponding error message next to the input field.

Allow the user to submit the form:
if the form is submitted then
Register the user by processing the submitted data.
Redirect the user to a success page or perform any necessary actions.
else if the user inputs are incorrect or incomplete then
Display appropriate error messages.
end if
END</td></tr>
</table>

4.2.3 verify [SDD-REQ-203]

Class Type	Boundary class	
Responsibility	An interface to display the verify page that provides instructions for user to verify the account.	
Attributes	Attributes Name	Attributes Type
	email	Varchar
Methods	Method Name	Description
	verifyaccount()	To verify new account where user can click on the link.

Algorithm	BEGIN
	Display a verification card with a message to verify the user's email address.
	
	if a fresh verification link has been sent then
	Display a success alert indicating that a fresh verification link has been sent to the user's email address.
	end if
	
	Display a message instructing the user to check their email for a verification link.
	
	Provide an option for the user to request another verification link:
	if the user wants to request another verification link then
	Process the request by submitting a form.
	Redirect the user or perform any necessary actions.
	end if
	END	

4.2.4 confirm [SDD-REQ-204]

Class Type	Boundary class	
Responsibility	An interface to display the confirm page that provides a link for user to verify the account and a form to confirm the password.	
Attributes	Attributes Name	Attributes Type
	email password	Varchar Varchar
Methods	Method Name	Description
	viewconfirm()	Show the status of the account.

Algorithm	BEGIN
	Display a card with a heading "Confirm Password".
	
	Display a message instructing the user to confirm their password before proceeding.
	
	Begin a form with a method of "POST" and an action of "password.confirm".
	
	Validate the password entered by the user:
	if the password is invalid then
	Display an error message indicating the validation error.
	end if
	
	Provide an option for the user to confirm the password:
	if the user confirms the password then
	Process the request by submitting the form.
	Redirect the user or perform any necessary actions.
	end if
	
	Provide an option for the user to reset their password if forgotten:
	if the "password.request" route exists then
	Display a button or link labeled "Forgot Your Password?" that links to the "password.request" route.
	end if
	END	

4.2.5 email [SDD-REQ-205]

<table>
<tr><td>Class Type</td><td colspan="2">Boundary class</td></tr>
<tr><td>Responsibility</td><td colspan="2">An interface to display the password reset page that provides a form for user to enter the email.</td></tr>
<tr><td rowspan="2">Attributes</td><td>Attributes Name</td><td>Attributes Type</td></tr>
<tr><td>email</td><td>Varchar</td></tr>
<tr><td rowspan="2">Methods</td><td>Method Name</td><td>Description</td></tr>
<tr><td>resetpassword()</td><td>To let the user enter their email to reset the password.</td></tr>
<tr><td>Algorithm</td><td colspan="2">BEGIN
Display a card with the heading "Reset Password".

Check if a session status message exists:
if a session status message exists then
Display a success alert with the session status message.
end if

Begin a form with a method of "POST" and an action of "password.email".

Retrieve the user's email address:
if the user's email address is provided and valid then
Submit the form to send a password reset link to the user's email address.
Redirect the user or perform any necessary actions.
end if

Validate the email address entered by the user:
if the email address is invalid then
Display an error message indicating the validation error.
end if

Provide an option for the user to send a password reset link:
if the user clicks the "Send Password Reset Link" button then
Process the request by submitting the form.
Redirect the user or perform any necessary actions.
end if
END</td></tr>
</table>

4.2.6 reset [SDD-REQ-206]

<table>
<tr><td>Class Type</td><td colspan="2">Boundary class</td></tr>
<tr><td>Responsibility</td><td colspan="2">An interface to display the update password reset page that provides a form for user to enter the new password.</td></tr>
<tr><td rowspan="2">Attributes</td><td>Attributes Name</td><td>Attributes Type</td></tr>
<tr><td>email
password</td><td>Varchar
Varchar</td></tr>
<tr><td rowspan="2">Methods</td><td>Method Name</td><td>Description</td></tr>
<tr><td>passwordtoken()</td><td>To reset the password.</td></tr>
<tr><td>Algorithm</td><td colspan="2">BEGIN
Display a card with a heading "Reset Password".

Begin a form with a method of "POST" and an action of "password.update".

Retrieve the reset password token:
if the reset password token is provided then
Include the token in a hidden input field.
end if

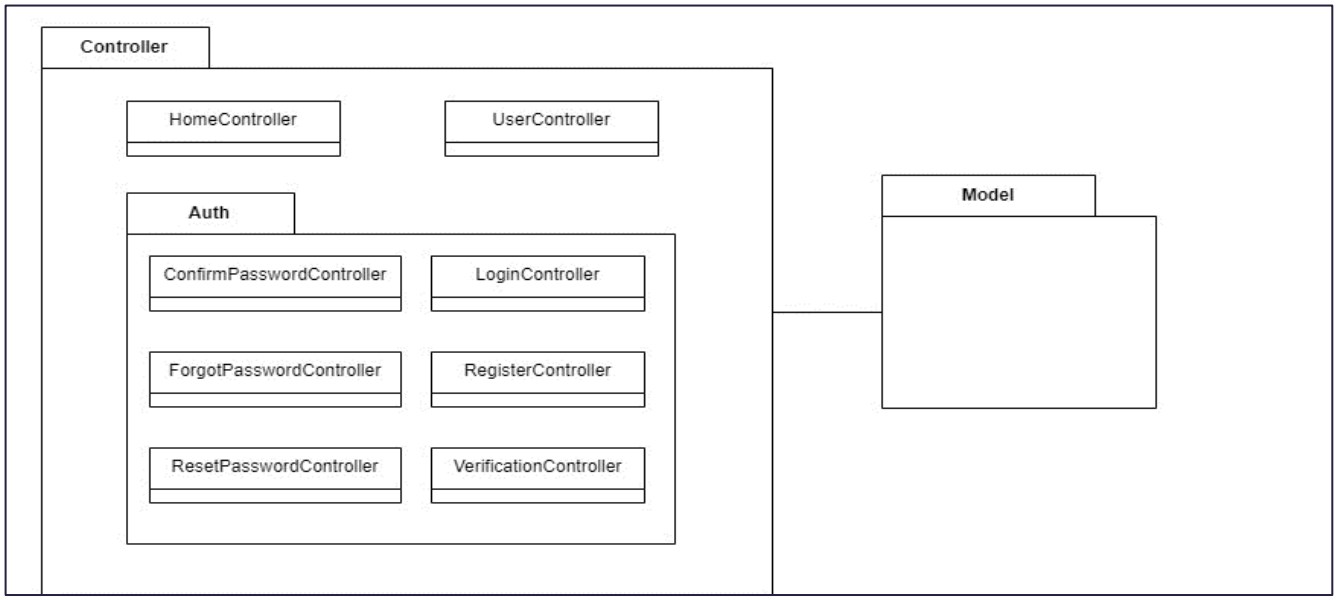
Retrieve the user's email address:
if the user's email address is provided and valid then
Retrieve and display the user's email address in an input field.
Display an error message if the email address is already registered.
end if

Retrieve the new password:
if a new password is provided and meets the required criteria then
Display an input field to enter the new password.
Display an error message if the password does not meet the criteria.
end if

Retrieve the confirmation password:
if a confirmation password is provided and matches the new password then
Display an input field to confirm the new password.</td></tr>
</table>

	end if
	
	Provide an option for the user to reset the password:
	if the user clicks the "Reset Password" button then
	Process the request by submitting the form.
	Redirect the user or perform any necessary actions.
	end if
	END

4.3 Controller [SDD-REQ-1000]



4.3.1 HomeController [SDD-REQ-1014]

Class Type	Controller Class	
Responsibility	The HomeController is responsible for managing user, staff and admin profiles and updating passwords in the application.	
Attributes	Attributes Name	Attributes Type
	None	None
Methods	Method Name	Description
	construct ()	Constructor method that sets up the middleware 'auth' for the HomeController class.
	indexUser()	Shows the user profile dashboard by returning the view 'manageProfile.userprofile'.

	indexStaff()	Shows the staff profile dashboard by returning the view 'manageProfile.staffprofile'.
	indexAdmin()	Shows the admin profile dashboard by returning the view 'manageProfile.adminprofile'.
	updatePassword()	Handles the request for updating the password. Validates the old_password and new_password, checks if the old password matches the authenticated user's password, and updates the password if successful.

Algorithm	BEGIN
	Create a new instance of the HomeController.
	
	Define a constructor method that adds the 'auth' middleware to the controller.
	
	Define a method called indexUser:
	if the method is called then
	Display the 'userprofile' view.
	end if
	
	Define a method called indexStaff:
	if the method is called then
	Display the 'staffprofile' view.
	end if
	
	Define a method called indexAdmin:
	if the method is called then
	Display the 'adminprofile' view.
	end if
	
	Define a method called updatePassword that accepts a Request object:
	begin
	Validate the request:
	if the 'old_password' and 'new_password' fields are required and the 'new_password' is confirmed then
	Continue to the next step.
	else
	Redirect back with an error message.
	end if	

	Check if the provided 'old_password' matches the authenticated user's password:
	if the passwords do not match then
	Redirect back with an error message.
	end if
	
	Update the authenticated user's password with the provided 'new_password':
	if the password is successfully updated then
	Redirect back with a success message.
	end if
	end
	END

4.3.2 UserController [SDD-REQ-1011]

Class Type	Controller Class	
Responsibility	The update method in UserController updates user information and redirects to the appropriate home route based on the user's role.	
Attributes	Attributes Name	Attributes Type
	None	None
Methods	Method Name	Description
	update(Request $request, $id)	Update the specified resource in storage. Retrieve the user, update their information, and redirect to the appropriate home route based on their role.

Algorithm	BEGIN
	Create a new instance of the UserController.
	
	Define a method called update that accepts a Request object and an ID:
	begin
	$user = User::find($id);
	$user->update($request->all());
	
	if the user's role is 'staff' then	

	Set the $homeRoute variable to 'staff.home'.
	else if the user's role is 'admin' then
	Set the $homeRoute variable to 'admin.home'.
	else
	Set the $homeRoute variable to 'user.home'.
	end if
	
	Define a method called storeStaff that accepts a Request object:
	if the method is called then
	begin
	$request->merge([
	'password' => Hash::make('1234'),
	'role' => 1,
	'staff_id' => 'stf' . rand(100, 999),
	]);
	$user = User::create($request->all());
	Redirect back with a success message.
	end
	end
	END

4.3.3 ConfirmPasswordController [SDD-REQ-1015]

Class Type	Controller Class	
Responsibility	This controller is responsible for handling password confirmations and uses a simple trait to include the behaviour.	
Attributes	Attributes Name	Attributes Type
	None	None
Methods	Method Name	Description
	construct()	Constructor method that is called when the ConfirmPasswordController class is instantiated. It sets up the middleware 'auth' to ensure the user is authenticated.
	showConfirmForm()	Display the password confirmation form.

	confirm()	Confirm the user's password.

Algorithm	BEGIN
	Create a new instance of the ConfirmPasswordController.
	
	Use the ConfirmsPasswords trait to include the password confirmation behavior.
	
	Set the redirectTo variable to the RouteServiceProvider's HOME constant.
	
	Define a method called __construct:
	if the method is called then
	end if
	END	

4.3.4 LoginController [SDD-REQ-1017]

Class Type	Controller Class	
Responsibility	This controller handles authenticating users for the system and redirecting them to the home screen	
Attributes	Attributes Name	Attributes Type
	None	None
Methods	Method Name	Description
	login(Request $request)	Handles the login request. Validates the input fields (ic and password), attempts to authenticate the user, and redirects based on the user's role. If authentication fails, it redirects back to the login page with an error message.
Algorithm	BEGIN Create a new instance of the LoginController. Use the AuthenticatesUsers trait for convenient authentication functionality. Set the redirectTo variable to the RouteServiceProvider's HOME constant.	

	Define a method called __construct:
	if the method is called then
	end if
	
	Define a method called login that accepts a Request object:
	if the method is called then
	$input = $request->all();
	
	Validate the request data: 'ic' field is required and must be 12 digits, 'password' field is required.
	
	if the authentication attempt is successful then
	if the authenticated user's role is 'admin' then
	Redirect to the 'admin.home' route.
	else if the authenticated user's role is 'staff' then
	Redirect to the 'staff.home' route.
	else if the authenticated user's role is 'user' then
	Redirect to the 'user.home' route.
	end if
	else
	Redirect to the 'login' route with an error message indicating invalid credentials.
	end if
	end
	END

4.3.5 ForgotPasswordController [SDD-REQ-1016]

Class Type	Controller Class	
Responsibility	This controller is responsible for handling password reset emails and includes a trait that assists in sending these notifications from the system to the users.	
Attributes	Attributes Name	Attributes Type
	None	None
Methods	Method Name	Description
	sendResetLinkEmail(Request $request)	Sends the password reset email to the user. Handles the logic for sending the password reset email notification.

Algorithm	BEGIN
	Create a new instance of the ForgotPasswordController.
	Define a method called sendResetLinkEmail:
	if the method is called then
	Send the password reset email to the user.
	end if
	END

4.3.6 RegisterController [SDD-REQ-1018]

Class Type	Controller Class	
Responsibility	This controller handles the registration of new users as well as their validation and creation.	
Attributes	Attributes Name	Attributes Type
	None	None
Methods	Method Name	Description
	validator(array $data)	Gets a validator for an incoming registration request. Validates the data based on the defined rules and returns the validator instance.
	create(array $data)	Creates a new user instance after a valid registration. Creates a new user record in the database with the provided data and returns the created user instance.

Algorithm	BEGIN
	Create a new instance of the RegisterController.
	
	Use the RegistersUsers trait to include the functionality for user registration.
	
	Define a method called register:
	Validate the incoming registration request data:
	- Required fields: ic, name, gender, contact, email, password
	- Additional validation rules for each field
	
	if the validation fails then
	Logic for handling failed validation
	else	

	Create a new user instance with the provided data: - ic, name, gender, contact, email, hashed password Save the user instance to the database. Create a new record in the applicant table linked to the user: - user_id: the ID of the created user Redirect the user to the specified redirect path after successful registration. end if END

4.3.7 ResetPasswordController [SDD-REQ-1019]

Class Type	Controller Class	
Responsibility	This controller is responsible for handling password reset requests and uses a simple trait to include this behaviour.	
Attributes	Attributes Name	Attributes Type
	None	None
Methods	Method Name	Description
	resetPassword()	Reset the given user's password.
	validateEmail()	Validate the email for the given password reset request.
Algorithm	BEGIN Create a new instance of the ResetPasswordController. Use the ResetsPasswords trait to include the functionality for handling password reset requests. Define a method called reset: Reset the user's password: - Use the token provided in the request to retrieve the user. - Validate and update the new password. Redirect the user to the specified redirect path after successfully resetting the password.	

	END

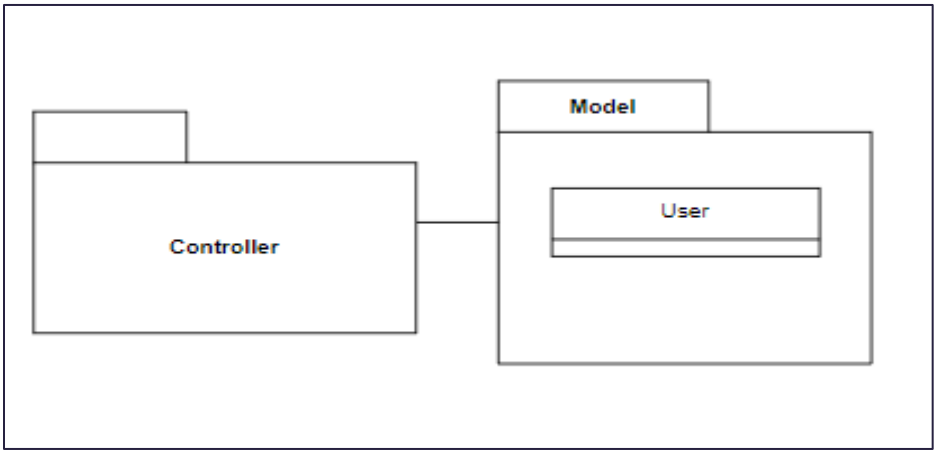
4.3.8 VerificationController [SDD-REQ-1019]

Class Type	Controller Class	
Responsibility	This controller is responsible for handling email verification for any user that recently registered with the application.	
Attributes	Attributes Name	Attributes Type
	None	None
Methods	Method Name	Description
	verify()	Mark the authenticated user's email address as verified.

Algorithm	BEGIN
	Create a new instance of the VerificationController.
	
	Use the VerifiesEmails trait to include the functionality for handling email verification.
	
	Define a method called verify:
	if the request has a signed URL:
	Verify the user's email:
	- Use the signed URL provided in the request to verify the user.
	- Mark the user's email as verified in the database.
	
	Redirect the user to the specified redirect path after successfully verifying the email.
	end if
	
	Define a method called resend:
	if the user is eligible to resend the verification email (throttle):
	Resend the email verification notification.
	
	Redirect the user to the specified redirect path after resending the verification email.
	end
	
	Set the middleware:	

	- 'auth': Require authentication to access the verification routes. - 'signed': Allow only signed URLs for the 'verify' method. - 'throttle': Limit the rate of accessing the 'verify' and 'resend' methods. END

4.4 Model [SDD-REQ-1100]



4.4.1 User [SDD-REQ-1112]

Class Type	Model Class	
Responsibility	This model manage the retrieving and storing data from users table and also manage its relationship with other tables.	
Attributes	Attributes Name	Attributes Type
	$fillable $hidden $cast	Array Array Array
Methods	Method Name	Description
	role()	Method to returns an Attribute object representing the role attribute and provides a mapping functionality for converting input values to user roles from a predefined array. It ensures controlled access to the role attribute within the class and its subclasses.

Algorithm	BEGIN User Model Definition Use HasApiTokens, HasFactory, Notifiable traits Define fillable attributes Define hidden attributes Define attribute casting rules Define a role() method for custom attribute casting BEGIN Custom attribute casting logic Map integer value to corresponding role string END END

5. REQUIREMENT TRACEABILITY

5.1 manageProfile [UC-101-EMUN-001]

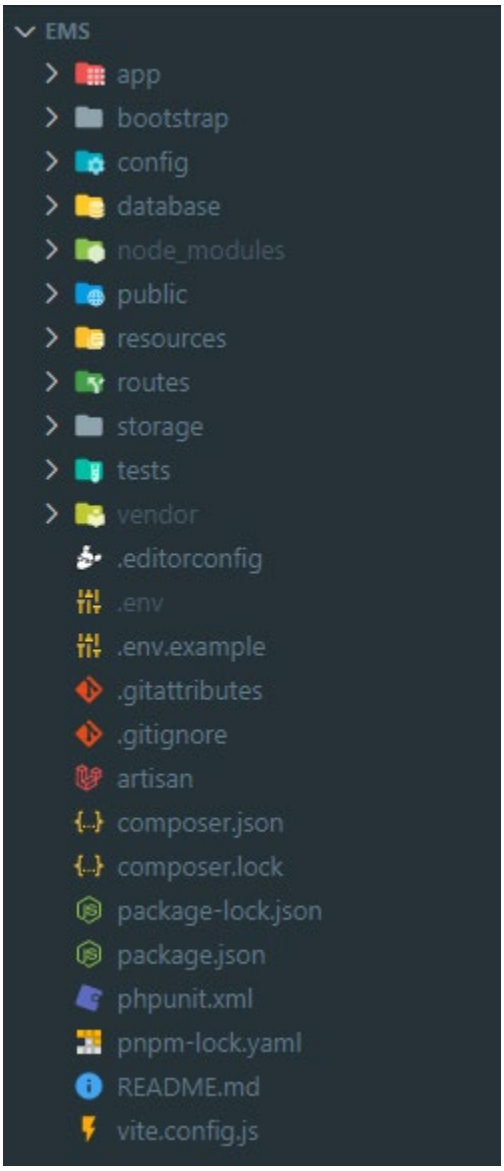
Use Case ID	Description	Package ID
UC-101-EMUN-001	Admin can register the staff	SDD-REQ-101
	Staff can view their profile. Staff can update their profile. Staff can change their account password.	SDD-REQ-102
	User can view their profile. User can update their profile. User can change their account password.	SDD-REQ-103

5.2 auth [UC-102-EMUN-001]

Use Case ID	Description	Package ID
UC-102-EMUN-001	User, staff and admin can login into the system	SDD-REQ-201
	User can register themselves to have an access into the system	SDD-REQ-202
	User can verify the account in the system	SDD-REQ-203
	User can confirm the account in the system	SDD-REQ-204
	User can enter the email to reset password in the system	SDD-REQ-205
	User can reset password system.	SDD-REQ-206

APPENDIX

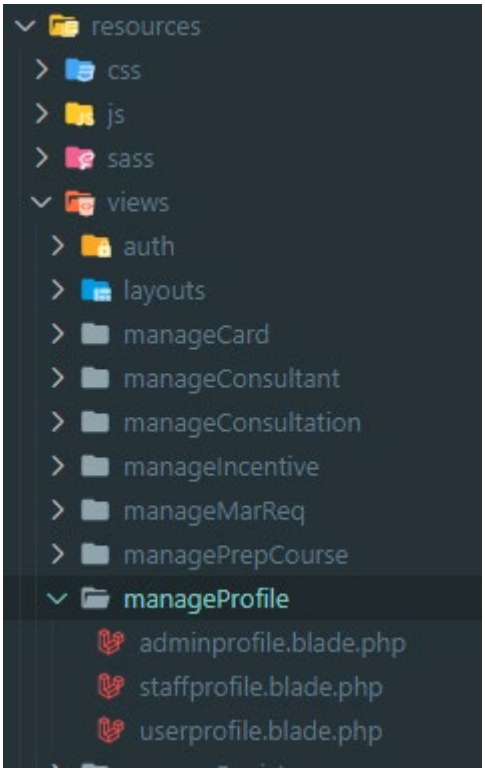
APPENDIX B



System Name	Layer		
EMS	resources	views	
	app	Http	Controllers
		Models	
	routes		

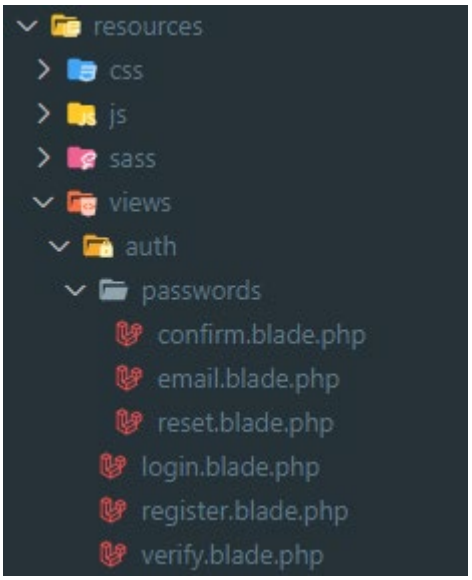
APPENDIX C1

manageProfile - Views Layer



Layer	Package	Class
views	manageProfile	adminprofile
		staffprofile
		userprofile

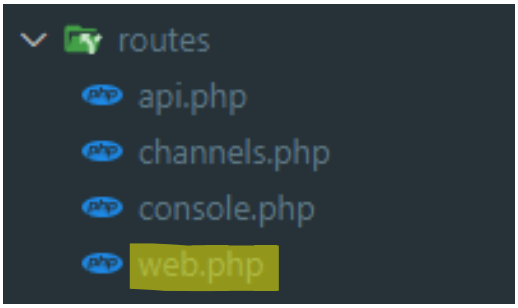
auth - Views Layer



Layer	Package		Class
views	auth	passwords	confirm
			email
			reset
			login
			register
			verify

APPENDIX C2

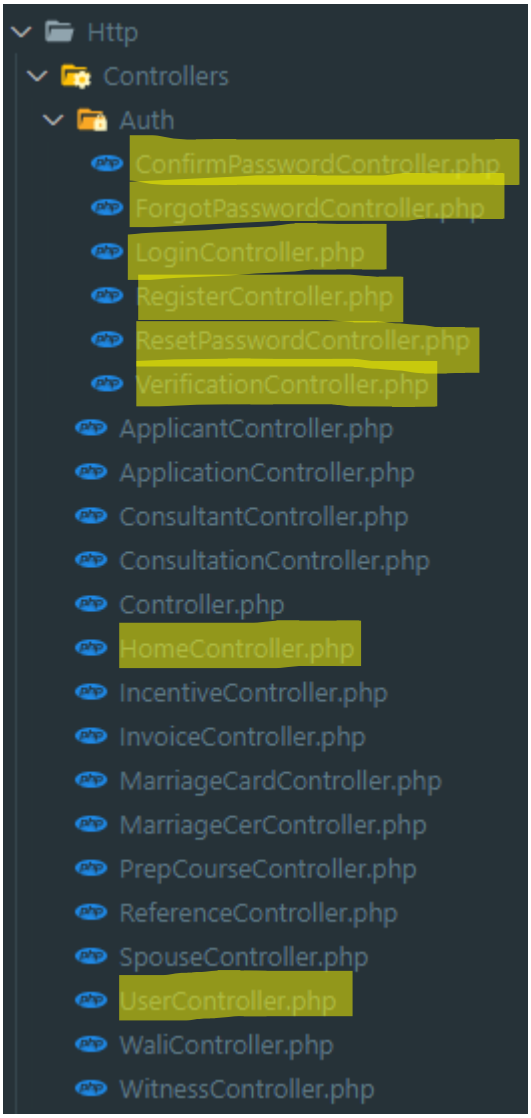
manageProfile & auth – Design Pattern Layer



Layer	Class
routes	web

APPENDIX C3

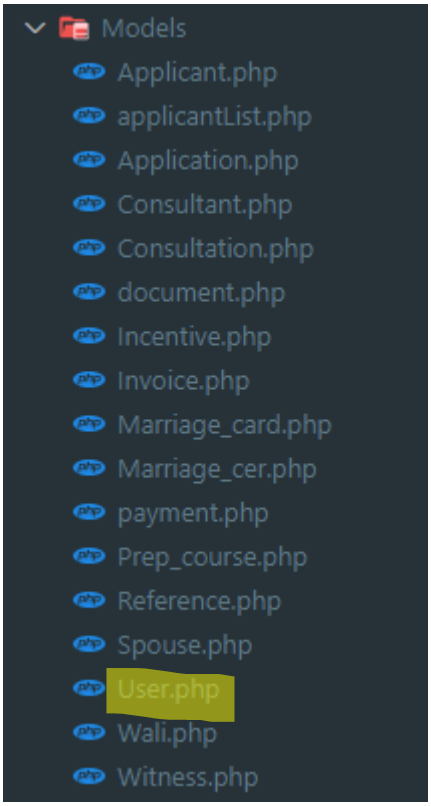
manageProfile & auth - Controller Layer



Layer	Class
Controllers	ConfirmPasswordController ForgotPasswordController LoginController RegisterController ResetPasswordController VerificationController HomeController UserController

APPENDIX C4

manageProfile & auth – Model Layer



Layer	Class
Models	User

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SDD Document SEM II 20222023

e-Munakahat System (EMUN)

Group Name

1. Muhammad Amir Bin Mohamed Ali [CB21060]
2. Ahmad Suffian Bin Md Noor Suhaime [CB21137]
3. Chua Kian Pheng [CB21106]
4. Nik Alia Syafiqah Binti Nik Azuri [CB21035]
5. Shammene A/P Muneesvaran [CB21018]

Quantum Corp

TABLE OF CONTENTS

1. INTRODUCTION

1.1 Purpose

This software design document (SDD) serves as a blueprint for the development of the e-Munakahat System (EMUN). It outlines the software design process, including the software's architecture, modules, interfaces, and data structures. The primary purpose of an SDD is to ensure that the software development team and stakeholders understand the design of the software application and how it will function.

The software design document (SDD) is a communication tool between the development team and stakeholders, ensuring everyone is on the same page regarding the software's design and implementation. It will also help the stakeholders to understand any limitations or assumptions that may impact the system's performance or usability, which will help the stakeholders to make informed decisions and better plan for the project. This will also help to ensure that the final product meets the needs of the users and the jurisdiction.

1.2 System Identification

The Software Design Document (SDD) belongs to the “e-Munakahat System” (EMUN).

Table 1.1 Document Identity.

<table>
<tr><th>System title</th><th>e-Munakahat System</th></tr>
<tr><td>System abbreviation</td><td>EMUN</td></tr>
<tr><td>System identification number</td><td>SDD_EMUN_QC_2023</td></tr>
<tr><td>Subsystem Title</td><td>IkatanCinta</td></tr>
<tr><td>Subsystem Abbreviation</td><td>IC</td></tr>
<tr><td>Package ID</td><td>SDD-REQ-100
Meanings for terms use:
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<tr><td>REQ</td><td>Requirement</td></tr>
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<tr><td>100</td><td>Number of use case</td></tr>
<tr><td>EMS</td><td>e-Munakahat System</td></tr>
<tr><td>2023</td><td>Year document created</td></tr>
</table></td></tr>
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<tr><td>REQ</td><td>Requirement Tracebility</td></tr>
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<tr><td>EMS</td><td>e-Munakahat System</td></tr>
<tr><td>2023</td><td>Year document created</td></tr>
</table></td></tr>
<tr><td>Document Identification System</td><td>SDD_EMUN_IC_2023_V1.0</td></tr>
</table>

Symbol/Number	Meaning
EMUN	It represents the system name which is e-Munakahat System (EMUN)
SDD	It represents the software design document (SDD)
QC	It represents the company name which is Quantum Corp SDN. BHD.
2023	It represents the year where the system has been released.
V1.0	V represent the word “Version” of the system while 1.0 is the general version of the system. The number will increase by 0.1 if there any updates or bugs fixed.

1.3 System Overview

Our system is a web-based system to support the Pahang Wedding management system. The purpose of the system is to provide a solution for managing wedding registration and operations efficiently. Users can use this system for marriage registration and information retrieval. It also eases the government to collect granular data on weddings in Pahang and store the information for future use. This system is handled by the Quantum Corp company. This system contains various functionalities such as user registration, marriage application, marriage registration, marriage preparation course, proof of payment, request for marriage, marriage card, marriage consultation, and special incentives for the bride and groom.

There are five modules in this system which are:

1. Registration and handle user profile

The initial stage of using the system is applicant registration, which is required for applicants to enter the system. It contains private information such as an Identity Card number, phone number, email address, and password. Since registration is based on the user's IC number, a unique number with no duplicates, each user has just one account for the system. Once the applicant's registration is successful, they can log in to access the system's contents after completing the registration process. The admin can register new staff through the admin dashboard. Once registration for staff is successful, they will be granted access to the system. The system also allows users (applicants & staff) to modify their profile details to update their information. In case the applicant has forgotten their password, they will be able to reset their password. Apart from that, the admin can update staff and applicant details through the admin dashboard.

2. Attend the marriage preparation course with proof of payment and to request a marriage.

After users register and login into the account, the users can proceed to the next step where they can apply for the marriage registration course. As a marriage registration course is an important step for the e-Munakahat system will update the name list of applicants. The system will show if the user has already paid for the course or not. So, then the staff can print the proof of payment and send the receipt to the applicants. The system shall allow the admin to manage the marriage preparation course details such as date, time, and where the course will be conducted. While the staff will handle the things that are related to the user or applicants. Approve the applications in the system and print the applicants' name list for the course for every session. If the applicant presents on the course day, the staff can approve their marriage course certificate. After the course ends, the applicants will be represented with the certificate. The staff can update the applicant's name from the system for obtaining the marriage course certificate. Next step for the applicant is request their marriage from E-Munakahat system.

3. An application to register a marriage within or outside the country, as well as a voluntary marriage, and to produce the marriage card or certificate with proof of payment.

Marriage registration is split into two processes which are voluntary and authorized registration. User needs to pass a pre-marriage course to be able to register their marriage. Voluntary registration is for the older generation who live far away from town and did not register when they married. For authorized registration, the user must prepare various forms and information in which the template is provided in the system. After staff from JAIP has approved the marriage registration, it will notify the user so that they know their marriage registration has been approved.

4. Register for a marriage consultation with a service advisor.

A consultation module is a module where the user can make an appointment to seek advice or to get a divorce. This module requires the users to enter their personal information and also their spouse information including their marriage information and upload related documents as proof. Staff can view the application made by the user and will decide whether to approve the appointment and responsible to assign consultant and slot to the consultation session. Staff are also responsible for managing the list of consultants and their information in this module. The staff can edit, add, and delete the consultants' information in the system.

5. Application for special incentive for the bride and groom

The marriage registration system features a special incentive module that enables users to apply for incentives, provided they meet the necessary prerequisites. This module allows individuals to input their personal information and upload necessary documents, making the process more streamlined. Additionally, the staff side of the platform allows for the review of applications and ensures that the process is efficient and user-friendly. The special incentive module in the marriage registration system also includes a notification feature that keeps applicants informed about the status of their applications. Once the staff reviews the application, the applicant will receive a notification, either confirming their approval or outlining the reasons for the denial. This ensures that applicants are aware of the status of their application in a timely and efficient manner."

1.4 Referenced Document

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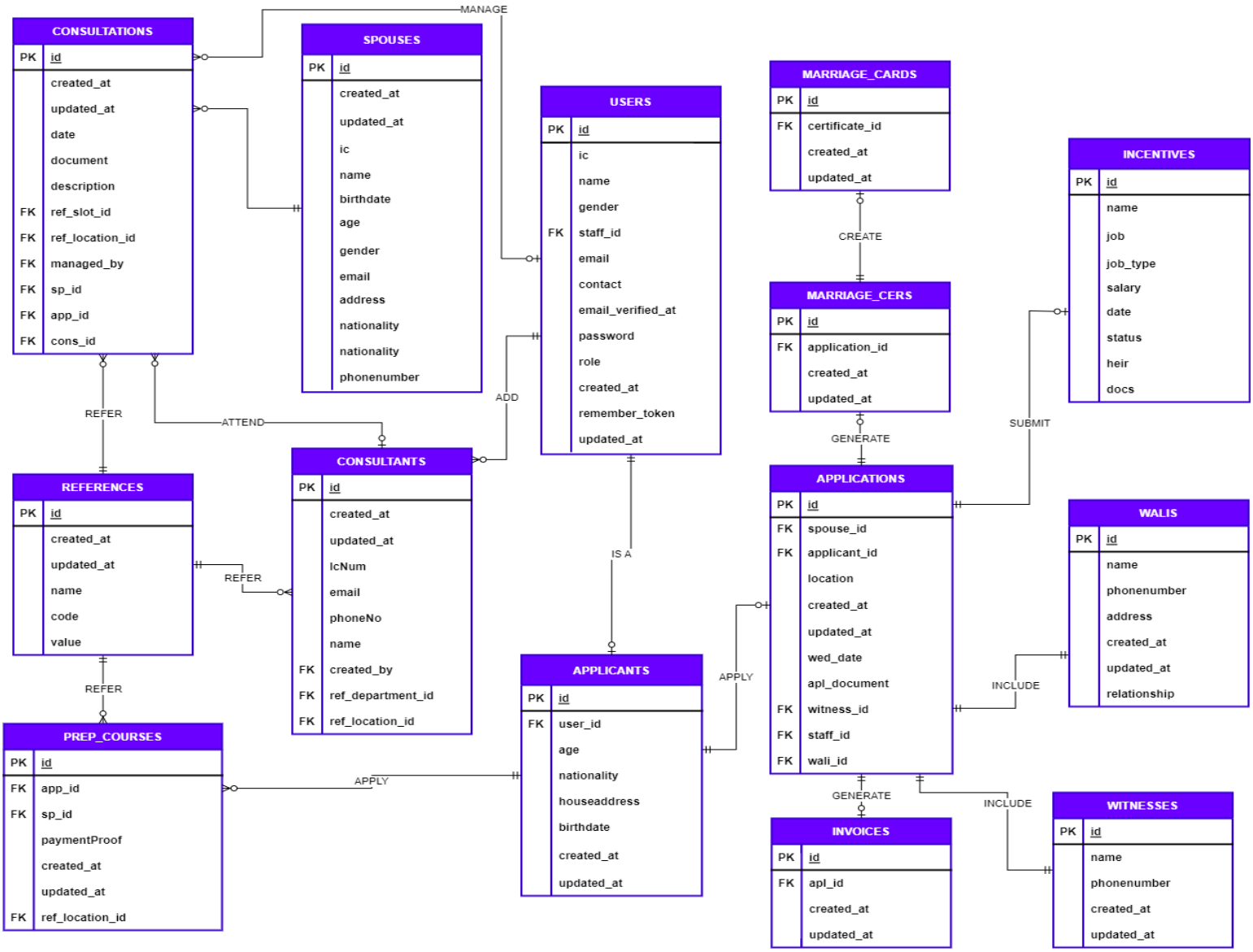
2. DATA DESIGN

2.1 Entity Relationship Diagram (ERD)



2.2 Data Dictionary

2.2.1 USERS

Field Name	Description	Data Type	Constraint
id	User's ID	BIGINT	PK
ic	User's IC	VARCHAR (12)	NOT NULL, UNIQUE
name	User's name	VARCHAR (255)	NOT NULL
gender	User's gender	VARCHAR (8)	NOT NULL
staff_id	Staff's ID	VARCHAR (10)	
email	User's email	VARCHAR (255)	NOT NULL, UNIQUE
contact	User's contact	VARCHAR (15)	NOT NULL
email_verified_at	User's email verification dates	TIMESTAMP	NOT NULL
password	User's password	VARCHAR (255)	NOT NULL
role	User's role	TINYINT	NOT NULL
remember_token	Users remember token	VARCHAR (100)	
created_at	User's created date	TIMESTAMP	NOT NULL
updated_at	User's updated date	TIMESTAMP	

2.2.2 APPLICANTS

Field Name	Description	Data Type	Constraint
id	Applicant's ID	BIGINT(20)	PK
user_id	User ID	BIGINT(20)	Not null
age	Applicant's age	INT(10)	
nationality	Applicant's nationality	VARCHAR(255)	
houseaddress	Applicant's house address	VARCHAR (255)	
birthdate	Applicant's birthdate	DATE	
created_at	Applicant's created time	TIMESTAMP	Not null
updated_at	Applicant's updated time	TIMESTAMP	

2.2.5 APPLICATIONS

Field Name	Description	Data Type	Constraint
id	Application's ID	INT	PK
spouse_id	Spouse ID	INT	FK
applicant_id	Applicant ID	INT	FK
location	Application location	VARCHAR (50)	NOT NULL
created_at	Application's created time	TIMESTAMP	NOT NULL
updated_at	Application 's updated time	TIMESTAMP	
wed_date	Wedding date	DATE (50)	NOT NULL
apl_document	Application's document	DOCUMENT	
witness_id	Witness ID	INT	FK
staff_id	Staff ID	INT	FK
wali_id	Wali ID	INT	FK

2.2.6 PREP_COURSES

Field Name	Description	Data Type	Constraint
id	Course ID	INT	PK
app_id	Applicant ID	INT	FK
sp_id	Spouse ID	INT	FK
paymentProof	Course payment proof receipt	DOCUMENT	
created_at	Course's created time	TIMESTAMP	NOT NULL
updated_at	Course 's updated time	TIMESTAMP	
ref_location_id	Marriage preparation course location	BIGINT (20)	FK, NOT NULL

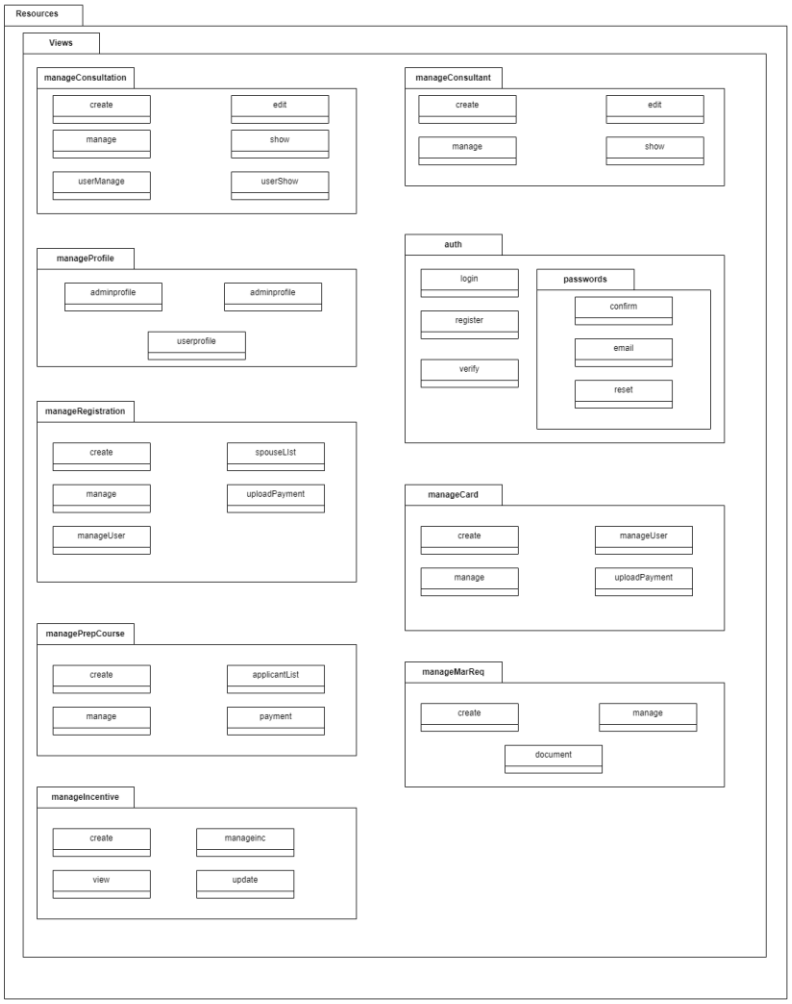
2.2.7 SPOUSES

Field Name	Description	Data Type	Constraint
id	Spouse's ID	BIGINT (255)	PK
created_at	Spouse's created time	TIMESTAMP	NOT NULL
updated_at	Spouse's updated times	TIMESTAMP	
ic	Spouse's IC	VARCHAR (12)	NOT NULL
name	Spouse's name	VARCHAR (255)	NOT NULL
birthdate	Spouse's birthdate	DATE	NOT NULL
age	Spouse's age	INT	NOT NULL
gender	Spouse's gender	VARCHAR (8)	NOT NULL
nationality	Spouse's nationality	VARCHAR (15)	NOT NULL
address	Spouse's address	VARCHAR (255)	NOT NULL
email	Spouse's email address	VARCHAR (255)	NOT NULL
phonenumber	Spouse's phone number	VARCHAR (15)	NOT NULL

3. GENERAL ARCHITECTURE

3.1 Layered Architecture

3.1.1 Application Layer



3.1.1.1 Manage Profile [SDD-REQ-100]

Class Name	Description
adminprofile	A view class for admin to register staff in the EMUN system
staffprofile	A view class for staff to manage their profile in the EMUN system
userprofile	A view class for user to manage their profile in the EMUN system

3.1.1.2 Auth [SDD-REQ-200]

Class Name	Description
login	A view class for user, staff and admin login into the EMUN system
register	A view class for user to register into the EMUN system
verify	A view class for user to verify the account in the EMUN system
confirm	A view class for user to confirm the account in the EMUN system
email	A view class for user to enter the email to reset password in the EMUN system
reset	A view class for user to reset password in the EMUN system.

3.1.1.3 Manage Preparation Course [SDD-REQ-300]

Class Name	Description
create	A view class for applicant to register the marriage preparation course by fill in the form
manage	A view class for applicant display the information regarding to marriage preparation course
applicantList	A view class for JAIP staff to see the list of applicants that apply marriage preparation course
payment	A view class for applicant to submit proof of payment

3.1.1.4 Manage Marriage Request [SDD-REQ-400]

Class Name	Description
create	A view class for applicant to register the marriage application by fill in the form
manage	A view class for applicant edit their information
document	A view class for applicant to submit document

3.1.1.5 Manage Registration [SDD-REQ-500]

Class Name	Description
spouseList	A view class that displays the spouse's information and allow the user to search, edit, delete, print and submit
create	A view class that allows the user to create a marriage registration application
manage	A view class that displays the user's marriage registration application and allow staff to accept or reject
manageUser	A view class that displays the marriage registration application
uploadPayment	A view class that displays payment receipt request and allow the user to upload their receipt

3.1.1.6 Manage Card [SDD-REQ-600]

Class Name	Description
create	A view class allow the user to request for the marriage card
manage	A view class that displays the user's marriage card application and allow staff to accept or reject
manageUser	A view class that displays the marriage card application
uploadPayment	A view class that displays payment receipt request and allow the user to upload their receipt

3.1.1.7 Manage consultation [SDD-REQ-700]

Class Name	Description
create	A view class to display form to allow the user to fill information details
show	A view class to allow JAIP staff to view the information of the application
edit	A view class to allow JAIP staff to fill user appointment detail and approve their application
userManage	A view class to allow user to check the list of consultation applications made
userShow	A view class to allow user to view the information of the application made
manage	A view class to display the list of application and allow JAIP staff to manage the consultation application

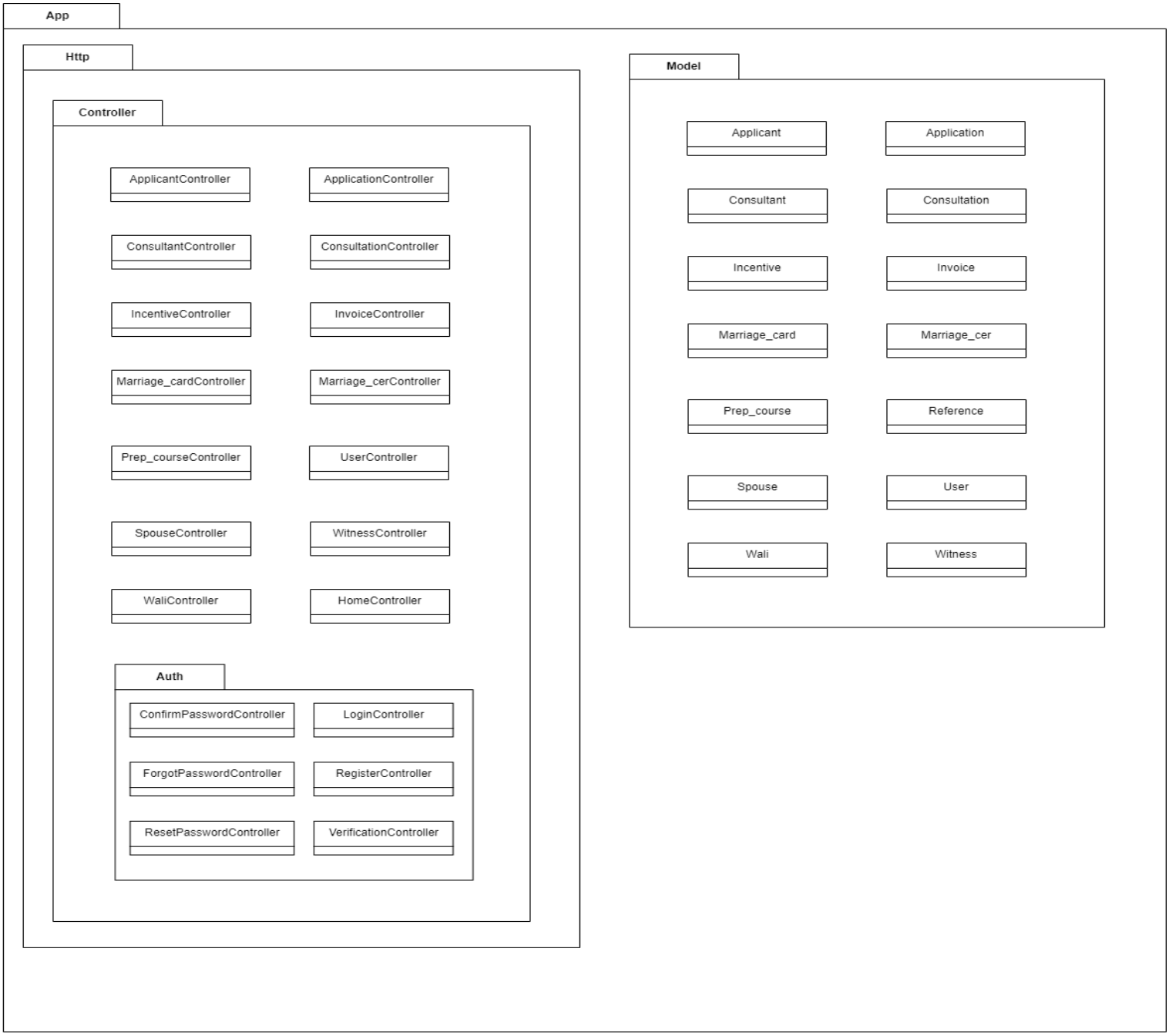
3.1.1.8 Manage consultant [SDD-REQ-800]

Class Name	Description
edit	A view class to allow JAIP staff to update the consultant's information
manage	A view class to allow JAIP staff to manage the list of consultants
create	A view class to allow JAIP staff to enter information of new consultant
show	A class that handles the consultant information

3.1.1.9 Manage Incentive [SDD-REQ-900]

Class Name	Description
create	A view class that displays the apply incentive page upon request which includes an application form
view	A view class that displays the user's incentive application details, hence information in a specified format
update	A view class that displays the user's information and allows the user to edit their information
delete	A view class that displays the user's information and allows the user to delete their information

3.1.2 Business Services Layer



3.1.2.1 Controller [SDD-REQ-1000]

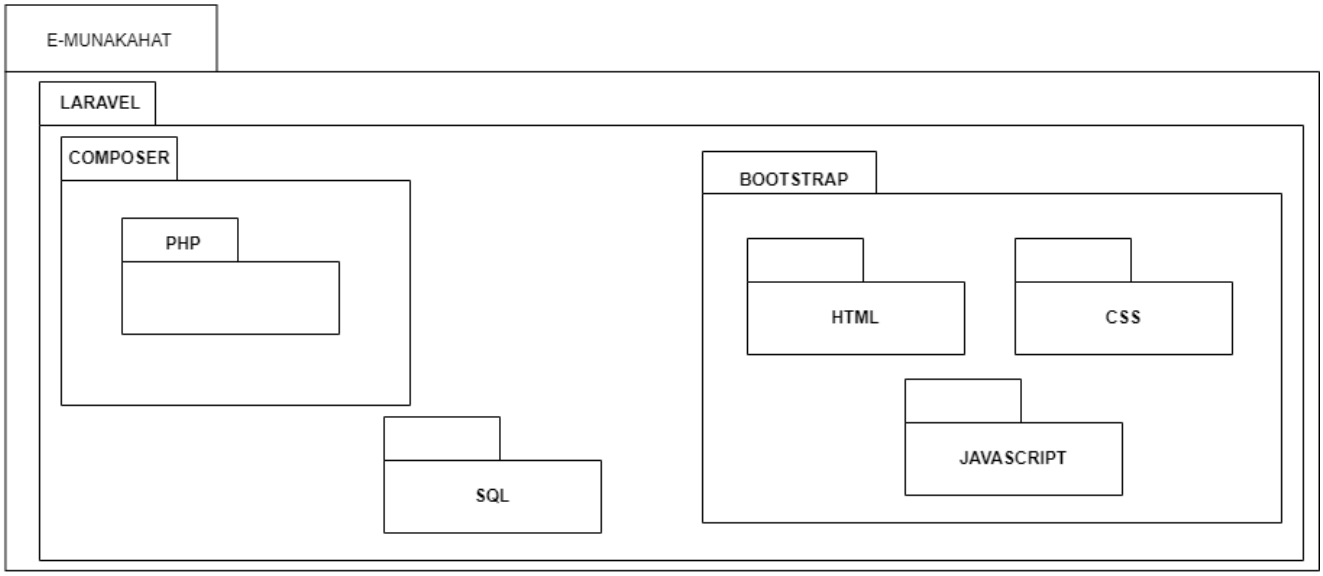
Class Name	Description
ApplicantController	Handles the logic and actions related to managing applicants in the application. Contains methods for creating, updating, and deleting applicant records, as well as retrieving applicant information.
ApplicationController	Manages the application-related functionality within the application. Contains methods for handling the creation, editing, deletion, and retrieval of application records.
ConsultantController	Responsible for handling the actions and operations related to managing consultants in the application. Contains methods for creating, updating, deleting, and retrieving consultant information.
ConsultationController	Handles the actions and operations associated with managing consultations in the application. Contains methods for scheduling consultations, updating consultation details, and retrieving consultation information.
IncentiveController	Manages the logic and actions related to incentives in the application. Contains methods for creating, updating, deleting, and retrieving incentive records.
InvoiceController	Handles the actions and operations related to managing invoices within the application. Contains methods for creating, updating, deleting, and retrieving invoice records.
Marriage_cardController	Manages the functionality associated with marriage cards within the application. Contains methods for creating, updating, deleting, and retrieving marriage card records.
Marriage_cerController	Handles the actions and operations related to managing marriage ceremonies in the application. Contains methods for creating, updating, deleting, and retrieving marriage ceremony records.
Prep_courseController	Responsible for managing the functionality related to preparation courses in the application. Contains methods for creating, updating, deleting, and retrieving preparation course records.

SpouseController	Manages the functionality and operations related to spouses within the application. Contains methods for creating, updating, deleting, and retrieving spouse records.
UserController	Handles the actions and operations related to managing users within the application. Contains methods for user registration, authentication, updating user information, and retrieving user details.
WaliController	Manages the logic and actions associated with managing walis (guardians) within the application. Contains methods for creating, updating, deleting, and retrieving wali records.
WitnessController	Handles the actions and operations related to managing witnesses within the application. Contains methods for creating, updating, deleting, and retrieving witness records.
HomeController	Handles the main functionality and actions related to the home page or main dashboard of the application. Contains methods for retrieving and displaying relevant information on the home page.
ConfirmPasswordController	This controller is responsible for handling password confirmations and uses a simple trait to include the behaviour
ForgotPasswordController	This controller is responsible for handling password reset emails and includes a trait that assists in sending these notifications from your application to your users.
LoginController	This controller handles authenticating users for the application and redirecting them to your home screen.
RegisterController	This controller handles the registration of new users as well as their validation and creation.
ResetPasswordController	This controller is responsible for handling password reset requests and uses a simple trait to include this behaviour.
VerificationController	This controller is responsible for handling email verification for any user that recently registered with the application.

3.1.2.2 Model [SDD-REQ-1100]

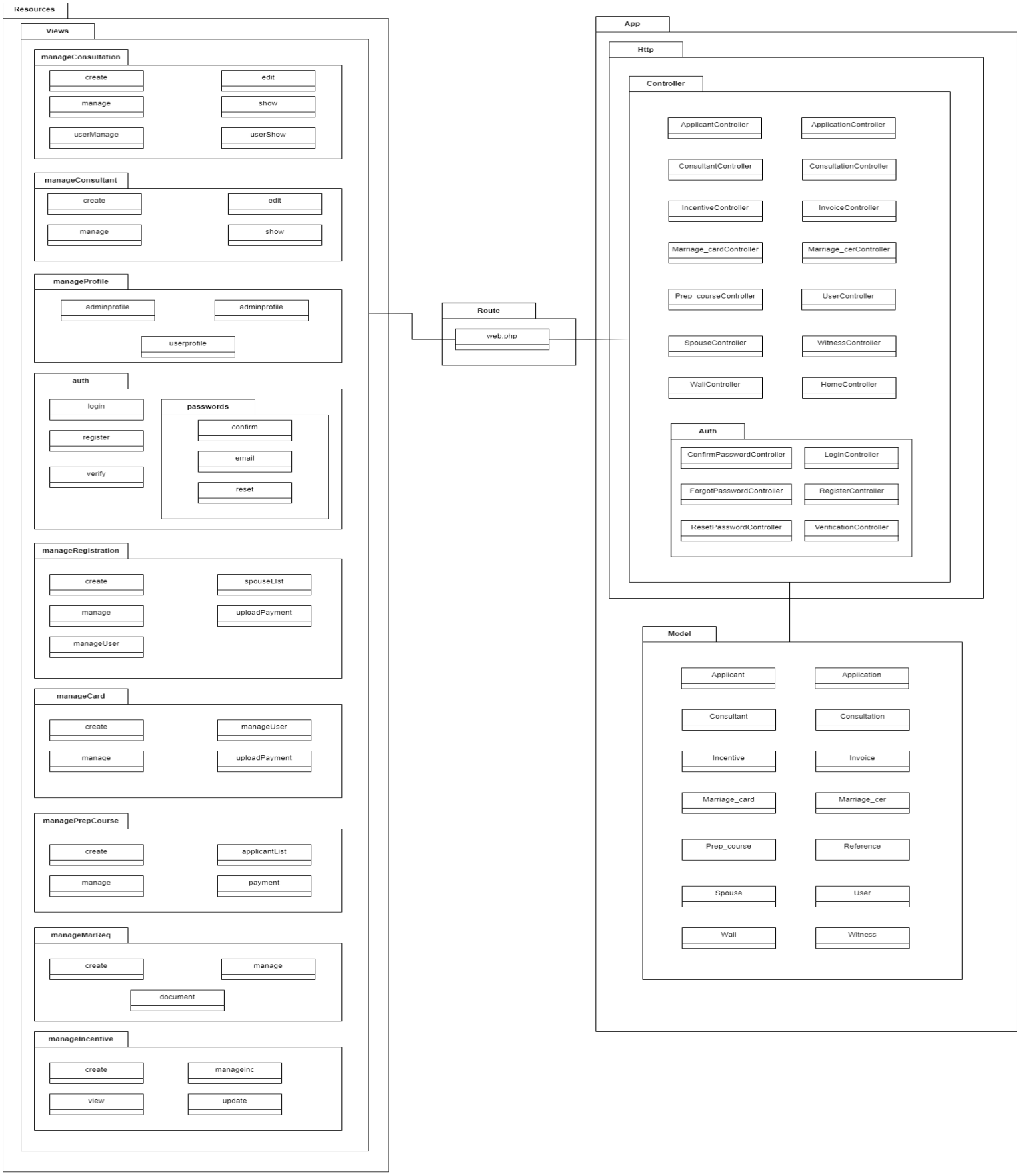
Class Name	Description
Applicant	This class retrieve and store applicant details
Application	This class retrieve and store application details
Consultant	This class retrieve and store consultant details
Consultation	This class retrieve and store consultation details
Incentive	This class retrieve and store incentive details
Invoice	This class retrieve and store invoice details
Marriage_card	This class retrieve and store marriage card details
Marriage_cer	This class retrieve and store marriage certificate details
Prep_course	This class retrieve and store preparation course details
Reference	This class retrieve and store reference details
Spouse	This class retrieve and store spouse details
User	This class retrieve and store user details
Wali	This class retrieve and store wali details
Witness	This class retrieve and store witness details

3.1.3 Middleware Layer



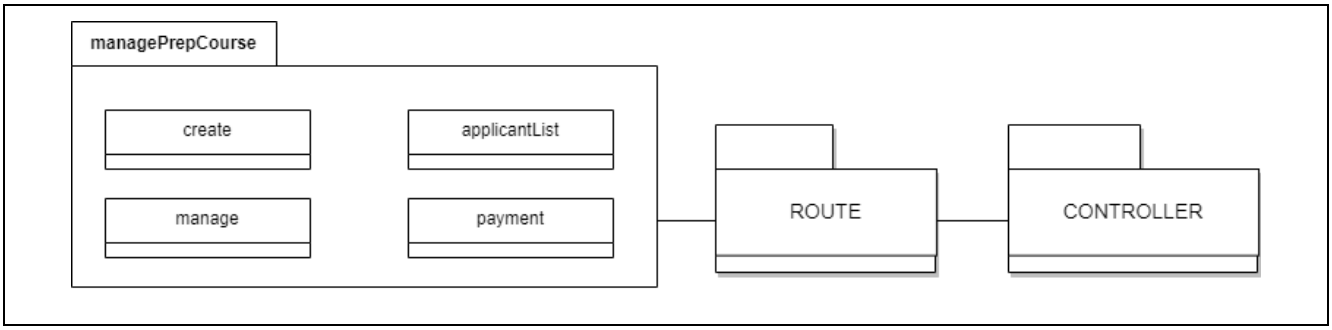
Package Name	Description
HTML	The package that contains of creating and design a website page
CSS	The package that contains of styling of the HTML package
JAVASCRIPT	The package that contains of enhancing the interactivity and functionality of website pages
LARAVEL	PHP web application framework. It contains various packages and classes for building web application.
PHP	The package that contains of code that builds dynamic web applications
SQL	The package that contains the database management

3.2 MVC Package Relationship



4. DETAIL DESIGN

4.1 Manage Preparation Course [SDD-REQ-300]



4.1.1 create [SDD-REQ-301]

Class Type	Boundary class	
Responsibility	A view class for applicant to register the marriage preparation course by fill in the form	
Attributes	Attributes Name	Attributes Type
	user_id age nationality houseaddress birthdate	BIGINT INT String String String
Methods	Method Name	Description
	Prep_courseController()	Creating, updating, deleting, and retrieving preparation course records.
Algorithm	START Click <<marriage preparation course>> IF there is no data, click <<Add>> Complete the form ELSE Press <<Home>> button END	

4.1.2 manage [SDD-REQ-302]

Class Type	Boundary class	
Responsibility	A view class for applicant display the information regarding to marriage preparation course	
Attributes	Attributes Name	Attributes Type
	user_id age nationality houseaddress birthdate	BIGINT INT String String String
Methods	Method Name	Description
	Prep_courseController()	Creating, updating, deleting, and retrieving preparation course records.
Algorithm	START Click <<marriage preparation course>> Find organizer place Complete the form Press <<Save>> button END	

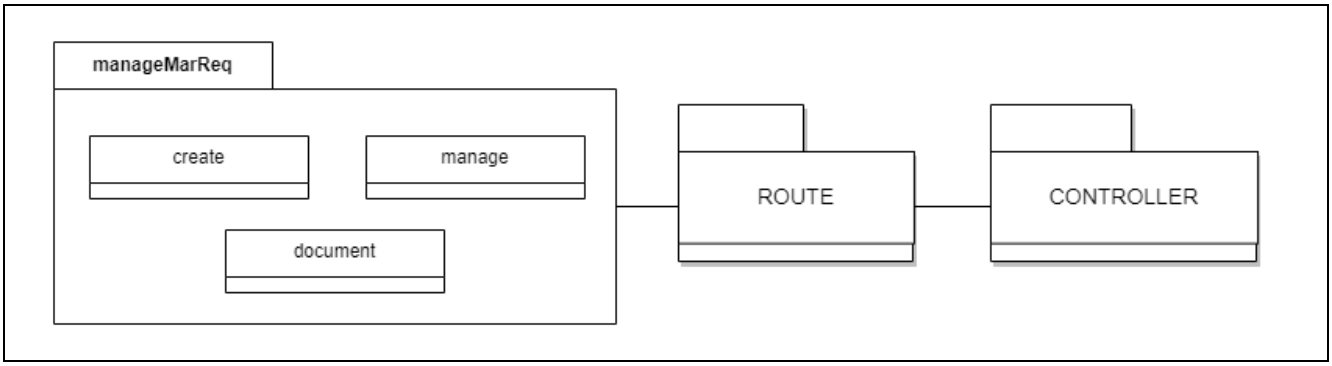
4.1.3 applicantList [SDD-REQ-303]

Class Type	Boundary class	
Responsibility	A view class for JAIP staff to see the list of applicants that apply marriage preparation course	
Attributes	Attributes Name	Attributes Type
	None	None
Methods	Method Name	Description
	Prep_courseController()	Creating, updating, deleting, and retrieving preparation course records.
Algorithm	START Click <<marriage preparation course>> Press <<Back>> button END	

4.1.4 payment [SDD-REQ-304]

Class Type	Boundary class	
Responsibility	A view class for applicant to submit proof of payment	
Attributes	Attributes Name	Attributes Type
	None	None
Methods	Method Name	Description
	Prep_courseController()	Creating, updating, deleting, and retrieving preparation course records.
Algorithm	START Click <<marriage preparation course>> Submit proof of payment Press <<Back>> button END	

4.2 Manage Marriage Request [SDD-REQ-400]



4.2.1 create [SDD-REQ-401]

Class Type	Boundary class	
Responsibility	A view class for applicant to register the marriage application by fill in the form	
Attributes	Attributes Name	Attributes Type
	spouse_id applicant_id location wed_date witness_id staff_id wali_id	INT INT String Date INT INT INT
Methods	Method Name	Description
	ApplicationController()	Handling the creation, editing, deletion, and retrieval of application records.
Algorithm	START Click <<marriage request>> IF there is no data, click <<Add>> Complete the form ELSE Press <<Home>> button END	

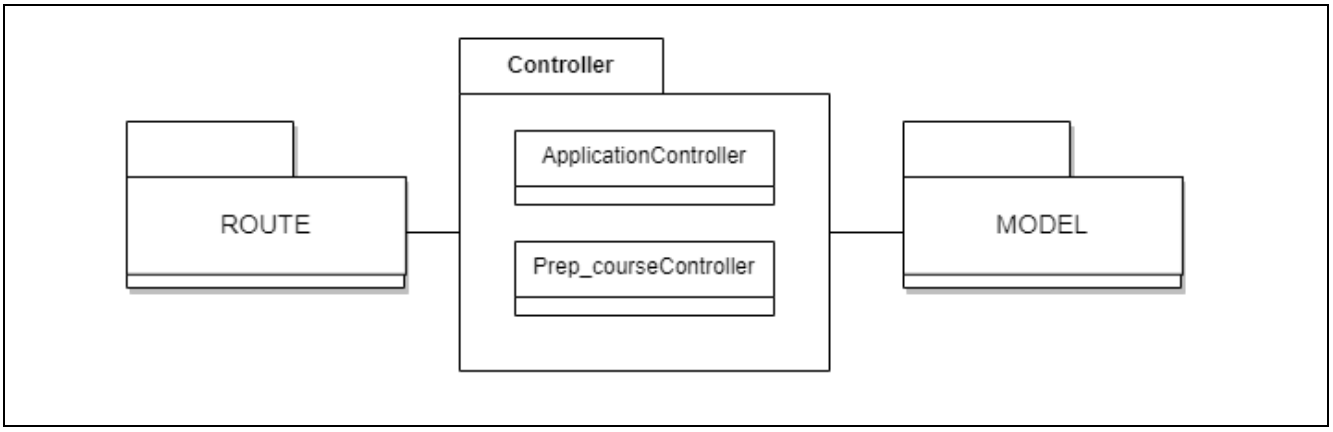
4.2.2 manage [SDD-REQ-402]

Class Type	Boundary class	
Responsibility	A view class for applicant edit their information	
Attributes	Attributes Name	Attributes Type
	spouse_id applicant_id location wed_date witness_id staff_id wali_id	INT INT String Date INT INT INT
Methods	Method Name	Description
	ApplicationController()	Handling the creation, editing, deletion, and retrieval of application records.
Algorithm	START Click <<marriage request>> Complete the form Press <<Save>> button END	

4.2.3 document [SDD-REQ-403]

Class Type	Boundary class	
Responsibility	A view class for applicant to submit document	
Attributes	Attributes Name	Attributes Type
	None	None
Methods	Method Name	Description
	ApplicationController()	Handling the creation, editing, deletion, and retrieval of application records.
Algorithm	START Click <<marriage request>> Submit document Press <<Back>> button END	

4.3 Controller [SDD-REQ-1000]



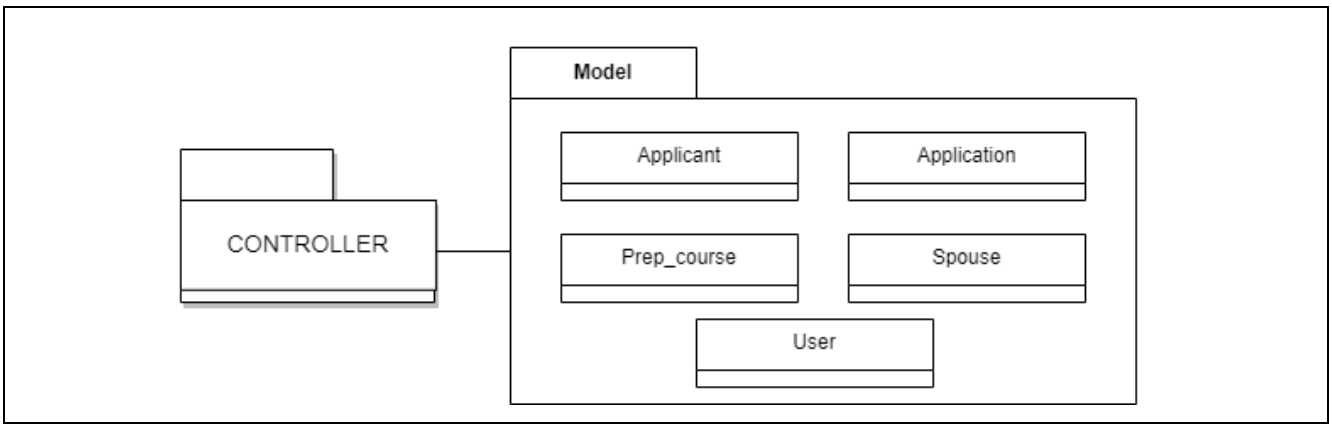
4.3.1 ApplicationController [SDD-REQ-1001]

Class Type	Controller class	
Responsibility	Manages the application-related functionality within the application. Contains methods for handling the creation, editing, deletion, and retrieval of application records.	
Attributes	Attributes Name	Attributes Type
	None	None
Methods	Method Name	Description
	None	None
Algorithm	START Click <<marriage request>> IF there is no data, click <<Add>> Complete the form ELSE Press <<Home>> button END	

4.3.2 Prep_courseController [SDD-REQ-1009]

Class Type	Controller class	
Responsibility	Responsible for managing the functionality related to preparation courses in the application. Contains methods for creating, updating, deleting, and retrieving preparation course records.	
Attributes	Attributes Name	Attributes Type
	None	None
Methods	Method Name	Description
	None	None
Algorithm	START Click <<marriage preparation course>> IF there is no data, click <<Add>> Complete the form ELSE Press <<Home>> button END	

4.4 Model [SDD-REQ-1100]



4.4.1 Applicant [SDD-REQ-1101]

Class Type	Model class	
Responsibility	This class retrieve and store applicant details	
Attributes	Attributes Name	Attributes Type
	$fillable	Array
Methods	Method Name	Description
	prep_course() application()	Method to return attribute object within its classes and subclasses
Algorithm	START Use HasFactory Define fillable attributes Define prep_course() method Define application() method END	

4.4.2 Application [SDD-REQ-1102]

Class Type	Model class	
Responsibility	This class retrieve and store application details	
Attributes	Attributes Name	Attributes Type
	$fillable	Array
Methods	Method Name	Description
	applicant() spouse()	Method to return attribute object within its classes and subclasses
Algorithm	START Use HasFactory Define fillable attributes Define applicant() method Define spouse() method END	

4.4.3 Prep_course [SDD-REQ-1109]

Class Type	Model class	
Responsibility	This class retrieve and store preparation course details	
Attributes	Attributes Name	Attributes Type
	$fillable	Array
Methods	Method Name	Description
	applicant() spouse()	Method to return attribute object within its classes and subclasses
Algorithm	START Use HasFactory Define fillable attributes Define applicant() method Define spouse() method END	

4.4.4 Spouse [SDD-REQ-1111]

Class Type	Model class	
Responsibility	This class retrieve and store spouse details	
Attributes	Attributes Name	Attributes Type
	$fillable	Array
Methods	Method Name	Description
	None	None
Algorithm	START Use HasFactory Define fillable attributes END	

4.4.5 User [SDD-REQ-1112]

Class Type	Model class	
Responsibility	This class retrieve and store user details	
Attributes	Attributes Name	Attributes Type
	$fillable $hidden $cast	Array Array Array
Methods	Method Name	Description
	None	None
Algorithm	START Use HasApiTokens, HasFactory, Notifiable traits Define fillable attributes Define hidden attributes END	

5. REQUIREMENT TRACEABILITY

5.1 Manage marriage preparation course [UC200-EMS-2023]

Requirement ID	Description	Design ID
UC200-EMS-2023	Applicant can fill in the marriage preparation course form	SDD-REQ-301
	Applicant can view the information	SDD-REQ-302
	JAIP staff can view list of applicants that submit the form	SDD-REQ-303
	Applicant submit proof of payment	SDD-REQ-304

5.2 Manage marriage request [UC300-EMS-2023]

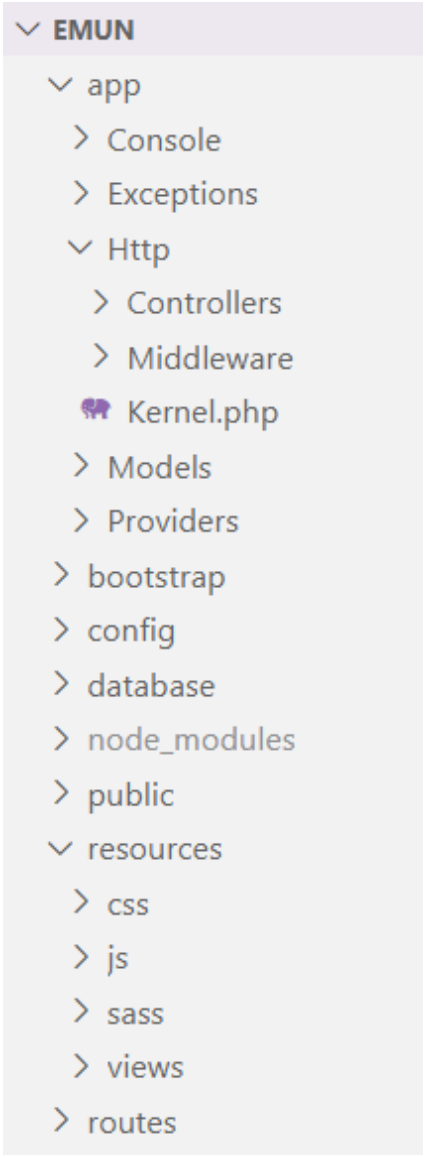
Requirement ID	Description	Design ID
UC300-EMS-2023	Applicant can apply marriage request	SDD-REQ-401
	Applicant can edit their information	SDD-REQ-402
	Applicant submit supporting document	SDD-REQ-403

6. APPENDIX

6.1 Appendix B

APPENDIX B:

General Architecture (Chapter 3)

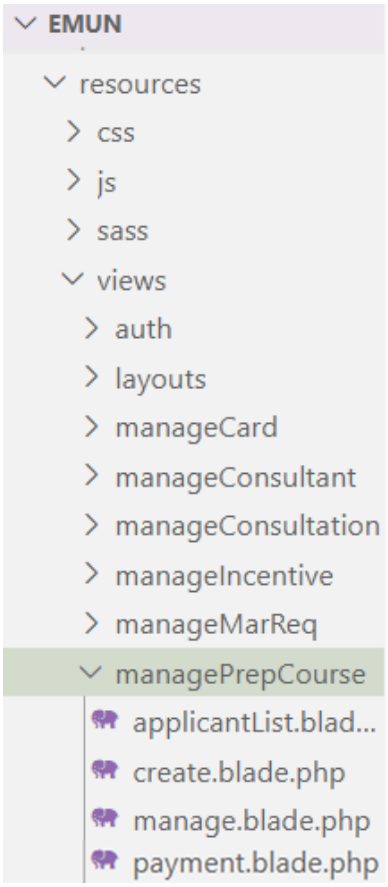


System Name	Layer		
EMUN	resources	views	
	app	Http	Controllers
		Models	
	routes		

6.2 Appendix C1

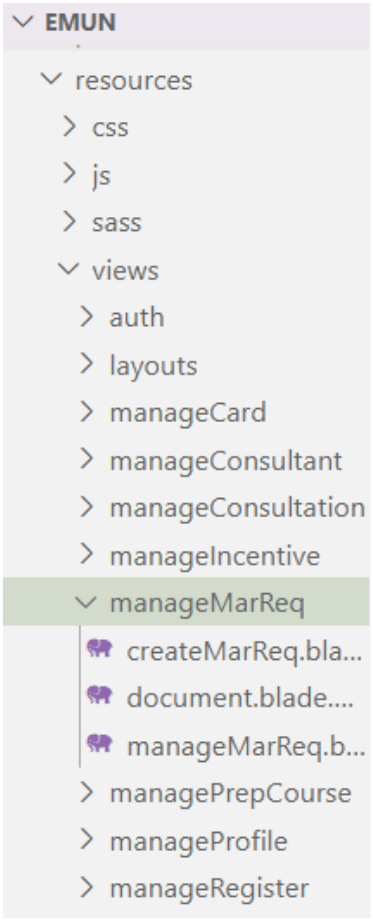
APPENDIX C1:

managePrepCourse (Chapter 4) – views layer



Layer	Package	Class
views	managePrepCourse	create manage applicantList payment

manageMarReq (Chapter 4) - views layer

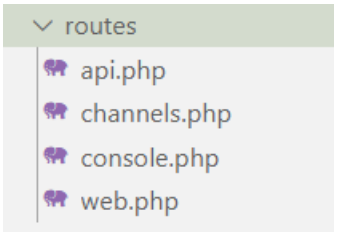


Layer	Package	Class
views	manageMarReq	createMarReq manageMarReq document

6.3 Appendix C2

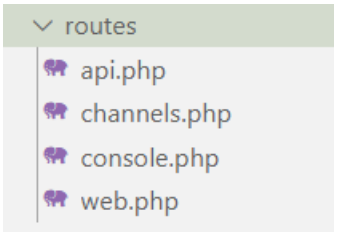
APPENDIX C2:

managePrepCourse (Chapter 4) – design patern layer



Layer	Class
routes	web

manageMarReq (Chapter 4) – design patern layer

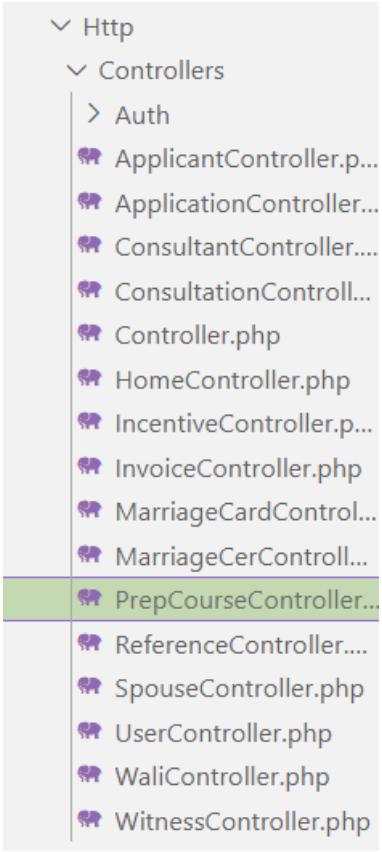


Layer	Class
routes	web

6.4 Appendix C3

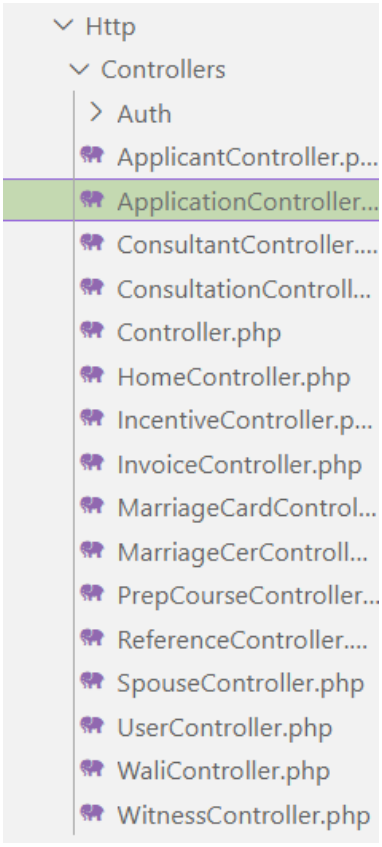
APPENDIX C3:

managePrepCourse (Chapter 4) – controller layer



Layer	Class
Controllers	PrepCourseController

manageMarReq (Chapter 4) – controller layer

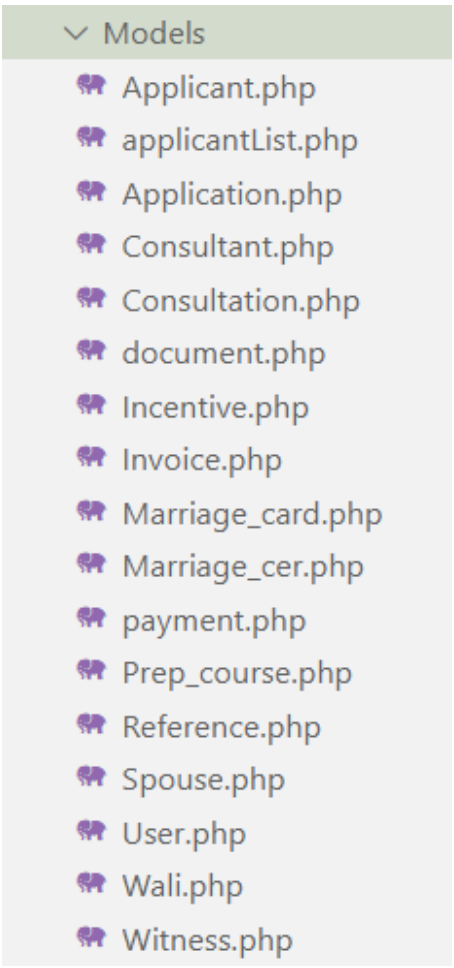


Layer	Class
Controllers	ApplicationController

6.5 Appendix C4

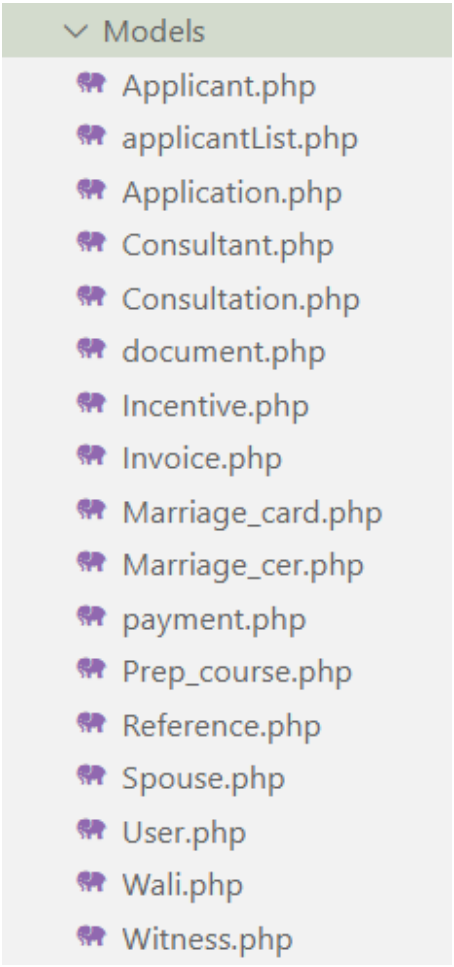
APPENDIX C4:

managePrepCourse (Chapter 4) - model layer



Layer	Class
Models	Prep_course Applicant

manageMarReq (Chapter 4) – model layer



Layer	Class
Models	Application Applicant Spouse User

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SDD Document SEM II 20222023

e-Munakahat System (EMUN)

Group Name

1. Muhammad Amir Bin Mohamed Ali [CB21060]
2. Ahmad Suffian Bin Md Noor Suhaime [CB21137]
3. Chua Kian Pheng [CB21106]
4. Nik Alia Syafiqah Binti Nik Azuri [CB21035]
5. Shammene A/P Muneesvaran [CB21018]

Quantum Corp

TABLE OF CONTENTS

1. INTRODUCTION

1.1 Purpose

This software design document (SDD) serves as a blueprint for the development of the e-Munakahat System (EMUN). It outlines the software design process, including the software's architecture, modules, interfaces, and data structures. The primary purpose of an SDD is to ensure that the software development team and stakeholders understand the design of the software application and how it will function.

The software design document (SDD) is a communication tool between the development team and stakeholders, ensuring everyone is on the same page regarding the software's design and implementation. It will also help the stakeholders to understand any limitations or assumptions that may impact the system's performance or usability, which will help the stakeholders to make informed decisions and better plan for the project. This will also help to ensure that the final product meets the needs of the users and the jurisdiction.

1.2 System Identification

The Software Design Document (SDD) belongs to the “e-Munakahat System” (EMUN).

Table 1.1 Document Identity.

<table>
<tr><th>System title</th><th>e-Munakahat System</th></tr>
<tr><td>System abbreviation</td><td>EMUN</td></tr>
<tr><td>System identification number</td><td>SDD_EMUN_QC_2023</td></tr>
<tr><td>Subsystem Title</td><td>IkatanCinta</td></tr>
<tr><td>Subsystem Abbreviation</td><td>IC</td></tr>
<tr><td>Package ID</td><td>SDD-REQ-100
Meanings for terms use:<table><tr><td>SDD</td><td>Software Design Document</td></tr><tr><td>REQ</td><td>Requirement</td></tr><tr><td>100</td><td>Package number</td></tr></table></td></tr>
<tr><td>Use Case ID</td><td>UC101-EMUN-001
Meanings for terms used:<table><tr><td>UC</td><td>Use Case</td></tr><tr><td>1</td><td>Number of the system module</td></tr><tr><td>01</td><td>Number of use case within a module in the subsystem</td></tr><tr><td>EMUN</td><td>e-Munakahat System (System name)</td></tr><tr><td>001</td><td>Document release number</td></tr></table></td></tr>
<tr><td>Requirement Traceability ID</td><td>UC101-EMUN-001
Meanings for terms used:<table><tr><td>UC</td><td>Use Case</td></tr><tr><td>1</td><td>Number of the system module</td></tr><tr><td>01</td><td>Number of use case within a module in the system</td></tr><tr><td>EMUN</td><td>e-Munakahat System (System name)</td></tr><tr><td>001</td><td>Document release number</td></tr></table></td></tr>
<tr><td>Document Identification System</td><td>SDD_EMUN_IC_2023_V1.0</td></tr>
</table>

Symbol/Number	Meaning
EMUN	It represents the system name which is e-Munakahat System (EMUN)
SDD	It represents the software design document (SDD)
QC	It represents the company name which is Quantum Corp SDN. BHD.
2023	It represents the year where the system has been released.
V1.0	V represent the word “Version” of the system while 1.0 is the general version of the system. The number will increase by 0.1 if there any updates or bugs fixed.

1.3 System Overview

Our system is a web-based system to support the Pahang Wedding management system. The purpose of the system is to provide a solution for managing wedding registration and operations efficiently. Users can use this system for marriage registration and information retrieval. It also eases the government to collect granular data on weddings in Pahang and store the information for future use. This system is handled by the Quantum Corp company. This system contains various functionalities such as user registration, marriage application, marriage registration, marriage preparation course, proof of payment, request for marriage, marriage card, marriage consultation, and special incentives for the bride and groom.

There are five modules in this system which are:

1. Registration and handle user profile

The initial stage of using the system is applicant registration, which is required for applicants to enter the system. It contains private information such as an Identity Card number, phone number, email address, and password. Since registration is based on the user's IC number, a unique number with no duplicates, each user has just one account for the system. Once the applicant's registration is successful, they can log in to access the system's contents after completing the registration process. The admin can register new staff through the admin dashboard. Once registration for staff is successful, they will be granted access to the system. The system also allows users (applicants & staff) to modify their profile details to update their information. In case the applicant has forgotten their password, they will be able to reset their password. Apart from that, the admin can update staff and applicant details through the admin dashboard.

2. Attend the marriage preparation course with proof of payment and to request a marriage.

   After users register and login into the account, the users can proceed to the next step where they can apply for the marriage registration course. As a marriage registration course is an important step for the e-Munakahat system will update the name list of applicants. The system will show if the user has already paid for the course or not. So, then the staff can print the proof of payment and send the receipt to the applicants. The system shall allow the admin to manage the marriage preparation course details such as date, time, and where the course will be conducted. While the staff will handle the things that are related to the user or applicants. Approve the applications in the system and print the applicants' name list for the course for every session. If the applicant presents on the course day, the staff can approve their marriage course certificate. After the course ends, the applicants will be represented with the certificate. The staff can update the applicant's name from the system for obtaining the marriage course certificate. Next step for the applicant is request their marriage from E-Munakahat system.

3. An application to register a marriage within or outside the country, as well as a voluntary marriage, and to produce the marriage card or certificate with proof of payment.

   Marriage registration is split into two processes which are voluntary and authorized registration. User needs to pass a pre-marriage course to be able to register their marriage. Voluntary registration is for the older generation who live far away from town and did not register when they married. For authorized registration, the user must prepare various forms and information in which the template is provided in the system. After staff from JAIP has approved the marriage registration, it will notify the user so that they know their marriage registration has been approved.

4. Register for a marriage consultation with a service advisor.

   A consultation module is a module where the user can make an appointment to seek advice or to get a divorce. This module requires the users to enter their personal information and also their spouse information including their marriage information and upload related documents as proof. Staff can view the application made by the user and will decide whether to approve the appointment and responsible to assign consultant and slot to the consultation session. Staff are also responsible for managing the list of consultants and their information in this module. The staff can edit, add, and delete the consultants' information in the system.

5. Application for special incentive for the bride and groom

The marriage registration system features a special incentive module that enables users to apply for incentives, provided they meet the necessary prerequisites. This module allows individuals to input their personal information and upload necessary documents, making the process more streamlined. Additionally, the staff side of the platform allows for the review of applications and ensures that the process is efficient and user-friendly. The special incentive module in the marriage registration system also includes a notification feature that keeps applicants informed about the status of their applications. Once the staff reviews the application, the applicant will receive a notification, either confirming their approval or outlining the reasons for the denial. This ensures that applicants are aware of the status of their application in a timely and efficient manner."

1.4 Referenced Document

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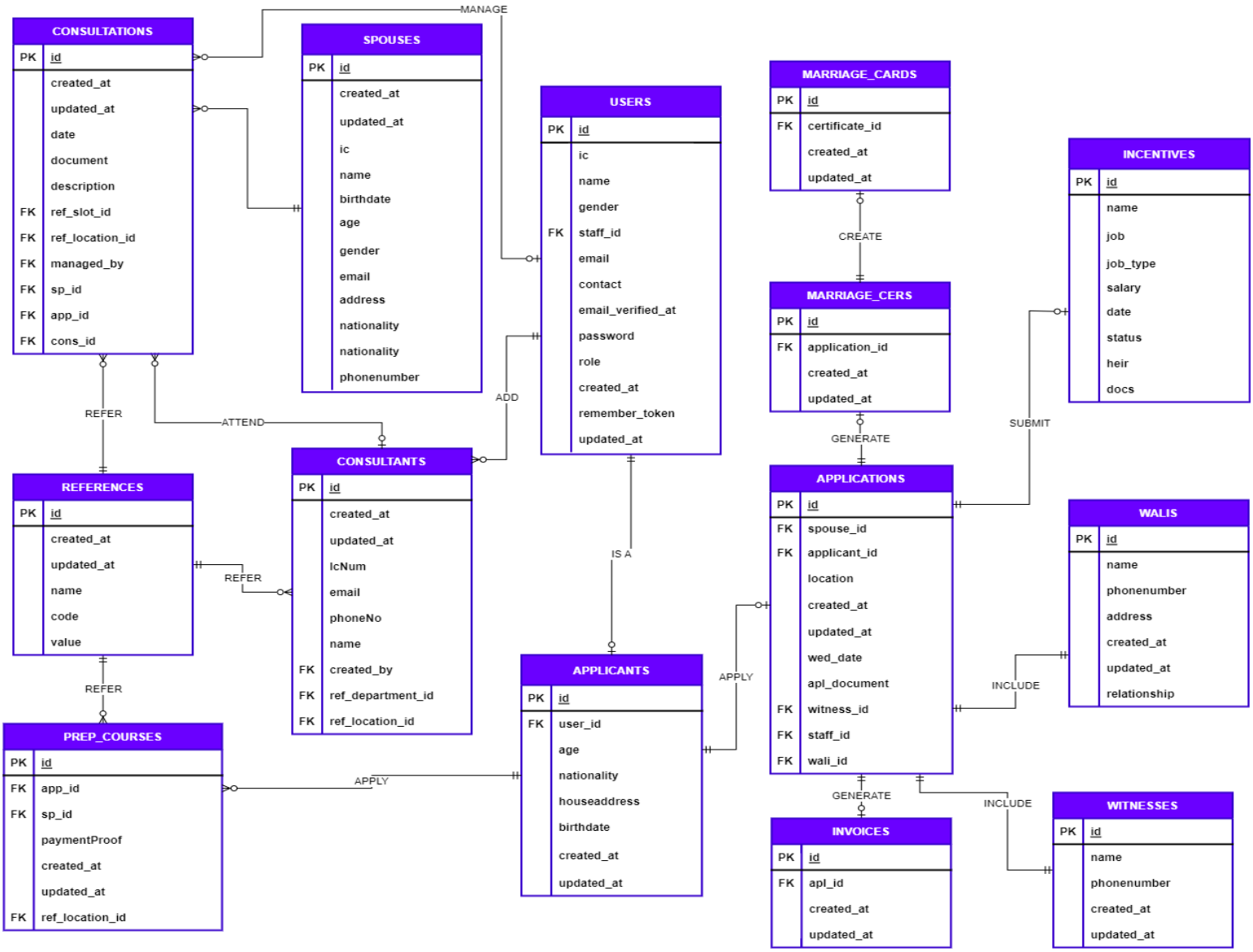
2. DATA DESIGN

2.1 Entity Relationship Diagram (ERD)



2.2 Data Dictionary

2.2.1 USERS

Field Name	Description	Data Type	Constraint
id	User's ID	BIGINT	PK
ic	User's IC	VARCHAR (12)	NOT NULL, UNIQUE
name	User's name	VARCHAR (255)	NOT NULL
gender	User's gender	VARCHAR (8)	NOT NULL
staff_id	Staff's ID	VARCHAR (10)	
email	User's email	VARCHAR (255)	NOT NULL, UNIQUE
contact	User's contact	VARCHAR (15)	NOT NULL
email_verified_at	User's email verification dates	TIMESTAMP	NOT NULL
password	User's password	VARCHAR (255)	NOT NULL
role	User's role	TINYINT	NOT NULL
remember_token	Users remember token	VARCHAR (100)	
created_at	User's created date	TIMESTAMP	NOT NULL
updated_at	User's updated date	TIMESTAMP	

2.2.2 APPLICANTS

Field Name	Description	Data Type	Constraint
id	Applicant's ID	BIGINT(20)	PK
user_id	User ID	BIGINT(20)	Not null
age	Applicant's age	INT(10)	
nationality	Applicant's nationality	VARCHAR(255)	
houseaddress	Applicant's house address	VARCHAR (255)	
birthdate	Applicant's birthdate	DATE	
created_at	Applicant's created time	TIMESTAMP	Not null
updated_at	Applicant's updated time	TIMESTAMP	

2.2.3 CONSULTATIONS

Field Name	Description	Data Type	Constraint
id	Consultation ID number	BIGINT (20)	PK
created_id	Consultation created date	TIMESTAMP	NOT NULL
updated_at	Consultation update date	TIMESTAMP	
date	Consultation appointment date	DATE	NOT NULL
ref_slot_id	Consultation slot	BIGINT (20)	NOT NULL
description	Consultation description	TEXT	NOT NULL
document	Consultation document file path	VARCHAR (255)	NOT NULL
ref_location_id	Consultation location	BIGINT (20)	NOT NULL
managed_by	Staff who managed the consultation	BIGINT (20)	
sp_id	Spouse ID	BIGINT (20)	NOT NULL
app_id	Applicant ID	BIGINT (20)	NOT NULL
cons_id	Consultant ID	BIGINT (20)	

2.2.4 CONSULTANTS

Field Name	Description	Data Type	Constraint
id	Consultation's id	BIGINT (20)	PK
created_at	Consultation's created time	TIMESTAMP	NOT NULL
updated_at	Consultation 's updated time	TIMESTAMP	
IcNum	Consultant's IC number	VARCHAR (255)	NOT NULL
name	Consultant's name	VARCHAR (255)	NOT NULL
email	Consultant's email address	VARCHAR (255)	NOT NULL
ref_department_id	Consultant's departments	BIGINT (20)	FK, NOT NULL
ref_location_id	Consultant's working location	BIGINT (20)	FK, NOT NULL
phoneNo	Consultant's phone number	VARCHAR (255)	NOT NULL
created_by	Staff who register the consultant	BIGINT (20)	FK, NOT NULL

2.2.5 APPLICATIONS

Field Name	Description	Data Type	Constraint
id	Application's ID	INT	PK
spouse_id	Spouse ID	INT	FK
applicant_id	Applicant ID	INT	FK
location	Application location	VARCHAR (50)	NOT NULL
created_at	Application's created time	TIMESTAMP	NOT NULL
updated_at	Application 's updated time	TIMESTAMP	
wed_date	Wedding date	DATE (50)	NOT NULL
apl_document	Application's document	DOCUMENT	
witness_id	Witness ID	INT	FK
staff_id	Staff ID	INT	FK
wali_id	Wali ID	INT	FK

2.2.6 PREP_COURSES

Field Name	Description	Data Type	Constraint
id	Course ID	INT	PK
app_id	Applicant ID	INT	FK
sp_id	Spouse ID	INT	FK
paymentProof	Course payment proof receipt	DOCUMENT	
created_at	Course's created time	TIMESTAMP	NOT NULL
updated_at	Course 's updated time	TIMESTAMP	
ref_location_id	Marriage preparation course location	BIGINT (20)	FK, NOT NULL

2.2.7 SPOUSES

Field Name	Description	Data Type	Constraint
id	Spouse's ID	BIGINT (255)	PK
created_at	Spouse's created time	TIMESTAMP	NOT NULL
updated_at	Spouse's updated times	TIMESTAMP	
ic	Spouse's IC	VARCHAR (12)	NOT NULL
name	Spouse's name	VARCHAR (255)	NOT NULL
birthdate	Spouse's birthdate	DATE	NOT NULL
age	Spouse's age	INT	NOT NULL
gender	Spouse's gender	VARCHAR (8)	NOT NULL
nationality	Spouse's nationality	VARCHAR (15)	NOT NULL
address	Spouse's address	VARCHAR (255)	NOT NULL
email	Spouse's email address	VARCHAR (255)	NOT NULL
phonenumber	Spouse's phone number	VARCHAR (15)	NOT NULL

2.2.8 INVOICE

Field Name	Description	Data Type	Constraint
inv_Num	Invoice Number	INT	PK
apl_Num	Application Number	INT	FK
inv_date	Invoice Date	DATE (50)	

2.2.9 INCENTIVE

Field Name	Description	Data Type	Constraint
id	Incentive id	INT	PK
name	Incentive Applicant name	STRING	FK
job	Job	VARCHAR (255)	
job_type	Job Type	VARCHAR (255)	
salary	Salary	DOUBLE	
date	Incentive Application Date	DATE (50)	
status	Approve status	VARCHAR(255)	
heir	Heir	VARCHAR(255)	
docs	Incentive Documents	BLOB	
created_at	Incentive created time	TIMESTAMP	NOT NULL
updated_at	Incentive updated time	TIMESTAMP	

2.2.10 WALI

Field Name	Description	Data Type	Constraint
wali_IcNuM	Wali's IC number	VARCHAR(60)	PK
wali_name	Wali's name	VARCHAR(60)	
wali_phonenumber	Wali's phone number	VARCHAR(60)	
wali_address	Wali's address	VARCHAR(200)	
wali_relationship	Wali's relationship	VARCHAR(60)	

2.2.11 WITNESS

Field Name	Description	Data Type	Constraint
wit_IcNuM	Witness's IC number	VARCHAR(60)	PK
wit_name	Witness's name	VARCHAR(60)	
wit_phonenumber	Witness's phone number	VARCHAR(60)	
wit_address	Witness's address	VARCHAR(200)	

2.2.12 MARRIAGE_CER

Field Name	Description	Data Type	Constraint
CER_Num	Certificate's number	INT	PK
apl_Num	Application's number	INT	FK
cer_issue_date	Certificate's issue date	DATE	

2.2.13 MARRIAGE_CARD

Field Name	Description	Data Type	Constraint
card_Num	Card's number	INT	PK
cer_Num	Certificate's number	INT	FK
card_issue_date	Card's issue date	DATE	

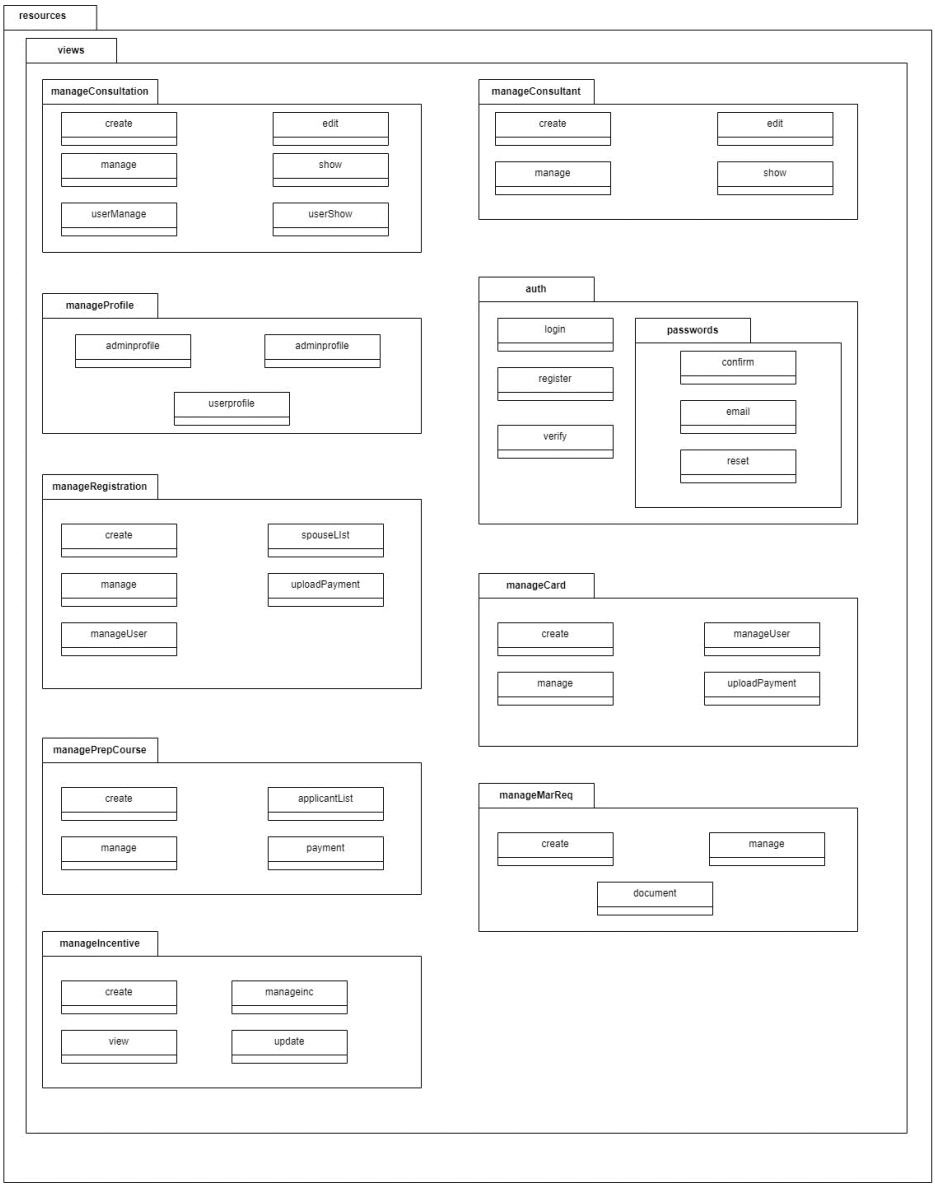
2.2.14 REFERENCES

Field Name	Description	Data Type	Constraint
id	References id	BIGINT (20)	PK
created_at	References created date	TIMESTAMP	
updated_at	References updated date	TIMESTAMP	
name	References name	VARCHAR (255)	NOT NULL
code	References code	VARCHAR (255)	NOT NULL
value	References value	VARCHAR (255)	NOT NULL

3. GENERAL ARCHITECTURE

3.1 Layered Architecture

3.1.1 Application Layer



3.1.1.1 Manage Profile [SDD-REQ-100]

Class Name	Description
adminprofile	A view class for admin to register staff in the EMUN system
staffprofile	A view class for staff to manage their profile in the EMUN system
userprofile	A view class for user to manage their profile in the EMUN system

3.1.1.2 Auth [SDD-REQ-200]

Class Name	Description
login	A view class for user, staff and admin login into the EMUN system
register	A view class for user to register into the EMUN system
verify	A view class for user to verify the account in the EMUN system
confirm	A view class for user to confirm the account in the EMUN system
email	A view class for user to enter the email to reset password in the EMUN system
reset	A view class for user to reset password in the EMUN system.

3.1.1.3 Manage Preparation Course [SDD-REQ-300]

Class Name	Description
create	A view class for applicant to register the marriage preparation course by fill in the form
manage	A view class for applicant display the information regarding to marriage preparation course
applicantList	A view class for JAIP staff to see the list of applicants that apply marriage preparation course
payment	A view class for applicant to submit proof of payment

3.1.1.4 Manage Marriage Request [SDD-REQ-400]

Class Name	Description
create	A view class for applicant to register the marriage application by fill in the form
manage	A view class for applicant edit their information
document	A view class for applicant to submit document

3.1.1.5 Manage Registration [SDD-REQ-500]

Class Name	Description
spouseList	A view class that displays the spouse's information and allow the user to search, edit, delete, print and submit
create	A view class that allows the user to create a marriage registration application
manage	A view class that displays the user's marriage registration application and allow staff to accept or reject
manageUser	A view class that displays the marriage registration application
uploadPayment	A view class that displays payment receipt request and allow the user to upload their receipt

3.1.1.6 Manage Card [SDD-REQ-600]

Class Name	Description
create	A view class allow the user to request for the marriage card
manage	A view class that displays the user's marriage card application and allow staff to accept or reject
manageUser	A view class that displays the marriage card application
uploadPayment	A view class that displays payment receipt request and allow the user to upload their receipt

3.1.1.7 Manage consultation [SDD-REQ-700]

Class Name	Description
create	A view class to display form to allow the user to fill information details
show	A view class to allow JAIP staff to view the information of the application
edit	A view class to allow JAIP staff to fill user appointment detail and approve their application
userManage	A view class to allow user to check the list of consultation applications made
userShow	A view class to allow user to view the information of the application made
manage	A view class to display the list of application and allow JAIP staff to manage the consultation application

3.1.1.8 Manage consultant [SDD-REQ-800]

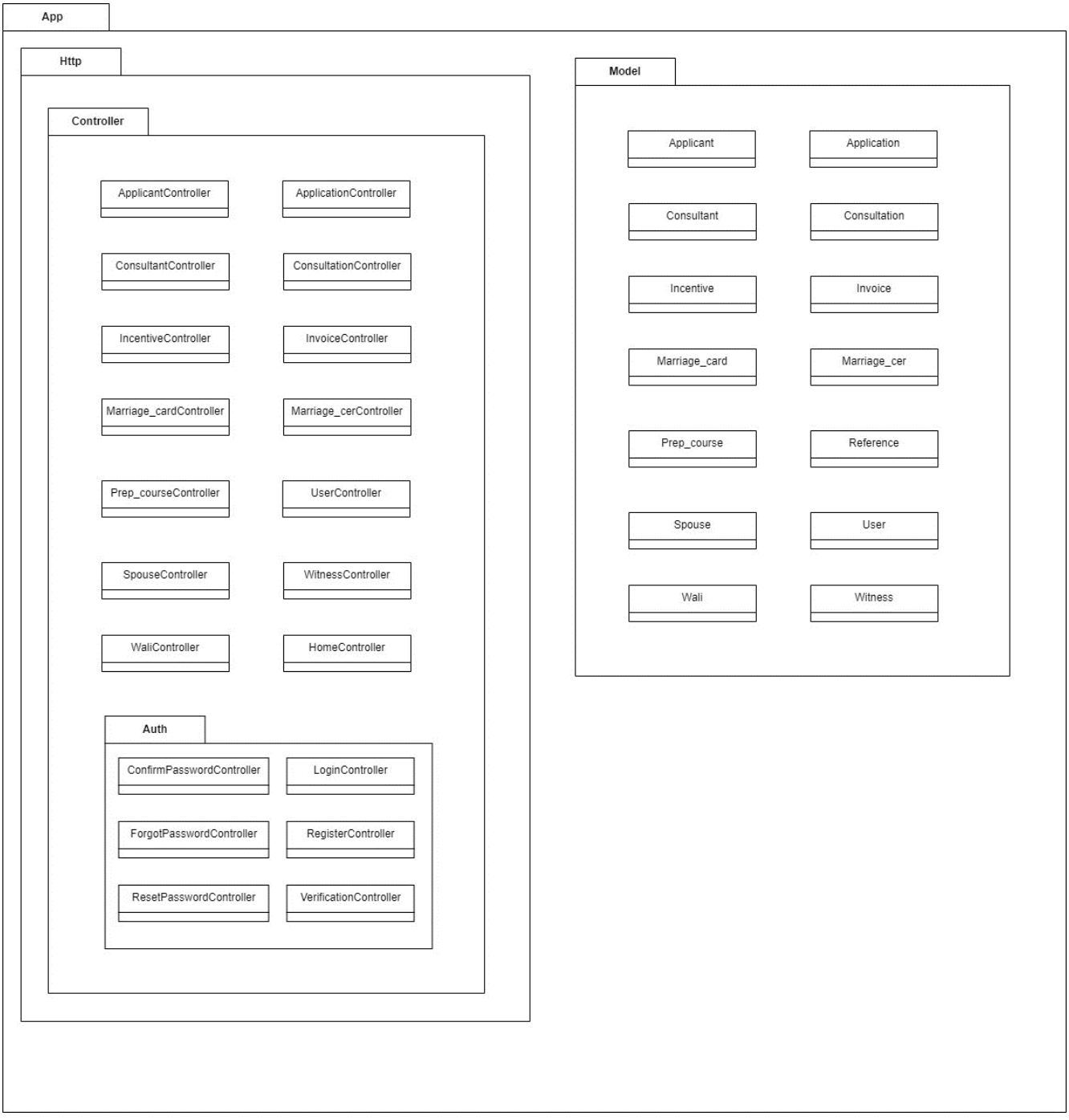
Class Name	Description
edit	A view class to allow JAIP staff to update the consultant's information
manage	A view class to allow JAIP staff to manage the list of consultants
create	A view class to allow JAIP staff to enter information of new consultant
show	A class that handles the consultant information

3.1.1.9 Manage Incentive [SDD-REQ-900]

Class Name	Description
create	A view class that displays the apply incentive page upon request which includes an application form
view	A view class that displays the user's incentive application details, hence information in a specified format
update	A view class that displays the user's information and allows the user to edit their information
delete	A view class that displays the user's information and allows the user to delete their information

3.1.2 Business Services Layer

3.1.2.1 Controller [SDD-REQ-1000]



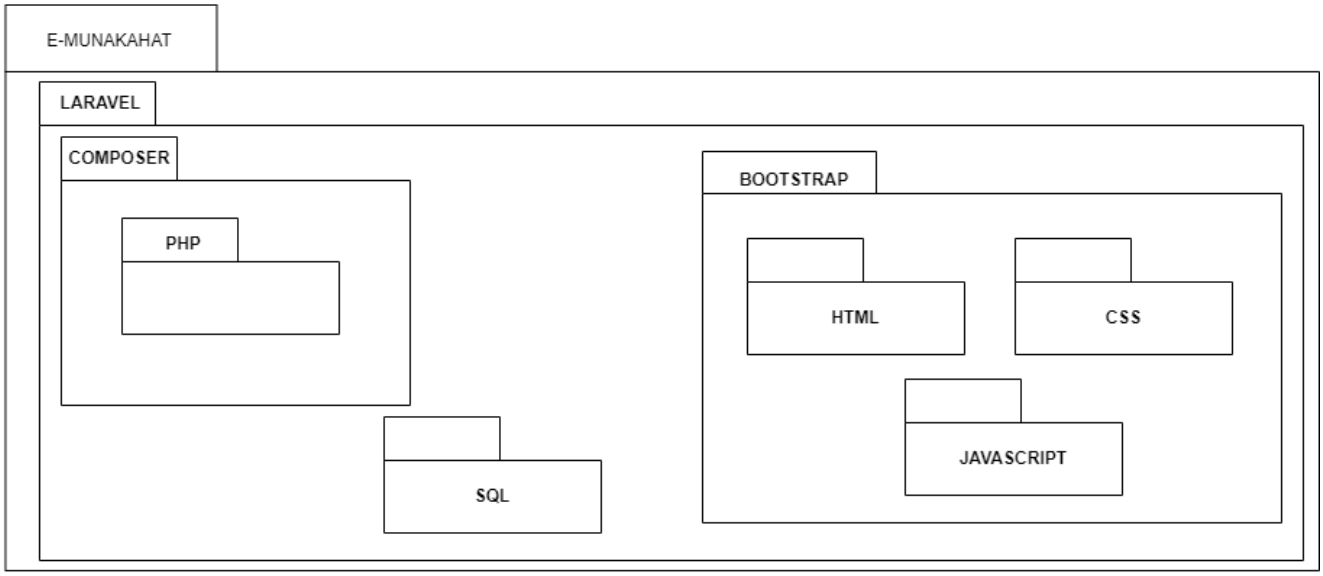
Class Name	Description
ApplicantController	Handles the logic and actions related to managing applicants in the application. Contains methods for creating, updating, and deleting applicant records, as well as retrieving applicant information.
ApplicationController	Manages the application-related functionality within the application. Contains methods for handling the creation, editing, deletion, and retrieval of application records.
ConsultantController	Responsible for handling the actions and operations related to managing consultants in the application. Contains methods for creating, updating, deleting, and retrieving consultant information.
ConsultationController	Handles the actions and operations associated with managing consultations in the application. Contains methods for scheduling consultations, updating consultation details, and retrieving consultation information.
IncentiveController	Manages the logic and actions related to incentives in the application. Contains methods for creating, updating, deleting, and retrieving incentive records.
InvoiceController	Handles the actions and operations related to managing invoices within the application. Contains methods for creating, updating, deleting, and retrieving invoice records.
MarriagCardController	Manages the functionality associated with marriage cards within the application. Contains methods for creating, updating, deleting, and retrieving marriage card records.
MarriageCerController	Handles the actions and operations related to managing marriage ceremonies in the application. Contains methods for creating, updating, deleting, and retrieving marriage ceremony records.
Prep_courseController	Responsible for managing the functionality related to preparation courses in the application. Contains methods for creating, updating, deleting, and retrieving preparation course records.

SpouseController	Manages the functionality and operations related to spouses within the application. Contains methods for creating, updating, deleting, and retrieving spouse records.
UserController	Handles the actions and operations related to managing users within the application. Contains methods for user registration, authentication, updating user information, and retrieving user details.
WaliController	Manages the logic and actions associated with managing walis (guardians) within the application. Contains methods for creating, updating, deleting, and retrieving wali records.
WitnessController	Handles the actions and operations related to managing witnesses within the application. Contains methods for creating, updating, deleting, and retrieving witness records.
HomeController	Handles the main functionality and actions related to the home page or main dashboard of the application. Contains methods for retrieving and displaying relevant information on the home page.
ConfirmPasswordController	This controller is responsible for handling password confirmations and uses a simple trait to include the behaviour
ForgotPasswordController	This controller is responsible for handling password reset emails and includes a trait that assists in sending these notifications from your application to your users.
LoginController	This controller handles authenticating users for the application and redirecting them to your home screen.
RegisterController	This controller handles the registration of new users as well as their validation and creation.
ResetPasswordController	This controller is responsible for handling password reset requests and uses a simple trait to include this behaviour.
VerificationController	This controller is responsible for handling email verification for any user that recently registered with the application.

3.1.2.2 Model [SDD-REQ-1100]

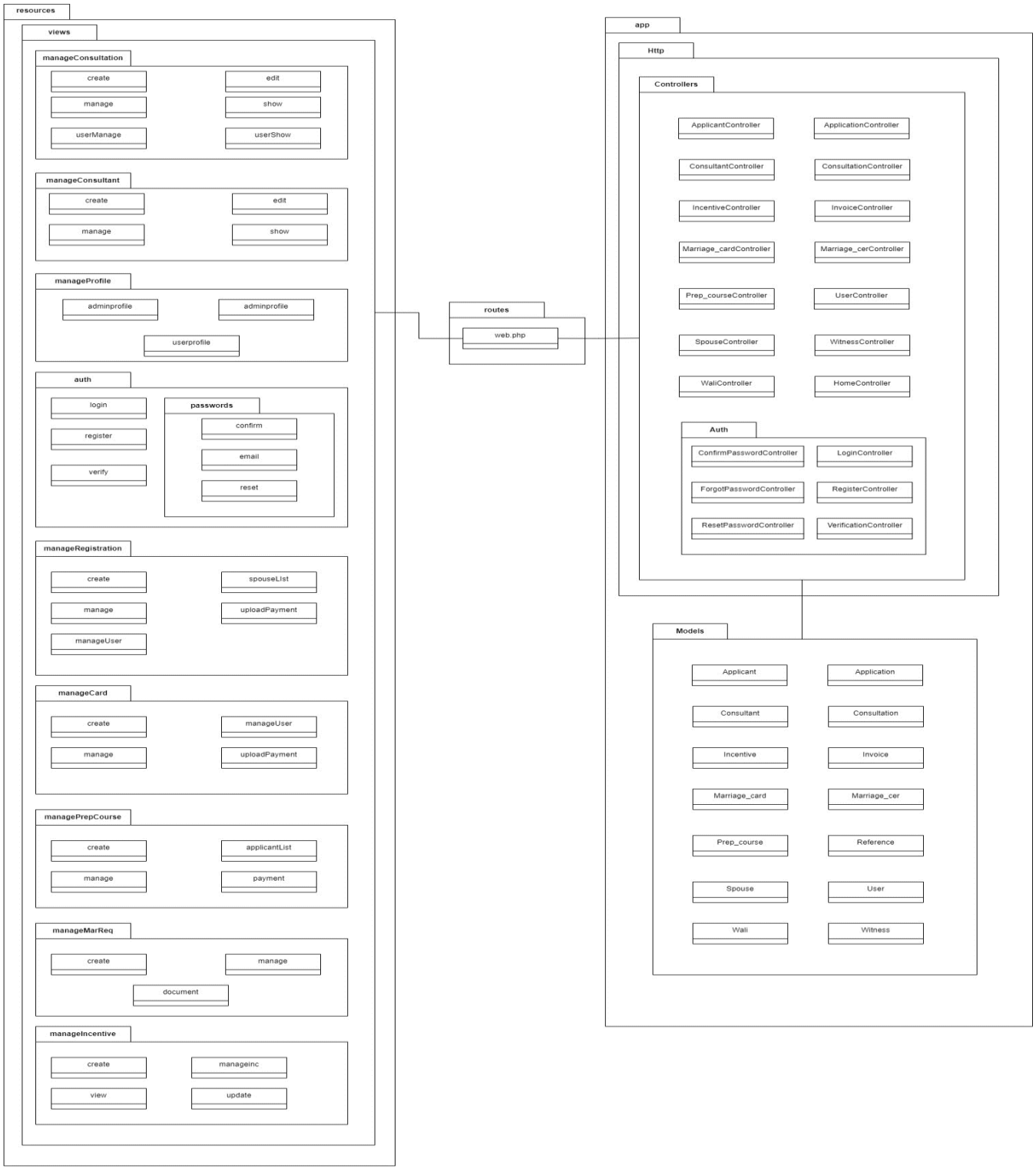
Class Name	Description
Applicant	This class retrieve and store applicant details
Application	This class retrieve and store application details
Consultant	This class retrieve and store consultant details
Consultation	This class retrieve and store consultation details
Incentive	This class retrieve and store incentive details
Invoice	This class retrieve and store invoice details
Marriage_card	This class retrieve and store marriage card details
Marriage_cer	This class retrieve and store marriage certificate details
Prep_course	This class retrieve and store preparation course details
Reference	This class retrieve and store reference details
Spouse	This class retrieve and store spouse details
User	This class retrieve and store user details
Wali	This class retrieve and store wali details
Witness	This class retrieve and store witness details

3.1.3 Middleware Layer



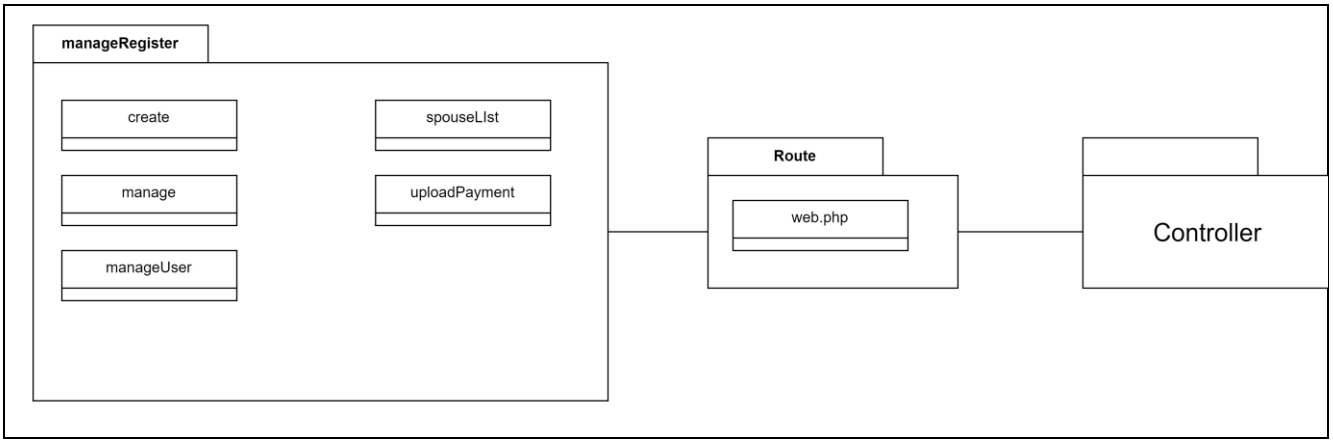
Package Name	Description
HTML	The package that contains of creating and design a website page
CSS	The package that contains of styling of the HTML package
JAVASCRIPT	The package that contains of enhancing the interactivity and functionality of website pages
LARAVEL	PHP web application framework. It contains various packages and classes for building web application.
PHP	The package that contains of code that builds dynamic web applications
SQL	The package that contains the database management

3.2 MVC Package Relationship



4. DETAIL DESIGN

4.1 manageRegister [SDD-REQ-500]



4.1.1 spouseList [SDD-REQ-501]

Class Type	Boundary class	
Responsibility	An interface to display the spouse list	
Attributes	Attributes Name	Attributes Type
	ic name gender contact email	Varchar Varchar Varchar Varchar Varchar
Methods	Method Name	Description
	manage()	To manage the user's spouse
Algorithm	BEGIN	

	System display user's spouse application. IF user appeal voluntary marriage User click "Register Marriage" button. ELSE User click "View Spouse" button. User click "Proceed to Payment" button. END

4.1.2 create [SDD-REQ-502]

Class Type	Boundary class	
Responsibility	An interface to display the marriage registration form	
Attributes	Attributes Name	Attributes Type
	ic name gender contact email address spouse_ic spouse_name spouse_gender spouse_contact spouse_email spouse_address wali_ic wali _name wali _gender wali _contact wali _address wali_relationship witness_ic witness _name witness_contact witness _email	Varchar Varchar
Methods	Method Name	Description
	create()	To create a marriage application
Algorithm	BEGIN System display marriage registration form User fill in all required information User click "Proceed Payment" button	

	END

4.1.3 manage [SDD-REQ-503]

Class Type	Boundary class	
Responsibility	An interface to display the user's marriage registration	
Attributes	Attributes Name	Attributes Type
	ic name gender contact email address spouse_ic spouse_name spouse_gender spouse_contact spouse_email spouse_address wali_ic wali _name wali _gender wali _contact wali _address wali_relationship witness_ic witness _name witness_contact witness _email payment	Varchar Blob
Methods		
	manage()	To manage marriage application

Algorithm	BEGIN
	System display marriage registration application
	IF user complete all the required information
	Staff click "Approve" button
	ELSE
	Staff click "Reject" button
	END	

4.1.4 manageUser [SDD-REQ-504]

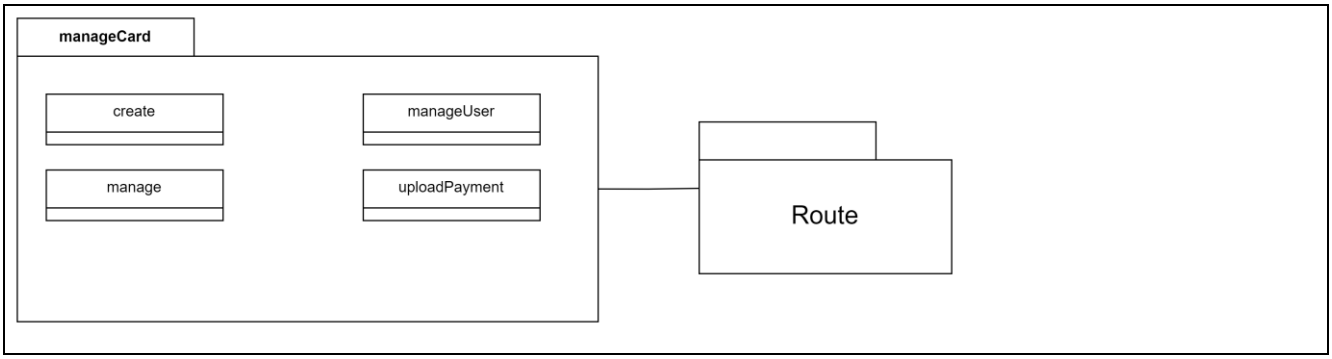
Class Type	Boundary class

Responsibility	An interface to display the requested marriage registration application	
Attributes	Attributes Name	Attributes Type
	ic	Varchar
	name	Varchar
	gender	Varchar
	contact	Varchar
	email	Varchar
	address	Varchar
	spouse_ic	Varchar
	spouse_name	Varchar
	spouse_gender	Varchar
	spouse_contact	Varchar
	spouse_email	Varchar
	spouse_address	Varchar
	wali_ic	Varchar
	wali _name	Varchar
	wali _gender	Varchar
	wali _contact	Varchar
	wali _address	Varchar
	wali_relationship	Varchar
	witness_ic	Varchar
	witness _name	Varchar
	witness_contact	Varchar
	witness _email	Varchar
	payment	Blob
Methods		
	manage()	To manage marriage application
Algorithm	BEGIN System display marriage registration application User click “View Status” button END	

4.1.5 uploadPayment [SDD-REQ-505]

Class Type	Boundary class	
Responsibility	An interface to display upload proof of payment	
Attributes	Attributes Name	Attributes Type
	ic name payment	Varchar Varchar Blob
Methods		
	payment()	To make a payment for marriage registration
Algorithm	BEGIN System display payment form User upload proof of payment User click “Register marriage” END	

4.2 manageCard [SDD-REQ-600]



4.2.1 create [SDD-REQ-601]

Class Type	Boundary class	
Responsibility	An interface to display marriage card form	
Attributes	Attributes Name	Attributes Type
	ic name spouse_ic spouse_name	Varchar Varchar Varchar Varchar
Methods		Description
	create()	To create marriage card application
Algorithm	BEGIN System display marriage card form User click “Proceed Payment” button END	

4.2.2 manage [SDD-REQ-602]

Class Type	Boundary class	
Responsibility	An interface to display user’s marriage card application	
Attributes	Attributes Name	Attributes Type
	ic name spouse_ic spouse_name payment	Varchar Varchar Varchar Varchar Blob
Methods	Method Name	Description

	manage()	To manage marriage card application

Algorithm	BEGIN
	System display marriage card application
	IF user complete all the required information
	Staff click “Approve” button
	ELSE
	Staff click “Reject” button
	END	

4.2.3 manageUser [SDD-REQ-603]

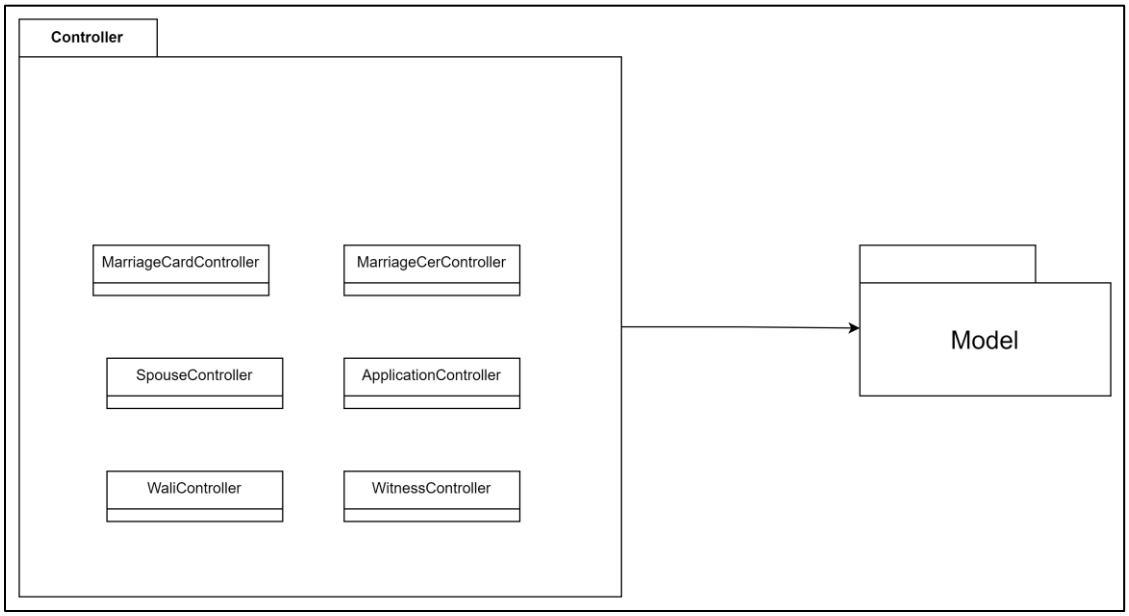
Class Type	Boundary class	
Responsibility	An interface to display requested marriage card application	
Attributes	Attributes Name	Attributes Type
	ic name spouse_ic spouse_name payment	Varchar Varchar Varchar Varchar Blob
Methods	Method Name	Description
	manage()	To manage marriage card application
Algorithm	BEGIN System display marriage registration application User click “View Status” button END	

4.2.4 uploadPayment [SDD-REQ-604]

Class Type	Boundary class
Responsibility	An interface to display upload proof of payment

Attributes	Attributes Name	Attributes Type
	ic name payment	Varchar Varchar Blob
Methods	Method Name	Description
	payment()	To make a payment for marriage registration
Algorithm	BEGIN System display payment form User upload proof of payment User click “Register marriage” END	

4.3 Controller [SDD-REQ-1000]



4.3.1 ApplicationController [SDD-REQ-1002]

Class Type	Controller Class	
Responsibility	Manages the application-related functionality within the application	
Attributes	Attributes Name	Attributes Type
	None	None
Methods	Method Name	Description
	create()	To display a registration form
	manageUser()	To display registration application
	payment(Request $request)	To store registration information
	manReg()	To manage registration application
Algorithm	BEGIN Create a new instance of the ApplicationController Create new method called create() Redirect to user.registration.create Create new method called manageUser() Search where user id = applicant id Paginate 10 with compact (datas)	

	Create new method called payment(Request $request) Store data where applicant id = user id Create new method called manReg() Paginate 10 with compact (datas) END

4.3.2 MarriageCardController [SDD-REQ-1007]

Class Type	Controller Class	
Responsibility	Manages the functionality associated with marriage cards within the application	
Attributes	Attributes Name	Attributes Type
	None	None
Methods	Method Name	Description
	manage() manageUser() store(Request $request) create()	To manage marriage card for staff To manage marriage card for user To store marriage card application data To create marriage card application
Algorithm	BEGIN Create a new instance of the MarriageCardController. Create new method called manage() Paginate 10 with compact (datas) Create new method called manageUser() Search where user id = applicant id Paginate 10 with compact (datas) Create new method called store(Request $request) Store data where applicant id = user id Create new method called create() Redirect to user.registration.create	

	END

4.3.3 MarriageCerController [SDD-REQ-1008]

Class Type	Controller Class	
Responsibility	Handles the actions and operations related to managing marriage ceremonies in the application	
Attributes	Attributes Name	Attributes Type
	None	None
Methods	Method Name	Description
	store(Request $request)	To store certificate information
Algorithm	BEGIN Create a new instance of the MarriageCerController Create new method called store(Request $request) Request All Redirect to user.register.create END	

4.3.4 SpouseController [SDD-REQ-1010]

Class Type	Controller Class	
Responsibility	Manages the functionality and operations related to spouses within the application	
Attributes	Attributes Name	Attributes Type
	None	None
Methods	Method Name	Description
	spouseList()	To display spouse list
Algorithm	BEGIN Create a new instance of the SpouseController Create new method called spouseList() Search where user id = applicant id Paginate 10 with compact (datas) END	

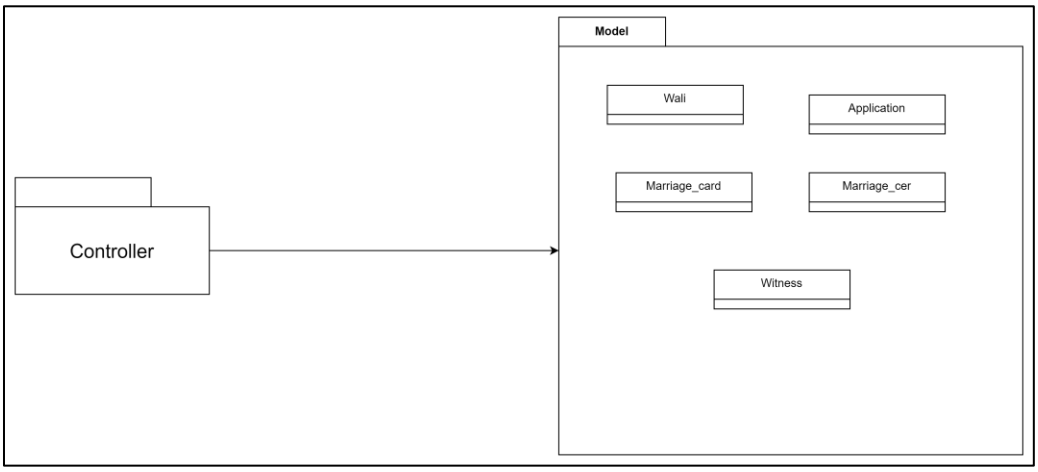
4.3.5 WaliController [SDD-REQ-1012]

Class Type	Controller Class	
Responsibility	Manages the logic and actions associated with managing walis (guardians) within the application	
Attributes	Attributes Name	Attributes Type
	None	None
Methods	Method Name	Description
	store(Request $request)	To store wali's information
Algorithm	BEGIN Create a new instance of the WaliController Create new method called store(Request $request) Request All Redirect to user.register.create END	

4.3.6 WitnessController [SDD-REQ-1013]

Class Type	Controller Class	
Responsibility	Handles the actions and operations related to managing witnesses within the application	
Attributes	Attributes Name	Attributes Type
	None	None
Methods	Method Name	Description
	store(Request $request)	To store witness's information
Algorithm	BEGIN Create a new instance of the WitnessController Create new method called store(Request $request) Request All Redirect to user.register.create END	

4.4 Model [SDD-REQ-1100]



4.4.1 Application [SDD-REQ-1102]

Class Type	Model class	
Responsibility	This class retrieve and store application details	
Attributes	Attributes Name	Attributes Type
	$fillable	Array
Methods	Method Name	Description
	applicant()	To create relationship with applicant table
	spouse()	To create relationship with spouse table
	wali()	To create relationship with wali table
	witness()	To create relationship with witness table
Algorithm	BEGIN Define a method called applicant Define its relationship Define a method called spouse Define its relationship Define a method called wali Define its relationship	

	Define a method called witness Define its relationship END

4.4.2 Marriage_cer [SDD-REQ-1107]

Class Type	Model class	
Responsibility	This class retrieve and store marriage certificate details	
Attributes	Attributes Name	Attributes Type
	$fillable	Array
Methods	Method Name	Description
	cert()	To create relationship with applicant table
Algorithm	BEGIN Define a method called cert Define its relationship END	

4.4.3 Marriage_card [SDD-REQ-1108]

Class Type	Model class	
Responsibility	This class retrieve and store marriage certificate details	
Attributes	Attributes Name	Attributes Type
	$fillable	Array
Methods	Method Name	Description
	card()	To create relationship with marriage certificate table
Algorithm	BEGIN Define a method called card Define its relationship END	

4.4.4 Wali [SDD-REQ-1113]

Class Type	Model class
Responsibility	This class retrieve and store wali details

Attributes	Attributes Name	Attributes Type
	$fillable	Array
Methods	Method Name	Description
	wali()	To create relationship with application table
Algorithm	BEGIN Define a method called wali Define its relationship END	

4.4.5 Witness [SDD-REQ-1114]

Class Type	Model class	
Responsibility	This class retrieve and store witness details	
Attributes	Attributes Name	Attributes Type
	$fillable	Array
Methods	Method Name	Description
	witness()	To create relationship with application table
Algorithm	BEGIN Define a method called witness Define its relationship END	

5. REQUIREMENT TRACEABILITY

5.1 manageRegister [UC-105-EMUN-001]

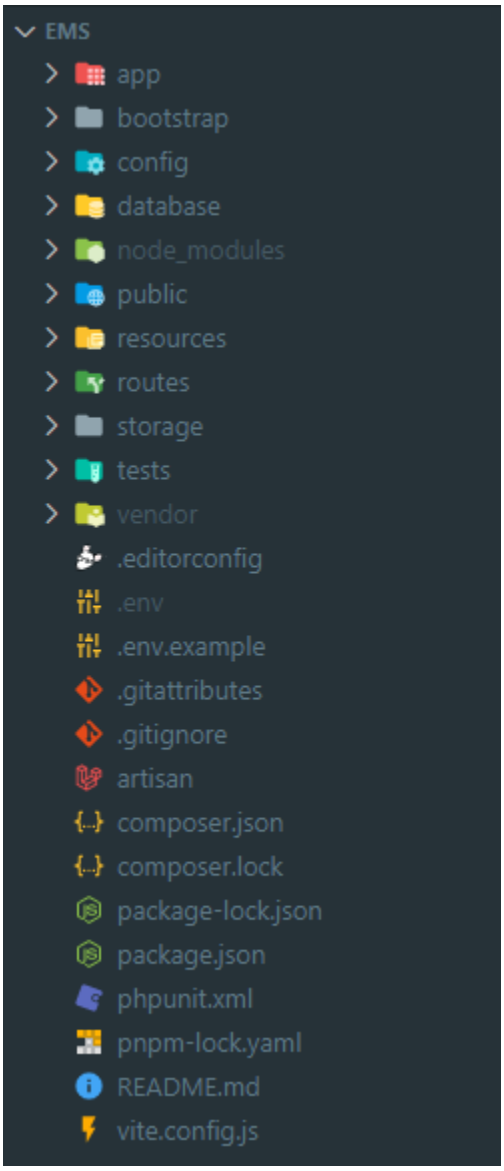
Use Case ID	Description	Package ID
UC-105-EMUN-001	User can manage their spouse	SDD-REQ-501
	User can create a marriage registration	SDD-REQ-502
	Staff can manage user's marriage registration	SDD-REQ-503
	User can manage their marriage registration	SDD-REQ-504
	User can upload a proof of payment	SDD-REQ-505

5.2 manageCard [UC-106-EMUN-001]

Use Case ID	Description	Package ID
UC-106-EMUN-001	User can create a marriage card application	SDD-REQ-601
	Staff can manage user's marriage card application	SDD-REQ-602
	User can manage their marriage card application	SDD-REQ-603
	User can upload a proof of payment	SDD-REQ-604

APPENDIX

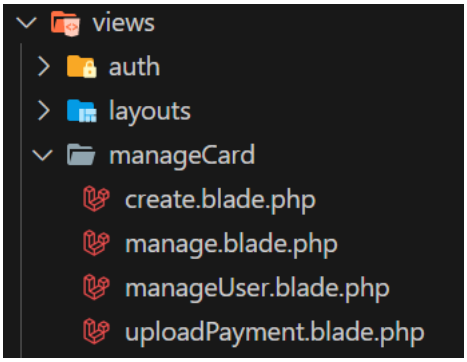
APPENDIX B



System Name	Layer		
EMS	resources	views	
	app	Http	Controllers
		Models	
	routes		

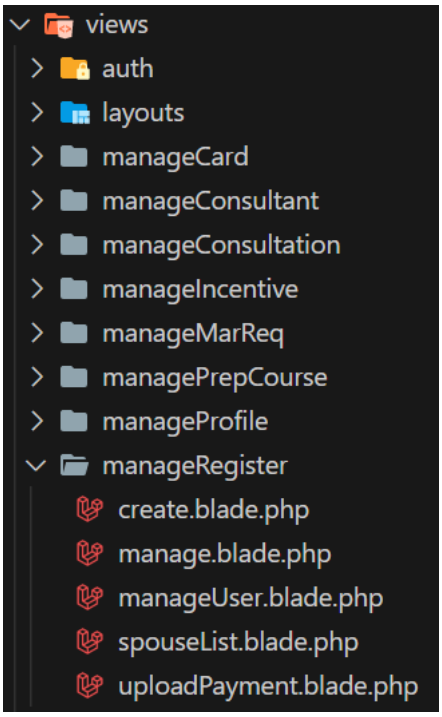
APPENDIX C1

manageCard - Views Layer



Layer	Package	Class
views	manageCard	create
		manage
		manageUser
		uploadPayment

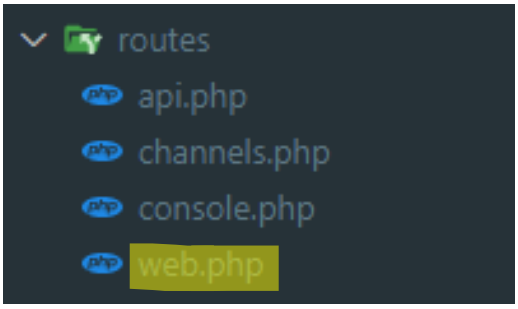
manageRegister - Views Layer



Layer	Package	Class
views	manageRegister	spouseList
		create
		manage
		manageUser
		uploadPayment

APPENDIX C2

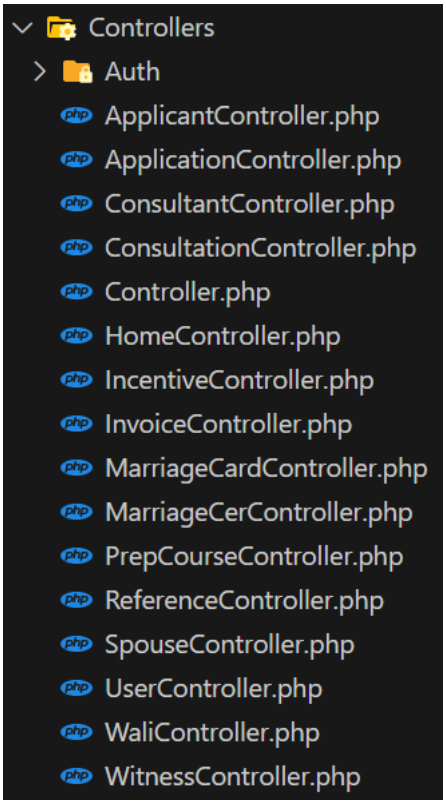
manageCard & manageRegister – Design Pattern Layer



Layer	Class
routes	web

APPENDIX C3

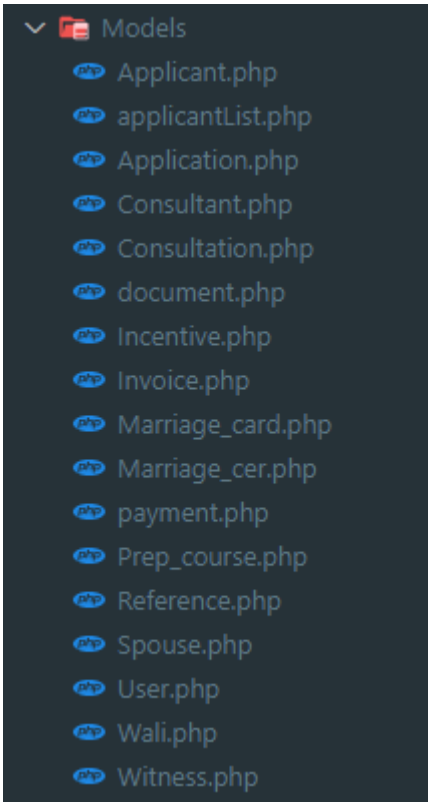
manageCard & manageRegister - Controller Layer



Layer	Class
Controllers	ApplicationController MarriageCardController MarriageCerController SpouseController WaliController WitnessController

APPENDIX C4

manageCard & manageRegister – Model Layer



Layer	Class
Models	Application Marriage_card Marriage_cer Wali Witness

SDD Document
SEM II 20222023

e-Munakahat System (EMUN)

Group Name

1. Muhammad Amir Bin Mohamed Ali [CB21060]
2. Ahmad Suffian Bin Md Noor Suhaime [CB21137]
3. Chua Kian Pheng [CB21106]
4. Nik Alia Syafiqah Binti Nik Azuri [CB21035]
5. Shammene A/P Muneesvaran [CB21018]

TABLE OF CONTENTS

1. INTRODUCTION

1.1 Purpose

This software design document (SDD) serves as a blueprint for the development of the e-Munakahat System (EMUN). It outlines the software design process, including the software's architecture, modules, interfaces, and data structures. The primary purpose of an SDD is to ensure that the software development team and stakeholders understand the design of the software application and how it will function.

The software design document (SDD) is a communication tool between the development team and stakeholders, ensuring everyone is on the same page regarding the software's design and implementation. It will also help the stakeholders to understand any limitations or assumptions that may impact the system's performance or usability, which will help the stakeholders to make informed decisions and better plan for the project. This will also help to ensure that the final product meets the needs of the users and the jurisdiction.

1.2 System Identification

The Software Design Document (SDD) belongs to the “e-Munakahat System” (EMUN).

Table 1.1 Document Identity.

<table>
<tr><th>System title</th><th>e-Munakahat System</th></tr>
<tr><td>System abbreviation</td><td>EMUN</td></tr>
<tr><td>System identification number</td><td>SDD_EMUN_QC_2023</td></tr>
<tr><td>Subsystem Title</td><td>IkatanCinta</td></tr>
<tr><td>Subsystem Abbreviation</td><td>IC</td></tr>
<tr><td>Package ID</td><td>SDD-REQ-100
Meanings for terms use:
<table>
<tr><td>SDD</td><td>Software Design Document</td></tr>
<tr><td>REQ</td><td>Requirement</td></tr>
<tr><td>100</td><td>Package number</td></tr>
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<tr><td>Use Case ID</td><td>UC101-EMUN-001
Meanings for terms used:
<table>
<tr><td>UC</td><td>Use Case</td></tr>
<tr><td>1</td><td>Number of the system module</td></tr>
<tr><td>01</td><td>Number of use case within a module in the subsystem</td></tr>
<tr><td>EMUN</td><td>e-Munakahat System (System name)</td></tr>
<tr><td>001</td><td>Document release number</td></tr>
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<tr><td>Requirement Traceability ID</td><td>UC101-EMUN-001
Meanings for terms used:
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<tr><td>UC</td><td>Use Case</td></tr>
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<tr><td>01</td><td>Number of use case within a module in the system</td></tr>
<tr><td>EMUN</td><td>e-Munakahat System (System name)</td></tr>
<tr><td>001</td><td>Document release number</td></tr>
</table></td></tr>
<tr><td>Document Identification System</td><td>SDD_EMUN_IC_2023_V1.0</td></tr>
</table>

Symbol/Number	Meaning
EMUN	It represents the system name which is e-Munakahat System (EMUN)
SDD	It represents the software design document (SDD)
QC	It represents the company name which is Quantum Corp SDN. BHD.
2023	It represents the year where the system has been released.
V1.0	V represent the word “Version” of the system while 1.0 is the general version of the system. The number will increase by 0.1 if there any updates or bugs fixed.

1.3 System Overview

Our system is a web-based system to support the Pahang Wedding management system. The purpose of the system is to provide a solution for managing wedding registration and operations efficiently. Users can use this system for marriage registration and information retrieval. It also eases the government to collect granular data on weddings in Pahang and store the information for future use. This system is handled by the Quantum Corp company. This system contains various functionalities such as user registration, marriage application, marriage registration, marriage preparation course, proof of payment, request for marriage, marriage card, marriage consultation, and special incentives for the bride and groom.

There are five modules in this system which are:

1. Registration and handle user profile

The initial stage of using the system is applicant registration, which is required for applicants to enter the system. It contains private information such as an Identity Card number, phone number, email address, and password. Since registration is based on the user's IC number, a unique number with no duplicates, each user has just one account for the system. Once the applicant's registration is successful, they can log in to access the system's contents after completing the registration process. The admin can register new staff through the admin dashboard. Once registration for staff is successful, they will be granted access to the system. The system also allows users (applicants & staff) to modify their profile details to update their information. In case the applicant has forgotten their password, they will be able to reset their password. Apart from that, the admin can update staff and applicant details through the admin dashboard.

2. Attend the marriage preparation course with proof of payment and to request a marriage.

   After users register and login into the account, the users can proceed to the next step where they can apply for the marriage registration course. As a marriage registration course is an important step for the e-Munakahat system will update the name list of applicants. The system will show if the user has already paid for the course or not. So, then the staff can print the proof of payment and send the receipt to the applicants. The system shall allow the admin to manage the marriage preparation course details such as date, time, and where the course will be conducted. While the staff will handle the things that are related to the user or applicants. Approve the applications in the system and print the applicants' name list for the course for every session. If the applicant presents on the course day, the staff can approve their marriage course certificate. After the course ends, the applicants will be represented with the certificate. The staff can update the applicant's name from the system for obtaining the marriage course certificate. Next step for the applicant is request their marriage from E-Munakahat system.

3. An application to register a marriage within or outside the country, as well as a voluntary marriage, and to produce the marriage card or certificate with proof of payment.

   Marriage registration is split into two processes which are voluntary and authorized registration. User needs to pass a pre-marriage course to be able to register their marriage. Voluntary registration is for the older generation who live far away from town and did not register when they married. For authorized registration, the user must prepare various forms and information in which the template is provided in the system. After staff from JAIP has approved the marriage registration, it will notify the user so that they know their marriage registration has been approved.

4. Register for a marriage consultation with a service advisor.

   A consultation module is a module where the user can make an appointment to seek advice or to get a divorce. This module requires the users to enter their personal information and also their spouse information including their marriage information and upload related documents as proof. Staff can view the application made by the user and will decide whether to approve the appointment and responsible to assign consultant and slot to the consultation session. Staff are also responsible for managing the list of consultants and their information in this module. The staff can edit, add, and delete the consultants' information in the system.

5. Application for special incentive for the bride and groom

The marriage registration system features a special incentive module that enables users to apply for incentives, provided they meet the necessary prerequisites. This module allows individuals to input their personal information and upload necessary documents, making the process more streamlined. Additionally, the staff side of the platform allows for the review of applications and ensures that the process is efficient and user-friendly. The special incentive module in the marriage registration system also includes a notification feature that keeps applicants informed about the status of their applications. Once the staff reviews the application, the applicant will receive a notification, either confirming their approval or outlining the reasons for the denial. This ensures that applicants are aware of the status of their application in a timely and efficient manner."

1.4 Referenced Document

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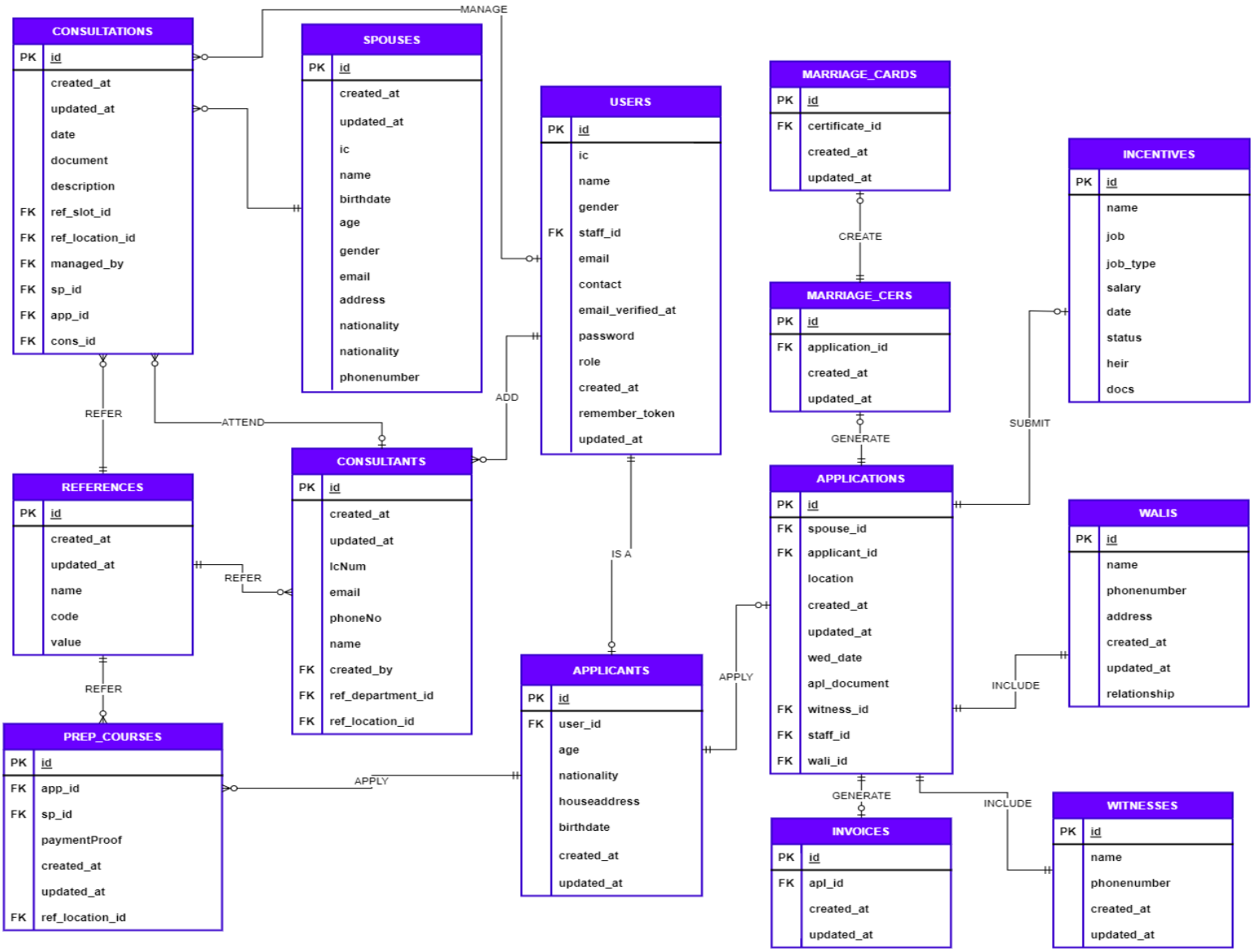
2. DATA DESIGN

2.1 Entity Relationship Diagram (ERD)



2.2 Data Dictionary

2.2.1 USERS

Field Name	Description	Data Type	Constraint
id	User's ID	BIGINT	PK
ic	User's IC	VARCHAR (12)	NOT NULL, UNIQUE
name	User's name	VARCHAR (255)	NOT NULL
gender	User's gender	VARCHAR (8)	NOT NULL
staff_id	Staff's ID	VARCHAR (10)	
email	User's email	VARCHAR (255)	NOT NULL, UNIQUE
contact	User's contact	VARCHAR (15)	NOT NULL
email_verified_at	User's email verification dates	TIMESTAMP	NOT NULL
password	User's password	VARCHAR (255)	NOT NULL
role	User's role	TINYINT	NOT NULL
remember_token	Users remember token	VARCHAR (100)	
created_at	User's created date	TIMESTAMP	NOT NULL
updated_at	User's updated date	TIMESTAMP	

2.2.2 APPLICANTS

Field Name	Description	Data Type	Constraint
id	Applicant's ID	BIGINT(20)	PK
user_id	User ID	BIGINT(20)	Not null
age	Applicant's age	INT(10)	
nationality	Applicant's nationality	VARCHAR(255)	
houseaddress	Applicant's house address	VARCHAR (255)	
birthdate	Applicant's birthdate	DATE	
created_at	Applicant's created time	TIMESTAMP	Not null
updated_at	Applicant's updated time	TIMESTAMP	

2.2.3 CONSULTATIONS

Field Name	Description	Data Type	Constraint
id	Consultation ID number	BIGINT (20)	PK
created_id	Consultation created date	TIMESTAMP	NOT NULL
updated_at	Consultation update date	TIMESTAMP	
date	Consultation appointment date	DATE	NOT NULL
ref_slot_id	Consultation slot	BIGINT (20)	NOT NULL
description	Consultation description	TEXT	NOT NULL
document	Consultation document file path	VARCHAR (255)	NOT NULL
ref_location_id	Consultation location	BIGINT (20)	NOT NULL
managed_by	Staff who managed the consultation	BIGINT (20)	
sp_id	Spouse ID	BIGINT (20)	NOT NULL
app_id	Applicant ID	BIGINT (20)	NOT NULL
cons_id	Consultant ID	BIGINT (20)	

2.2.4 CONSULTANTS

Field Name	Description	Data Type	Constraint
id	Consultation's id	BIGINT (20)	PK
created_at	Consultation's created time	TIMESTAMP	NOT NULL
updated_at	Consultation 's updated time	TIMESTAMP	
IcNum	Consultant's IC number	VARCHAR (255)	NOT NULL
name	Consultant's name	VARCHAR (255)	NOT NULL
email	Consultant's email address	VARCHAR (255)	NOT NULL
ref_department_id	Consultant's departments	BIGINT (20)	FK, NOT NULL
ref_location_id	Consultant's working location	BIGINT (20)	FK, NOT NULL
phoneNo	Consultant's phone number	VARCHAR (255)	NOT NULL
created_by	Staff who register the consultant	BIGINT (20)	FK, NOT NULL

2.2.5 SPOUSES

Field Name	Description	Data Type	Constraint

id	Spouse's ID	BIGINT (255)	PK
created_at	Spouse's created time	TIMESTAMP	NOT NULL
updated_at	Spouse's updated times	TIMESTAMP	
ic	Spouse's IC	VARCHAR (12)	NOT NULL
name	Spouse's name	VARCHAR (255)	NOT NULL
birthdate	Spouse's birthdate	DATE	NOT NULL
age	Spouse's age	INT	NOT NULL
gender	Spouse's gender	VARCHAR (8)	NOT NULL
nationality	Spouse's nationality	VARCHAR (15)	NOT NULL
address	Spouse's address	VARCHAR (255)	NOT NULL
email	Spouse's email address	VARCHAR (255)	NOT NULL
phonenumber	Spouse's phone number	VARCHAR (15)	NOT NULL

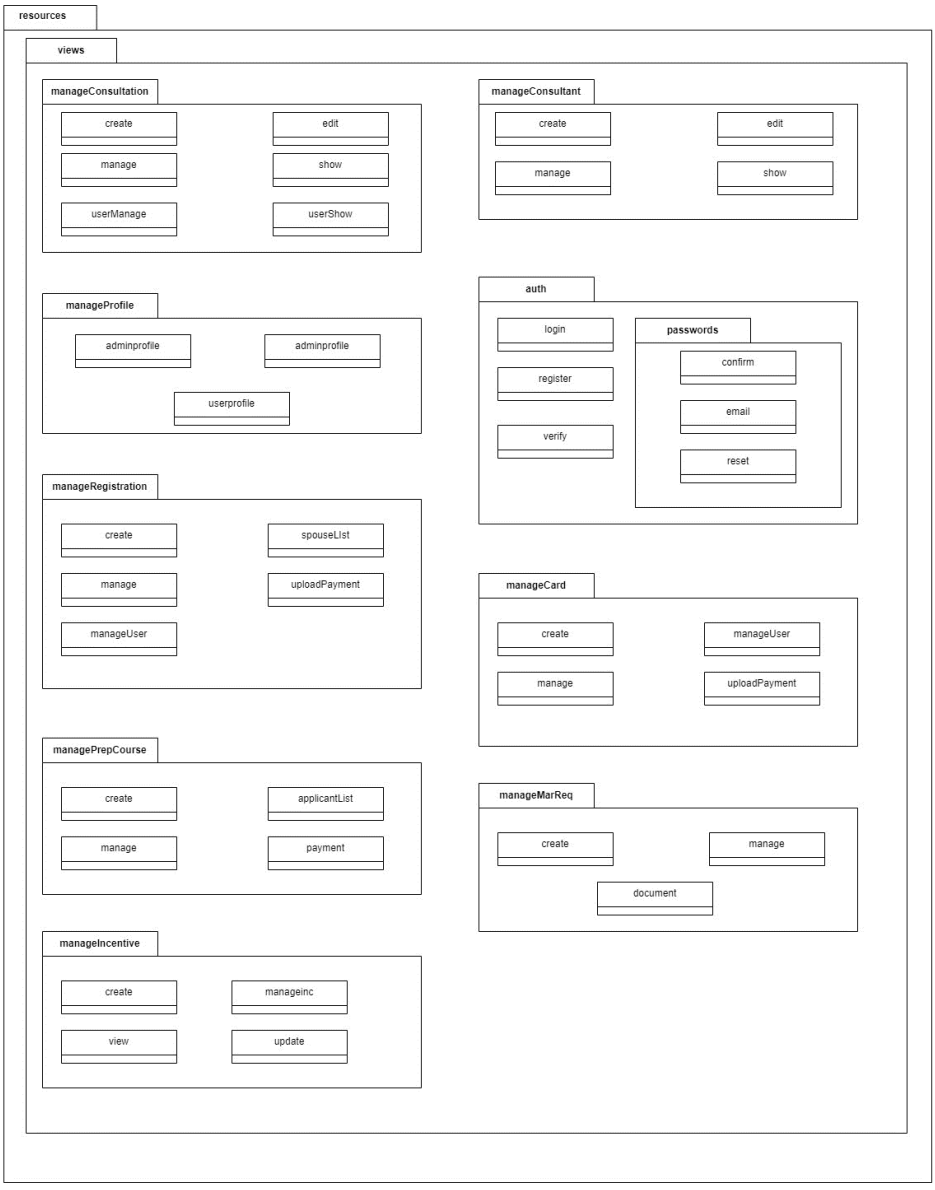
2.2.6 REFERENCES

Field Name	Description	Data Type	Constraint
id	References id	BIGINT (20)	PK
created_at	References created date	TIMESTAMP	
updated_at	References updated date	TIMESTAMP	
name	References name	VARCHAR (255)	NOT NULL
code	References code	VARCHAR (255)	NOT NULL
value	References value	VARCHAR (255)	NOT NULL

3. GENERAL ARCHITECTURE

3.1 Layered Architecture

3.1.1 Application Layer



3.1.1.1 Manage Profile [SDD-REQ-100]

Class Name	Description
adminprofile	A view class for admin to register staff in the EMUN system
staffprofile	A view class for staff to manage their profile in the EMUN system

userprofile	A view class for user to manage their profile in the EMUN system

3.1.1.2 Auth [SDD-REQ-200]

Class Name	Description
login	A view class for user, staff and admin login into the EMUN system
register	A view class for user to register into the EMUN system
verify	A view class for user to verify the account in the EMUN system
confirm	A view class for user to confirm the account in the EMUN system
email	A view class for user to enter the email to reset password in the EMUN system
reset	A view class for user to reset password in the EMUN system.

3.1.1.3 Manage Preparation Course [SDD-REQ-300]

Class Name	Description
create	A view class for applicant to register the marriage preparation course by fill in the form
manage	A view class for applicant display the information regarding to marriage preparation course
applicantList	A view class for JAIP staff to see the list of applicants that apply marriage preparation course
payment	A view class for applicant to submit proof of payment

3.1.1.4 Manage Marriage Request [SDD-REQ-400]

Class Name	Description
create	A view class for applicant to register the marriage application by fill in the form
manage	A view class for applicant edit their information
document	A view class for applicant to submit document

3.1.1.5 Manage Registration [SDD-REQ-500]

Class Name	Description
spouseList	A view class that displays the spouse's information and allow the user to search, edit, delete, print and submit
create	A view class that allows the user to create a marriage registration application
manage	A view class that displays the user's marriage registration application and allow staff to accept or reject
manageUser	A view class that displays the marriage registration application
uploadPayment	A view class that displays payment receipt request and allow the user to upload their receipt

3.1.1.6 Manage Card [SDD-REQ-600]

Class Name	Description
create	A view class allow the user to request for the marriage card
manage	A view class that displays the user's marriage card application and allow staff to accept or reject
manageUser	A view class that displays the marriage card application
uploadPayment	A view class that displays payment receipt request and allow the user to upload their receipt

3.1.1.7 Manage consultation [SDD-REQ-700]

Class Name	Description
create	A view class to display form to allow the user to fill information details
show	A view class to allow JAIP staff to view the information of the application

edit	A view class to allow JAIP staff to fill user appointment detail and approve their application
userManage	A view class to allow user to check the list of consultation applications made
userShow	A view class to allow user to view the information of the application made
manage	A view class to display the list of application and allow JAIP staff to manage the consultation application

3.1.1.8 Manage consultant [SDD-REQ-800]

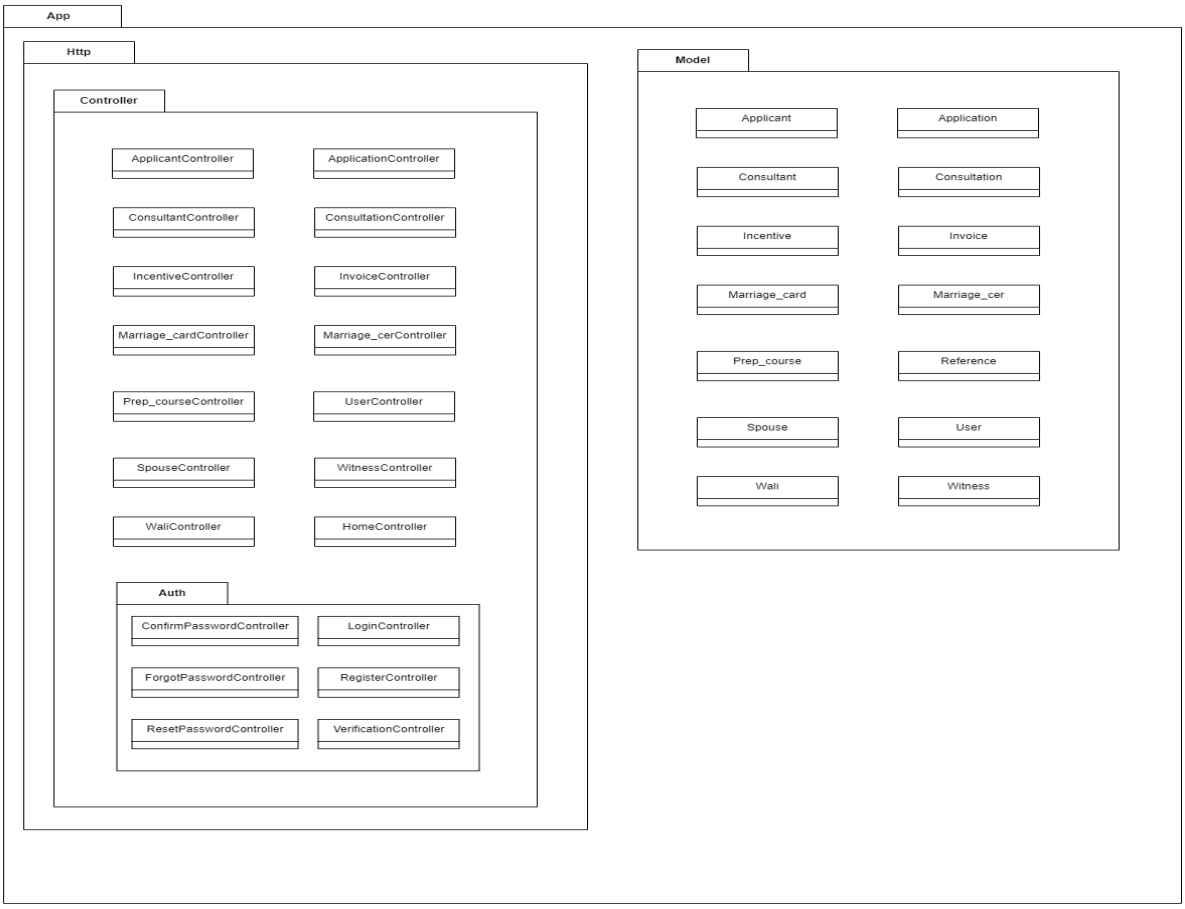
Class Name	Description
edit	A view class to allow JAIP staff to update the consultant's information
manage	A view class to allow JAIP staff to manage the list of consultants
create	A view class to allow JAIP staff to enter information of new consultant
show	A class that handles the consultant information

3.1.1.9 Manage Incentive [SDD-REQ-900]

Class Name	Description
create	A view class that displays the apply incentive page upon request which includes an application form
view	A view class that displays the user's incentive application details, hence information in a specified format
update	A view class that displays the user's information and allows the user to edit their information
delete	A view class that displays the user's information and allows the user to delete their information

3.1.2 Business Services Layer

3.1.2.1 Controller [SDD-REQ-1000]



Class Name	Description
ApplicantController	Handles the logic and actions related to managing applicants in the application. Contains methods for creating, updating, and deleting applicant records, as well as retrieving applicant information.
ApplicationController	Manages the application-related functionality within the application. Contains methods for handling the creation, editing, deletion, and retrieval of application records.
ConsultantController	Responsible for handling the actions and operations related to managing consultants in the application. Contains

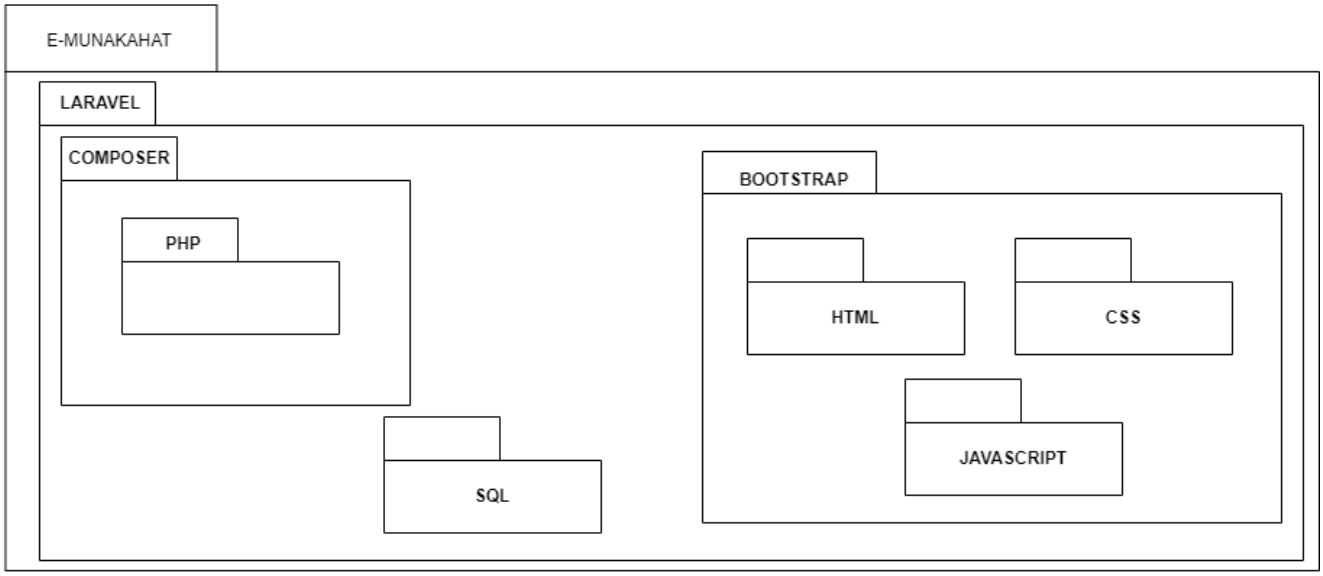
	methods for creating, updating, deleting, and retrieving consultant information.
ConsultationController	Handles the actions and operations associated with managing consultations in the application. Contains methods for scheduling consultations, updating consultation details, and retrieving consultation information.
IncentiveController	Manages the logic and actions related to incentives in the application. Contains methods for creating, updating, deleting, and retrieving incentive records.
InvoiceController	Handles the actions and operations related to managing invoices within the application. Contains methods for creating, updating, deleting, and retrieving invoice records.
Marriage_cardController	Manages the functionality associated with marriage cards within the application. Contains methods for creating, updating, deleting, and retrieving marriage card records.
Marriage_cerController	Handles the actions and operations related to managing marriage ceremonies in the application. Contains methods for creating, updating, deleting, and retrieving marriage ceremony records.
Prep_courseController	Responsible for managing the functionality related to preparation courses in the application. Contains methods for creating, updating, deleting, and retrieving preparation course records.
SpouseController	Manages the functionality and operations related to spouses within the application. Contains methods for creating, updating, deleting, and retrieving spouse records.
UserController	Handles the actions and operations related to managing users within the application. Contains methods for user registration, authentication, updating user information, and retrieving user details.
WaliController	Manages the logic and actions associated with managing walis (guardians) within the application. Contains methods for creating, updating, deleting, and retrieving wali records.

WitnessController	Handles the actions and operations related to managing witnesses within the application. Contains methods for creating, updating, deleting, and retrieving witness records.
HomeController	Handles the main functionality and actions related to the home page or main dashboard of the application. Contains methods for retrieving and displaying relevant information on the home page.
ConfirmPasswordController	This controller is responsible for handling password confirmations and uses a simple trait to include the behaviour
ForgotPasswordController	This controller is responsible for handling password reset emails and includes a trait that assists in sending these notifications from your application to your users.
LoginController	This controller handles authenticating users for the application and redirecting them to your home screen.
RegisterController	This controller handles the registration of new users as well as their validation and creation.
ResetPasswordController	This controller is responsible for handling password reset requests and uses a simple trait to include this behaviour.
VerificationController	This controller is responsible for handling email verification for any user that recently registered with the application.

3.1.2.2 Model [SDD-REQ-1100]

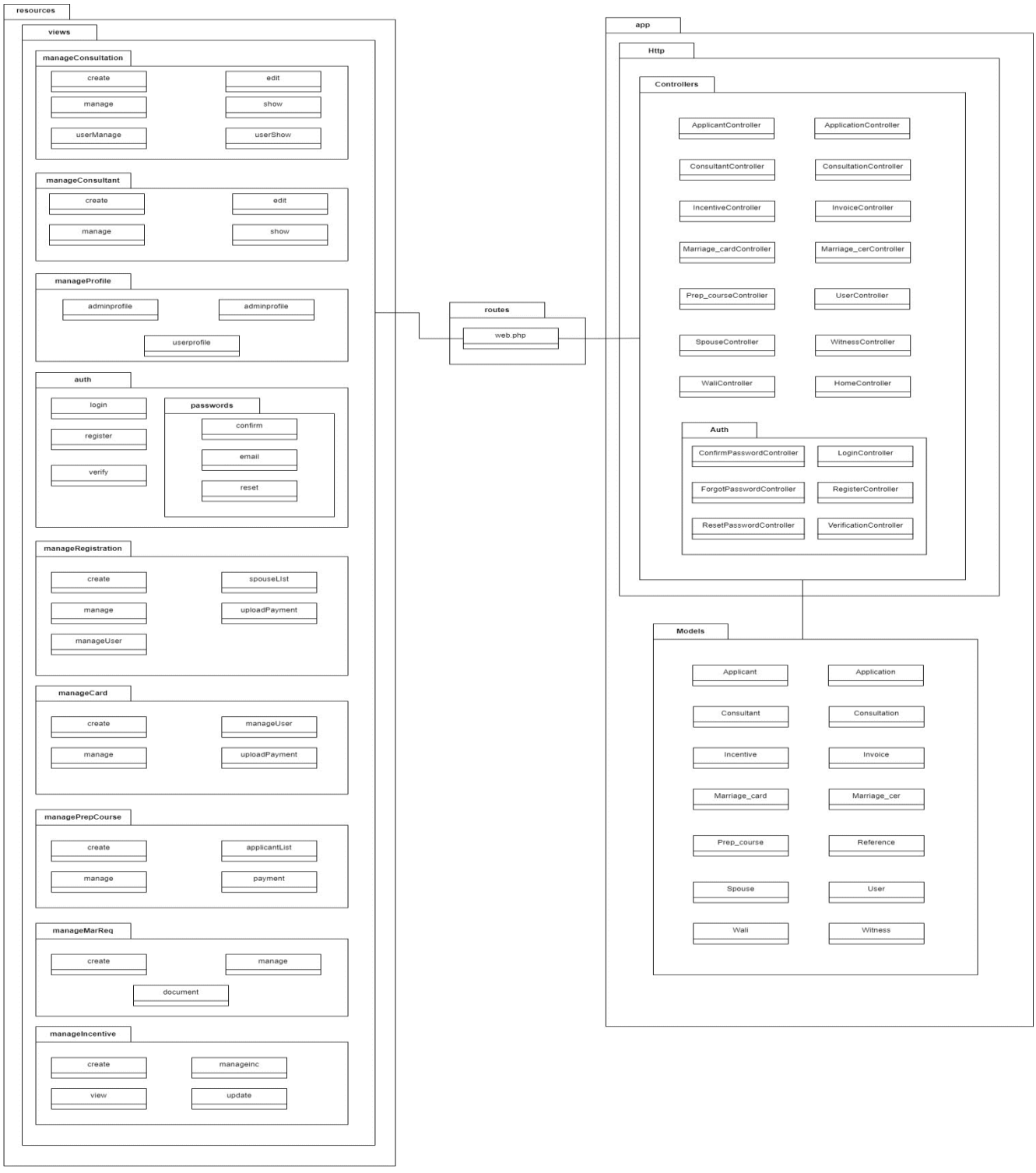
Class Name	Description
Applicant	This class retrieve and store applicant details
Application	This class retrieve and store application details
Consultant	This class retrieve and store consultant details
Consultation	This class retrieve and store consultation details
Incentive	This class retrieve and store incentive details
Invoice	This class retrieve and store invoice details
Marriage_card	This class retrieve and store marriage card details
Marriage_cer	This class retrieve and store marriage certificate details
Prep_course	This class retrieve and store preparation course details
Reference	This class retrieve and store reference details
Spouse	This class retrieve and store spouse details
User	This class retrieve and store user details
Wali	This class retrieve and store wali details
Witness	This class retrieve and store witness details

3.1.3 Middleware Layer



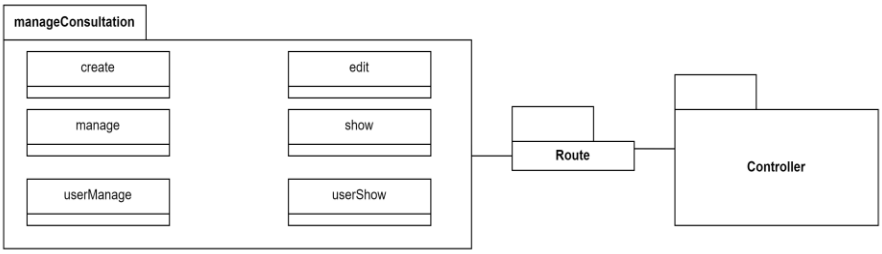
Package Name	Description
HTML	The package that contains of creating and design a website page
CSS	The package that contains of styling of the HTML package
JAVASCRIPT	The package that contains of enhancing the interactivity and functionality of website pages
LARAVEL	PHP web application framework. It contains various packages and classes for building web application.
PHP	The package that contains of code that builds dynamic web applications
SQL	The package that contains the database management

3.2 MVC Package Relationship



4. DETAIL DESIGN

4.1 manageConsultation [SDD-REQ-700]



4.1.1 create [SDD-REQ-701]

Class Type	Boundary class	
Responsibility	This interface allows user to fill the consultation application form	
Attributes	Attributes Name	Attributes Type
	$user $applicant $spouse $slots $locations	User Applicant Spouse Array Array
Methods	Method Name	Description
	store ()	Method to create new Consultation and store the data.
	userManage()	Method to redirect user to userManage class in manageConsultation package
Algorithm	1) Start 2) Display form 3) If save button is clicked a) Call store() 4) End if 5) If consultation button is clicked a) Call userManage() 6) End if 7) End	

4.1.2 manage [SDD-REQ-702]

Class Type	Boundary class	
Responsibility	This interface allows JAIP Staff to manage the consultation application list.	
Attributes	Attributes Name	Attributes Type
	$datas	Consultation
Methods	Method Name	Description
	edit($id)	Method to redirect JAIP Staff to edit class in manageConsultation package
	show($id)	Method to redirect JAIP Staff to show class in manageConsultation package
	decline($id)	Method to update the status of consultation to decline
Algorithm	1) Start 2) List all consultation 3) If edit icon is clicked a) Call edit() 4) End if 5) If show icon is clicked a) Call show() 6) End if 7) If decline icon is clicked a) Call decline() 8) End if 9) End	

4.1.3 userManage [SDD-REQ-703]

Class Type	Boundary class	
Responsibility	This interface allows user to manage the consultation application list.	
Attributes	Attributes Name	Attributes Type

	$datas	Consultation
Methods	Method Name	Description
	userShow($id)	Method to redirect user to userShow class in manageConsultation package
	create()	Method to redirect user to create class in manageConsultation package
Algorithm	1) Start 2) List all consultations 3) If show icon is clicked a) Call userShow() 4) End if 5) If new button is clicked a) Call create() 6) End if 7) End	

4.1.4 edit [SDD-REQ-704]

Class Type	Boundary class	
Responsibility	This interface allows JAIP Staff to update the consultation application	
Attributes	Attributes Name	Attributes Type
	$id $consultants $datas	Bigint Consultant Consultation
Methods	Method Name	Description
	update(Request $request, $id)	Method to update the Consultation's details.
	decline($id)	Method to update the status of consultation to decline
	manage()	Method to redirect JAIP Staff to manage class in manageConsultation package
Algorithm	1) Start 2) Display form with previous details	

	3) If update button is clicked a) Call update() 4) End if 5) If back button is clicked a) Call manage() 6) End if 7) If decline button is clicked a) Call decline() 8) End if 9) End

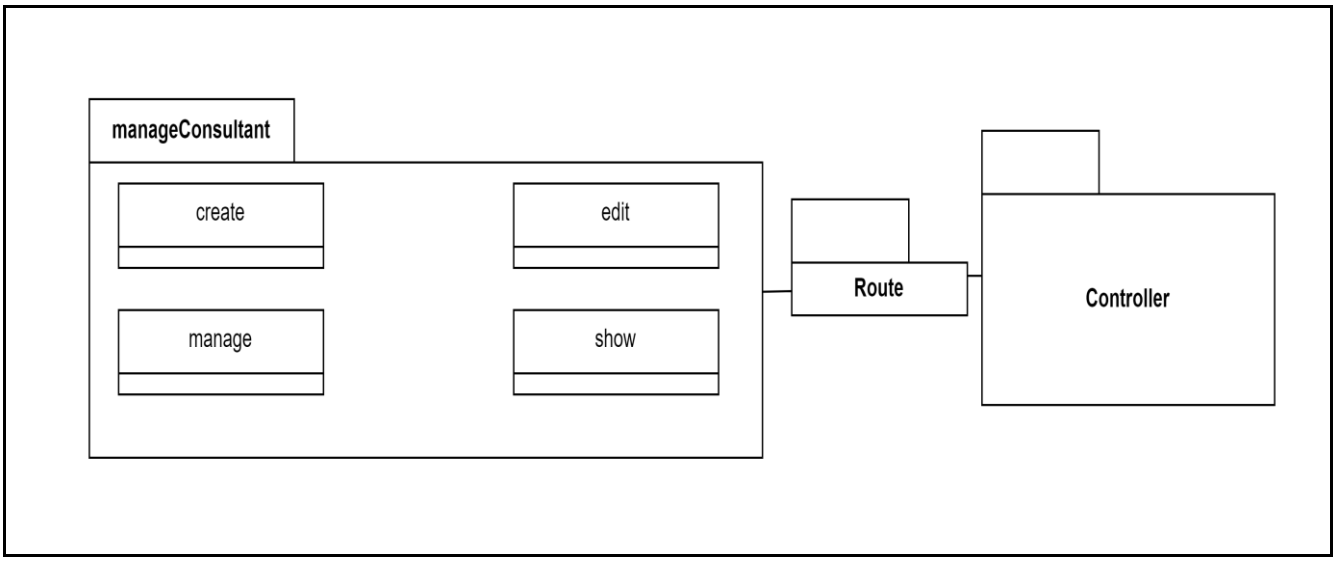
4.1.5 show [SDD-REQ-705]

Class Type	Boundary class	
Responsibility	This interface allows JAIP Staff view the consultation application details	
Attributes	Attributes Name	Attributes Type
	$data	Consultation
Methods	Method Name	Description
	displayFile($fileName)	Method to display file
	manage()	Method to redirect JAIP Staff to manage class in manageConsultation package
Algorithm	1) Start 2) Display consultation details 3) If file button is clicked a) Call displayFile() 4) End if 5) If back button is clicked a) Call manage() 6) End if 7) End	

4.1.6 userShow [SDD-REQ-706]

<table>
<tr><td>Class Type</td><td colspan="2">Boundary class</td></tr>
<tr><td>Responsibility</td><td colspan="2">This interface allow user to view the consultation application details</td></tr>
<tr><td rowspan="2">Attributes</td><td>Attributes Name</td><td>Attributes Type</td></tr>
<tr><td>$data</td><td>Consultation</td></tr>
<tr><td rowspan="3">Methods</td><td>Method Name</td><td>Description</td></tr>
<tr><td>displayFile($fileName)</td><td>Method to display file</td></tr>
<tr><td>userManage()</td><td>Method to redirect user to userManage class in manageConsultation package</td></tr>
<tr><td>Algorithm</td><td colspan="2">1) Start
2) Display consultation details
3) If file button is clicked
a) Call displayFile()
4) End if
5) If back button is clicked
a) Call userManage()
6) End if
7) End</td></tr>
</table>

4.2 manageConsultant [SDD-REQ-800]



4.2.1 create [SDD-REQ-801]

Class Type	Boundary class	
Responsibility	This interface allow JAIP Staff to create new consultant in the system.	
Attributes	Attributes Name	Attributes Type
	$departments	Reference
	$locations	Reference
Methods	Method Name	Description
	store(Request $request)	Method to create new Consultant and store the data.
	manage()	Method to redirect JAIP Staff to manage class in manageConsultant
Algorithm	1) Start 2) Display form 3) If save button is clicked a) Call store() 4) End if 5) If save button is clicked a) Call manage() 6) End if 7) End	

4.2.2 edit [SDD-REQ-802]

Class Type	Boundary class	
Responsibility	This interface allow JAIP Staff to edit consultant's detail.	
Attributes	Attributes Name	Attributes Type
	$departments $locations $consultant	Reference Reference Consultant
Methods	Method Name	Description
	manage()	Method to redirect JAIP Staff to manage class in manageConsultant
	update(Request $request)	Method to update the Consultant's details.
Algorithm	1) Start 2) Display details 3) If update button is clicked a) Call update() 4) End if 5) If back button is clicked a) Call manage() 6) End if 7) End	

4.2.3 manage [SDD-REQ-803]

Class Type	Boundary class	
Responsibility	This interface allow JAIP Staff to manage list of consultants.	
Attributes	Attributes Name	Attributes Type
	$datas	Consultant
Methods	Method Name	Description
	create()	Method to redirect JAIP Staff to create class in manageConsultant

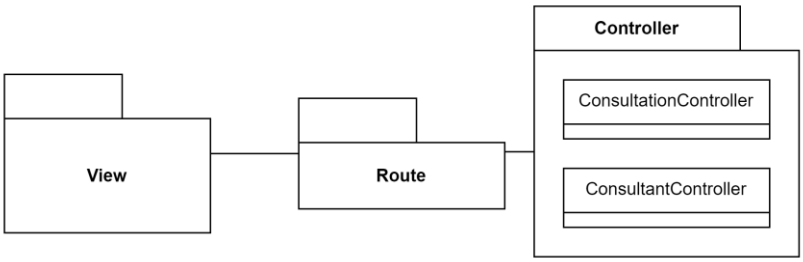
	edit($id)	Method to redirect JAIP Staff to edit class in manageConsultant
	destroy($id)	Method to delete record of Consultant in the database
	show($id)	Method to redirect JAIP Staff to show class in manageConsultant
Algorithm	1) Start 2) Display consultants list 3) If edit icon is clicked a) Call edit() 4) End if 5) If new button is clicked a) Call create() 6) End if 7) If delete icon is clicked a) Call destroy() 8) End if 9) If show icon is clicked a) Call show() 10) End if 11) End	

4.2.4 show [SDD-REQ-804]

Class Type	Boundary class	
Responsibility	This interface allow JAIP Staff to view consultant's detail.	
Attributes	Attributes Name	Attributes Type
	$consultant	Consultant
Methods	Method Name	Description
	manage()	Method to redirect JAIP Staff to manage class in manageConsultant
Algorithm	1) Start 2) Display consultant details	

	3) If back button is clicked a) Call manage() 4) End if 5) End

4.3 Controller [SDD-REQ-1000]



4.3.1 ConsultantController [SDD-REQ-1003]

Class Type	**Controller Class**	
Responsibility	This controller controls activities between manageConsultant interfaces and model class related to consultants.	
Attributes	Attributes Name	Attributes Type
	None	None
Methods	Method Name	Description
	index ()	Method to redirect user to staff.consultant.manage route
	manage()	Method to redirect JAIP Staff to manage class in manageConsultant
	create()	Method to redirect JAIP Staff to create class in manageConsultant
	store(Request $request)	Method to create new Consultant and store the data.
	update(Request $request)	Method to update the Consultant's details.
	edit($id)	Method to redirect JAIP Staff to edit class in manageConsultant
	show($id)	Method to redirect JAIP Staff to show class in manageConsultant

	destroy($id)	Method to delete record of Consultant in the database
Algorithm	1. Start 2. Redirect to the 'staff.consultant.manage' route. 3. Define the 'manage' function: • Retrieve consultant data with location and department information, paginated by 10. • Display the 'manageConsultant.manage' view, passing the 'datas' variable. 4. Define the 'create' function: • Retrieve locations and departments from the 'Reference' model, ordered by code. • Display the 'manageConsultant.create' view, passing the 'locations' and 'departments' variables. 5. Define the 'store' function with a request parameter: • Create a new consultant record using the request data. • Redirect to the 'staff.consultant.manage' route with a success message. 6. Define the 'update' function with request and id parameters: • Find the consultant with the given id and update its information using the request data. • Redirect to the 'staff.consultant.manage' route with a success message. 7. Define the 'edit' function with an id parameter: • Retrieve the consultant with the given id, including its location and department information. • Retrieve locations and departments from the 'Reference' model, ordered by code. • Display the 'manageConsultant.edit' view, passing the 'locations', 'departments', and 'consultant' variables. 8. Define the 'show' function with an id parameter: • Retrieve the consultant with the given id, including its location and department information.	

	• Display the 'manageConsultant.show' view, passing the 'consultant' variable. 9. Define the 'destroy' function with an id parameter: • Find the consultant with the given id. • If the consultant does not exist, redirect back with an error message. • Delete the consultant. • Redirect to the 'staff.consultant.manage' route with a success message. 10. End

4.3.2 ConsultationController [SDD-REQ-1004]

<table>
<tr><td>Class Type</td><td colspan="2">Controller Class</td></tr>
<tr><td>Responsibility</td><td colspan="2">This controller controls activities between manageConsultation interfaces and model class related to consultations.</td></tr>
<tr><td rowspan="2">Attributes</td><td>Attributes Name</td><td>Attributes Type</td></tr>
<tr><td>None</td><td>None</td></tr>
<tr><td rowspan="11">Methods</td><td>Method Name</td><td>Description</td></tr>
<tr><td>userManage()</td><td>Method to redirect user to userManage class in manageConsultation package</td></tr>
<tr><td>manage()</td><td>Method to redirect JAIP Staff to manage class in manageConsultation package</td></tr>
<tr><td>create()</td><td>Method to redirect user to create class in manageConsultation package</td></tr>
<tr><td>store(Request $request)</td><td>Method to create new Consultation and store the data.</td></tr>
<tr><td>update(Request $request, $id)</td><td>Method to update the Consultation’s details.</td></tr>
<tr><td>edit($id)</td><td>Method to redirect JAIP Staff to edit class in manageConsultation package</td></tr>
<tr><td>show($id)</td><td>Method to redirect JAIP Staff to show class in manageConsultation package</td></tr>
<tr><td>decline($id)</td><td>Method to update the status of consultation to decline</td></tr>
<tr><td>userShow($id)</td><td>Method to redirect user to userShow class in manageConsultation package</td></tr>
<tr><td>displayFile($fileName)</td><td>Method to display file</td></tr>
<tr><td>Algorithm</td><td colspan="2">1. Start
2. Define the 'manage' function:
• Retrieve consultations with related data, paginated by 3.
• Display the 'manageConsultation.manage' view with 'datas'.
3. Define the 'userManage' function:
• Retrieve the applicant associated with the authenticated user.</td></tr>
</table>

- Retrieve consultations with related data where 'app_id' matches the applicant's id, paginated by 9.
- Display the 'manageConsultation.userManage' view with 'datas'.

4. Define the 'create' function:

- Retrieve locations and slots.
- Retrieve the authenticated user.
- Display the 'manageConsultation.create' view with 'user', 'locations', and 'slots'.

5. Define the 'store' function with a request parameter:

- Retrieve the uploaded file.
- Generate a unique file name.
- Store the file.
- Update user information.
- Update the applicant's details.
- Check and create/update spouse information.
- Create a consultation record.
- Redirect to the 'user.consultation.manage' route with a success message.

6. Define the 'edit' function with an id parameter:

- Retrieve consultation data with related spouse, applicant's user, slot, and location.
- Retrieve consultants.
- Display the 'manageConsultation.edit' view with 'data', 'consultants', and 'id'.

7. Define the 'update' function with request and id parameters:

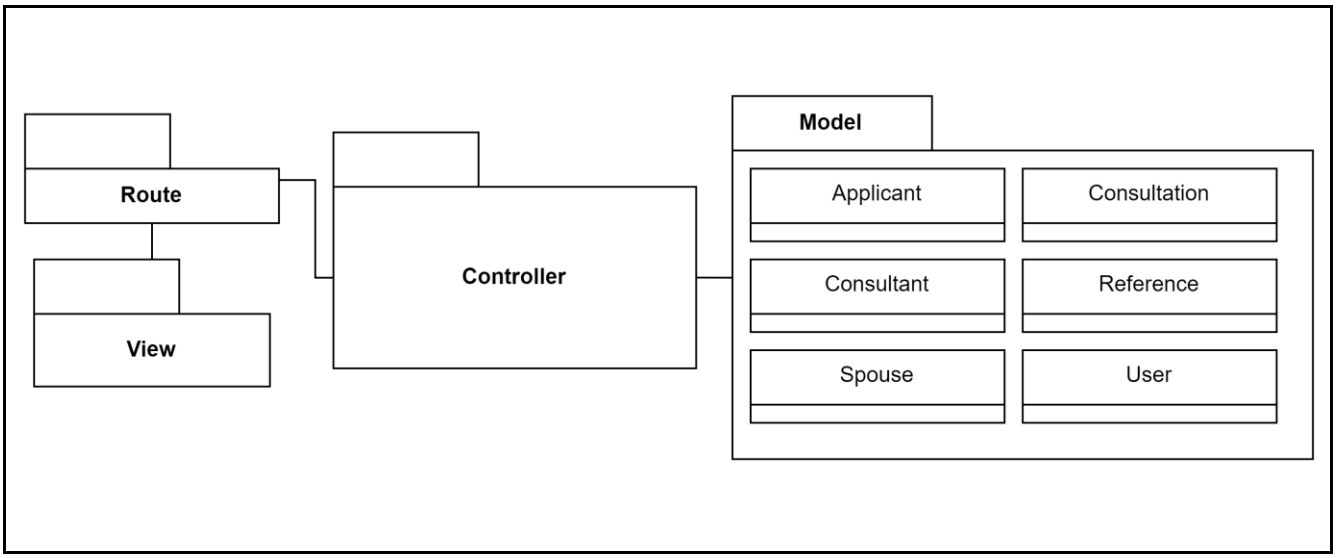
- Set the 'ref_status_id' field to 3 in the request.
- Update the consultation record with the given id using the request data.
- Redirect to the 'staff.consultation.manage' route with a success message.

8. Define the 'decline' function with an id parameter:

- Set the 'ref_status_id' field to 2 in the status array.

	• Update the consultation record with the given id using the status array. • Redirect to the 'staff.consultation.manage' route. 9. Define the 'show' function with an id parameter: • Retrieve consultation data with related spouse, applicant's user, location, slot, and status. • Display the 'manageConsultation.show' view with 'data' and 'id'. 10. Define the 'displayFile' function with a fileName parameter: • Create the file path. • Check if the file exists. • Retrieve the file content and MIME type. • Return a response with the file content, MIME type, and inline filename. • Abort with a 404 error if the file doesn't exist. 11. End

4.4 Model [SDD-REQ-1100]



4.4.1 Applicant [SDD-REQ-1101]

Class Type	**Model Class**	
Responsibility	This model manage the retrieving and storing data from applicants table and also manage its relationship with other tables.	
Attributes	Attributes Name	Attributes Type
	$fillable	Array
Methods	Method Name	Description
	user()	Method to link the applicant model with user model
	consultation()	Method to link the applicant model with consultation model
Algorithm	1. Start 2. Define the "Applicant" class and make it extend the "Model" class. 3. Define the fillable attributes of the "Applicant" model: "id", "user_id", "birthdate", "age", "nationality", and "houseaddress". 4. Define a relationship method named "user": • The method should return a belongsTo relationship with the "User" model. 5. Define a relationship method named "consultation":	

	• The method should return a hasMany relationship with the "Consultation" model. 6. End

4.4.2 Consultant [SDD-REQ-1103]

Class Type	**Model Class**	
Responsibility	This model manage the retrieving and storing data from consultants table and also manage its relationship with other tables.	
Attributes	Attributes Name	Attributes Type
	$fillable	Array
Methods	Method Name	Description
	created_by()	Method to link the consultant model with user model
	location()	Method to link the consultant model with reference model
	department()	Method to link the consultant model with reference model
Algorithm	1. Start 2. Define the fillable attributes of the "Consultant" model: "id", "created_by", "IcNum", "name", "email", "ref_department_id", "ref_location_id", and "phoneNo". 3. Define a relationship method named "created_by": • The method should return a belongsTo relationship with the "User" model, using the "created_by" foreign key. 4. Define a relationship method named "location": • The method should return a belongsTo relationship with the "Reference" model, using the "ref_location_id" foreign key. 5. Define a relationship method named "department": • The method should return a belongsTo relationship with the "Reference" model, using the "ref_department_id" foreign key. 6. End	

4.4.3 Consultations [SDD-REQ-1104]

<table>
<tr><td>Class Type</td><td colspan="2">Model Class</td></tr>
<tr><td>Responsibility</td><td colspan="2">This model manage the retrieving and storing data from consultations table and also manage its relationship with other tables.</td></tr>
<tr><td rowspan="2">Attributes</td><td>Attributes Name</td><td>Attributes Type</td></tr>
<tr><td>$fillable</td><td>Array</td></tr>
<tr><td rowspan="8">Methods</td><td>Method Name</td><td>Description</td></tr>
<tr><td>managed_by()</td><td>Method to link the consultation model with user model</td></tr>
<tr><td>spouse()</td><td>Method to link the consultation model with spouse model</td></tr>
<tr><td>applicant()</td><td>Method to link the consultation model with applicant model</td></tr>
<tr><td>consultant()</td><td>Method to link the consultation model with consultant model</td></tr>
<tr><td>location()</td><td>Method to link the consultation model with reference model</td></tr>
<tr><td>slot()</td><td>Method to link the consultation model with reference model</td></tr>
<tr><td>status()</td><td>Method to link the consultation model with reference model</td></tr>
<tr><td>Algorithm</td><td colspan="2">1. Start
2. Define the fillable attributes of the "Consultation" model: "id", "date", "ref_slot_id", "description", "document", "ref_location_id", "managed_by", "sp_id", "app_id", "cons_id", and "ref_status_id".
3. Define a relationship method named "managed_by":
• The method should return a belongsTo relationship with the "User" model, using the "managed_by" foreign key.
4. Define a relationship method named "spouse":
• The method should return a belongsTo relationship with the "Spouse" model, using the "sp_id" foreign key.
5. Define a relationship method named "applicant":</td></tr>
</table>

	• The method should return a belongsTo relationship with the "Applicant" model, using the "app_id" foreign key. 6. Define a relationship method named "consultant": • The method should return a belongsTo relationship with the "Consultant" model, using the "cons_id" foreign key. 7. Define a relationship method named "location": • The method should return a belongsTo relationship with the "Reference" model, using the "ref_location_id" foreign key. 8. Define a relationship method named "slot": • The method should return a belongsTo relationship with the "Reference" model, using the "ref_slot_id" foreign key. 9. Define a relationship method named "status": • The method should return a belongsTo relationship with the "Reference" model, using the "ref_status_id" foreign key. 10. End

4.4.4 Reference [SDD-REQ-1110]

Class Type	**Model Class**	
Responsibility	This model manage the retrieving and storing data from references table and also manage its relationship with other tables.	
Attributes	Attributes Name	Attributes Type
	$fillable	Array
Methods	Method Name	Description
	None	None
Algorithm	1. Start 2. Define the fillable attributes of the "Reference" model: "id", "name", "code", and "value". 3. End	

4.4.5 Spouse [SDD-REQ-1111]

Class Type	**Model Class**

Responsibility	This model manage the retrieving and storing data from spouses table and also manage its relationship with other tables.	
Attributes	Attributes Name	Attributes Type
	$fillable	Array
Methods	Method Name	Description
	None	None
Algorithm	1. Start 2. Define the fillable attributes of the "Spouse" model: "id", "name", "birthdate", "email", "ic", "gender", "phonenumber", "nationality", "address", and "age". 3. End	

4.4.6 User [SDD-REQ-1112]

Class Type	**Model Class**	
Responsibility	This model manage the retrieving and storing data from users table and also manage its relationship with other tables.	
Attributes	Attributes Name	Attributes Type
	$fillable $hidden $cast	Array Array Array
Methods	Method Name	Description
	role()	Method to returns an Attribute object representing the role attribute and provides a mapping functionality for converting input values to user roles from a predefined array. It ensures controlled access to the role attribute within the class and its subclasses.
Algorithm	1. Start 2. Create a class named "User" and make it extend the "Authenticatable" class. 3. Implement the "MustVerifyEmail" interface. 4. Use the traits "HasApiTokens", "HasFactory", and "Notifiable" in the "User" class.	

	5. Define the fillable attributes of the "User" model: "ic", "staff_id", "role", "name", "gender", "contact", "email", and "password". 6. Define the hidden attributes of the "User" model: "password" and "remember_token". 7. Define the casts for the "User" model: "email_verified_at" is cast as "datetime", and "password" is cast as "hashed". 8. Define a method named "role" that returns an instance of the "Attribute" class. The method should accept a value and use a lambda function to map the value to the corresponding role ("user", "staff", or "admin"). 9. End

5. REQUIREMENT TRACEABILITY

5.1 Manage Marriage Consultation [SRS-REQ-400]

CHUA KIAN PHENG [CB21106]

Requirement ID	Description	Design ID
SRS-REQ-UC-400	**Manage Consultation** The system provides the user with the capability to apply for consultation, search for existing consultation application.	SDD-REQ-701 SDD-REQ-703
SRS-REQ-UC 400-1	**Print Application** The system provides the capability for the user to print the consultation application made details by clicking the print icon.	SDD-REQ-706
SRS-REQ-UC 400-2	**Delete Record** The system provides the capability to the user to delete the information stored as long as it not submitted yet by clicking the print icon.	SDD-REQ-703
SRS-REQ-UC 400-3	**Update Information** The system provides the capability to the user to update the information that they entered by clicking the edit icon.	
SRS-REQ-UC 400-4	**View Application Made** The system provides the user with the capability to view the consultation applications made details by clicking the view icon.	SDD-REQ-706
SRS-REQ-UC 400-5	**Approve Application** The system provides the capability to the user to approve the consultation application made by <> button	SDD-REQ-704
SRS-REQ-UC 400-6	**Search for Application**	SDD-REQ-702

	The system provides the capability to the user to search for specific consultation application made by entering the applicant's IC number of the desired application details.	
SRS-REQ- UC 400-7	**The Information is Not Complete** The system can verify that the compulsory information entered by the user are not completed.	SDD-REQ-701
SRS-REQ- UC 400-8	**The Identification Card Number's Length is Not Valid** The system can verify that the length of the IC number entered by the user is not valid either it is more or less than 12.	SDD-REQ-701

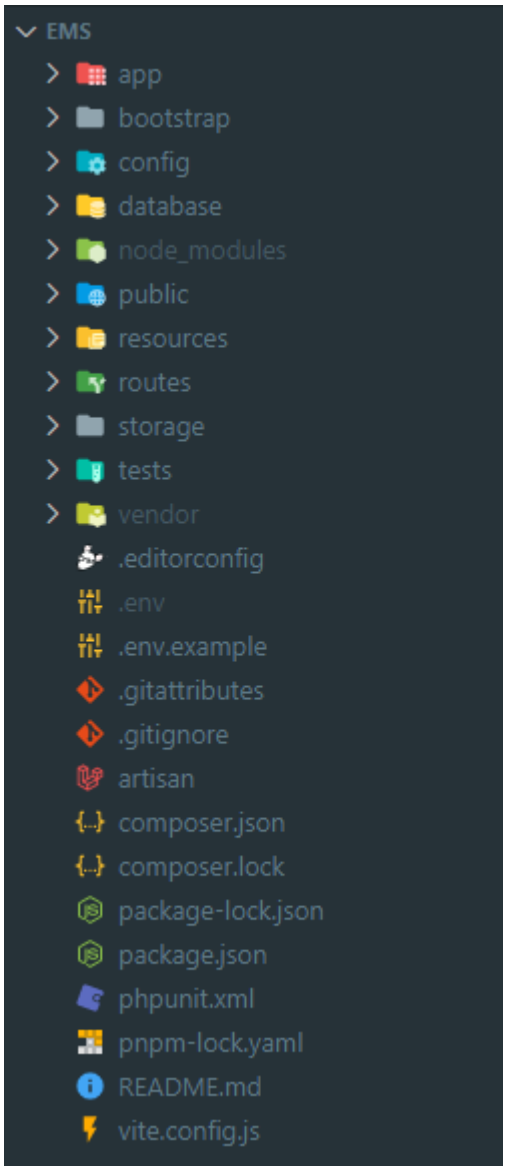
APPENDIX

APPENDIX A

3. Requirement Traceability

Requirements	Description
SRS-REQ-UC-400	**Manage Consultation** The system provides the user with the capability to apply for consultation, search for existing consultation application.
SRS-REQ-UC-400-1	**Print Application** The system provides the capability for the user to print the consultation application made details by clicking the print icon.
SRS-REQ-UC-400-2	**Delete Record** The system provides the capability to the user to delete the information stored as long as it not submitted yet by clicking the print icon.
SRS-REQ-UC-400-3	**Update Information** The system provides the capability to the user to update the information that they entered by clicking the edit icon.
SRS-REQ-UC-400-4	**View Application Made** The system provides the user with the capability to view the consultation applications made details by clicking the view icon.
SRS-REQ-UC-400-5	**Approve Application** The system provides the capability to the user to approve the consultation application made by <<Sahkan Permohonan>> button
SRS-REQ-UC-400-6	**Search for Application** The system provides the capability to the user to search for specific consultation application made by entering the applicant's IC number of the desired application details.
SRS-REQ-UC-400-7	**The Information is Not Complete** The system can verify that the compulsory information entered by the user are not completed.
SRS-REQ-UC-400-8	**The Identification Card Number's Length is Not Valid** The system can verify that the length of the IC number entered by the user is not valid either it is more or less than 12.

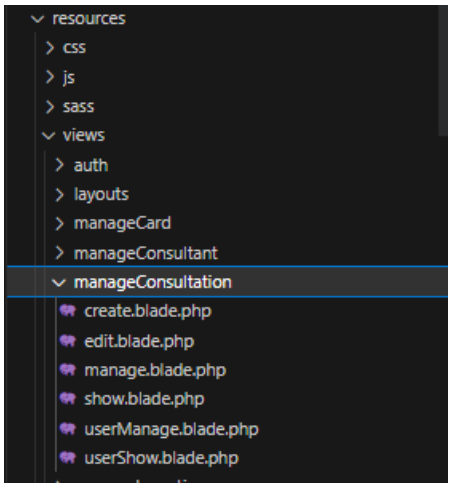
APPENDIX B



System Name	Layer		
EMS	resources	views	
	app	Http	Controllers
		Models	
	routes		

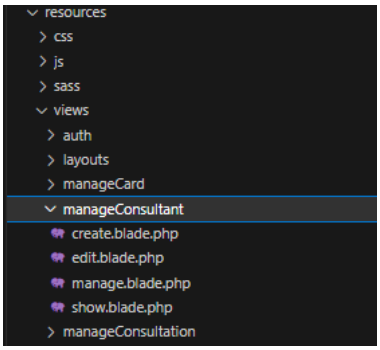
APPENDIX C1

manageConsultation - Views Layer



Layer	Package	Class
views	manageConsultation	create
		manage
		userManage
		show
		userShow
		edit

manageConsultant - Views Layer

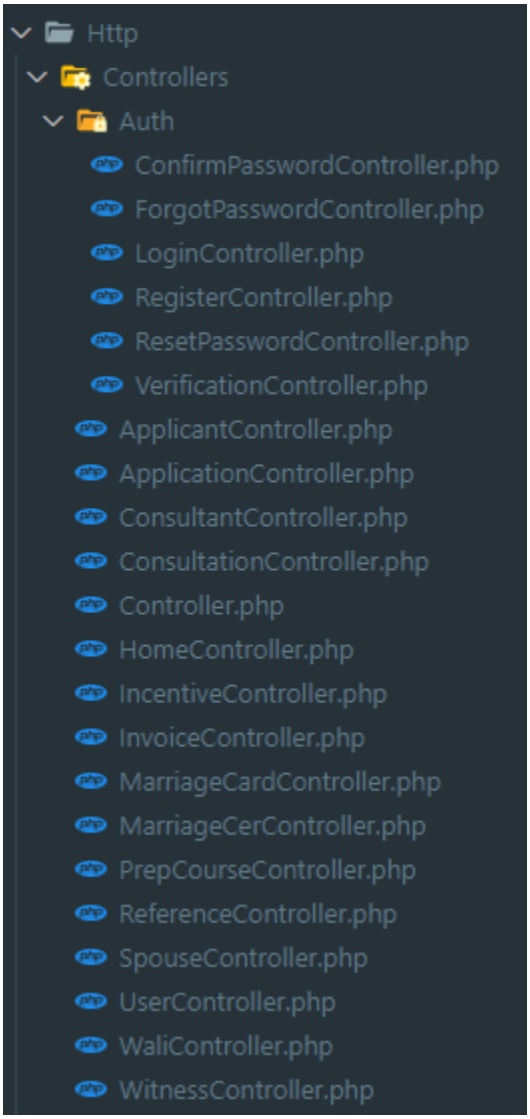


Layer	Package	Class
views	manageConsultant	edit
		create
		show
		manage

APPENDIX C2

APPENDIX C3

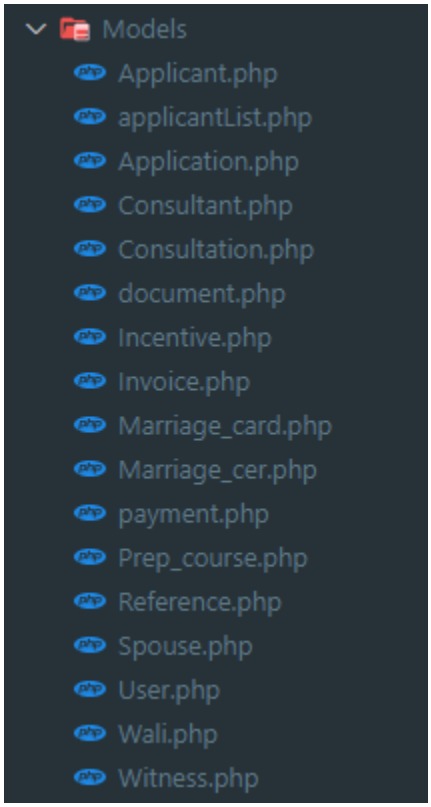
Controller Layer



Layer	Class
Controllers	ConsultantController ConsultationController

APPENDIX C4

Model Layer



Layer	Class
Models	User Applicant Consultant Consultation Reference Spouse

Universiti Malaysia PAHANG

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SDD Document
SEM II 20222023

e-Munakahat System (EMUN)

Group Name

1. Muhammad Amir Bin Mohamed Ali [CB21060]
2. Ahmad Suffian Bin Md Noor Suhaime [CB21137]
3. Chua Kian Pheng [CB21106]
4. Nik Alia Syafiqah Binti Nik Azuri [CB21035]
5. Shammene A/P Muneesvaran [CB21018]

Quantum Corp

TABLE OF CONTENTS

1. INTRODUCTION

1.1 Purpose

This software design document (SDD) serves as a blueprint for the development of the e-Munakahat System (EMUN). It outlines the software design process, including the software's architecture, modules, interfaces, and data structures. The primary purpose of an SDD is to ensure that the software development team and stakeholders understand the design of the software application and how it will function.

The software design document (SDD) is a communication tool between the development team and stakeholders, ensuring everyone is on the same page regarding the software's design and implementation. It will also help the stakeholders to understand any limitations or assumptions that may impact the system's performance or usability, which will help the stakeholders to make informed decisions and better plan for the project. This will also help to ensure that the final product meets the needs of the users and the jurisdiction.

1.2 System Identification

The Software Design Document (SDD) belongs to the “e-Munakahat System” (EMUN).

Table 1.1 Document Identity.

<table>
<tr><th>System title</th><th>e-Munakahat System</th></tr>
<tr><td>System abbreviation</td><td>EMUN</td></tr>
<tr><td>System identification number</td><td>SDD_EMUN_QC_2023</td></tr>
<tr><td>Subsystem Title</td><td>IkatanCinta</td></tr>
<tr><td>Subsystem Abbreviation</td><td>IC</td></tr>
<tr><td>Package ID</td><td>SDD-REQ-100
Meanings for terms use:
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<tr><td>SDD</td><td>Software Design Document</td></tr>
<tr><td>REQ</td><td>Requirement</td></tr>
<tr><td>100</td><td>Package number</td></tr>
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<tr><td>Use Case ID</td><td>UC101-EMUN-001
Meanings for terms used:
<table>
<tr><td>UC</td><td>Use Case</td></tr>
<tr><td>1</td><td>Number of the system module</td></tr>
<tr><td>01</td><td>Number of use case within a module in the subsystem</td></tr>
<tr><td>EMUN</td><td>e-Munakahat System (System name)</td></tr>
<tr><td>001</td><td>Document release number</td></tr>
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<tr><td>Requirement Traceability ID</td><td>UC101-EMUN-001
Meanings for terms used:
<table>
<tr><td>UC</td><td>Use Case</td></tr>
<tr><td>1</td><td>Number of the system module</td></tr>
<tr><td>01</td><td>Number of use case within a module in the system</td></tr>
<tr><td>EMUN</td><td>e-Munakahat System (System name)</td></tr>
<tr><td>001</td><td>Document release number</td></tr>
</table></td></tr>
</table>

Document Identification System	SDD_EMUN_IC_2023_V1.0

Symbol/Number	Meaning
EMUN	It represents the system name which is e-Munakahat System (EMUN)
SDD	It represents the software design document (SDD)
QC	It represents the company name which is Quantum Corp SDN. BHD.
2023	It represents the year where the system has been released.
V1.0	V represent the word “Version” of the system while 1.0 is the general version of the system. The number will increase by 0.1 if there any updates or bugs fixed.

1.3 System Overview

Our system is a web-based system to support the Pahang Wedding management system. The purpose of the system is to provide a solution for managing wedding registration and operations efficiently. Users can use this system for marriage registration and information retrieval. It also eases the government to collect granular data on weddings in Pahang and store the information for future use. This system is handled by the Quantum Corp company. This system contains various functionalities such as user registration, marriage application, marriage registration, marriage preparation course, proof of payment, request for marriage, marriage card, marriage consultation, and special incentives for the bride and groom.

There are five modules in this system which are:

1. Registration and handle user profile

   The initial stage of using the system is applicant registration, which is required for applicants to enter the system. It contains private information such as an Identity Card number, phone number, email address, and password. Since registration is based on the user's IC number, a unique number with no duplicates, each user has just one account for the system. Once the applicant's registration is successful, they can log in to access the system's contents after completing the registration process. The admin

can register new staff through the admin dashboard. Once registration for staff is successful, they will be granted access to the system. The system also allows users (applicants & staff) to modify their profile details to update their information. In case the applicant has forgotten their password, they will be able to reset their password. Apart from that, the admin can update staff and applicant details through the admin dashboard.

2. Attend the marriage preparation course with proof of payment and to request a marriage.

   After users register and login into the account, the users can proceed to the next step where they can apply for the marriage registration course. As a marriage registration course is an important step for the e-Munakahat system will update the name list of applicants. The system will show if the user has already paid for the course or not. So, then the staff can print the proof of payment and send the receipt to the applicants. The system shall allow the admin to manage the marriage preparation course details such as date, time, and where the course will be conducted. While the staff will handle the things that are related to the user or applicants. Approve the applications in the system and print the applicants' name list for the course for every session. If the applicant presents on the course day, the staff can approve their marriage course certificate. After the course ends, the applicants will be represented with the certificate. The staff can update the applicant's name from the system for obtaining the marriage course certificate. Next step for the applicant is request their marriage from E-Munakahat system.

3. An application to register a marriage within or outside the country, as well as a voluntary marriage, and to produce the marriage card or certificate with proof of payment.

   Marriage registration is split into two processes which are voluntary and authorized registration. User needs to pass a pre-marriage course to be able to register their marriage. Voluntary registration is for the older generation who live far away from town and did not register when they married. For authorized registration, the user must prepare various forms and information in which the template is provided in the system. After staff from JAIP has approved the marriage registration, it will notify the user so that they know their marriage registration has been approved.

4. Register for a marriage consultation with a service advisor.

A consultation module is a module where the user can make an appointment to seek advice or to get a divorce. This module requires the users to enter their personal information and also their spouse information including their marriage information and upload related documents as proof. Staff can view the application made by the user and will decide whether to approve the appointment and responsible to assign consultant and slot to the consultation session. Staff are also responsible for managing the list of consultants and their information in this module. The staff can edit, add, and delete the consultants' information in the system.

5. Application for special incentive for the bride and groom

   The marriage registration system features a special incentive module that enables users to apply for incentives, provided they meet the necessary prerequisites. This module allows individuals to input their personal information and upload necessary documents, making the process more streamlined. Additionally, the staff side of the platform allows for the review of applications and ensures that the process is efficient and user-friendly. The special incentive module in the marriage registration system also includes a notification feature that keeps applicants informed about the status of their applications. Once the staff reviews the application, the applicant will receive a notification, either confirming their approval or outlining the reasons for the denial. This ensures that applicants are aware of the status of their application in a timely and efficient manner."

1.4 Referenced Document

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3. Layered Architecture. (2021, November 11). Retrieved May 2, 2023, from https://www.baeldung.com/cs/layered-architecture.
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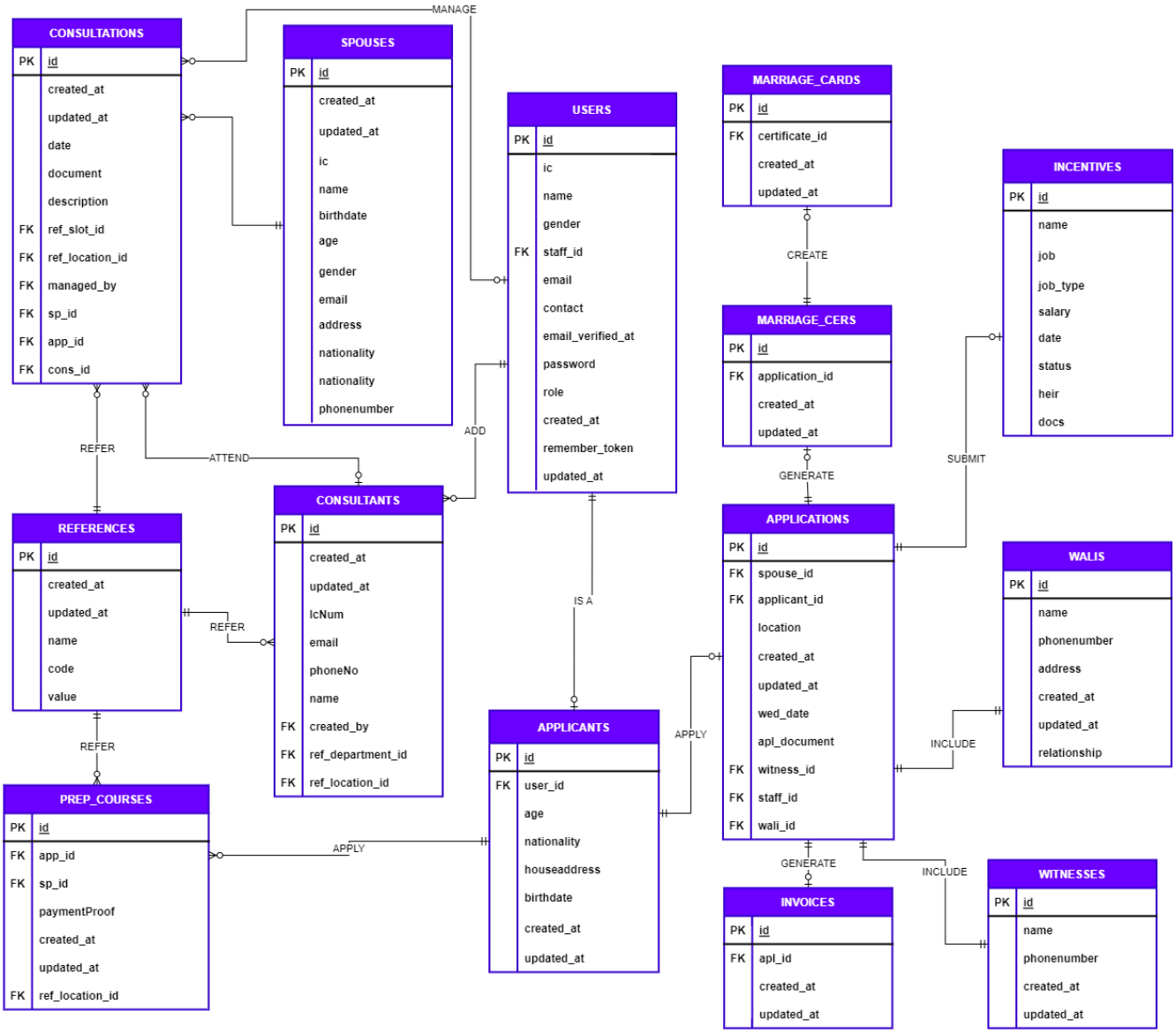
2. DATA DESIGN

2.1 Entity Relationship Diagram (ERD)



2.2 Data Dictionary

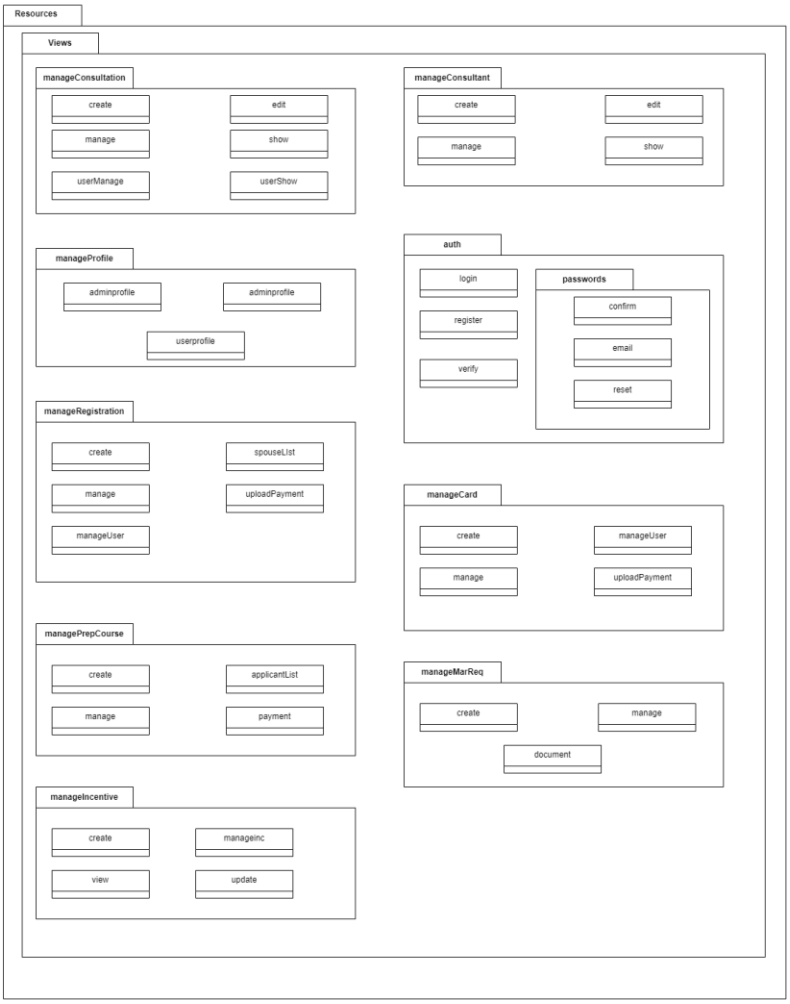
2.2.9 INCENTIVE

Field Name	Description	Data Type	Constraint
id	Incentive id	INT	PK
applicant_name	Incentive Applicant name	INT	
job	Job	VARCHAR (255)	
job_type	Job Type	VARCHAR (255)	
salary	Salary	DOUBLE	
date	Incentive Application Date	DATE (50)	
status	Approve status	VARCHAR (255)	
heir	Heir	VARCHAR (255)	
docs	Incentive Documents	BLOB	
created_at	Incentive created time	TIMESTAMP	NOT NULL
updated_at	Incentive updated time	TIMESTAMP	

3. GENERAL ARCHITECTURE

3.1 Layered Architecture

3.1.1 Application Layer



3.1.1.1 Manage Profile [SDD-REQ-100]

Class Name	Description
adminprofile	A view class for admin to register staff in the EMUN system
staffprofile	A view class for staff to manage their profile in the EMUN system
userprofile	A view class for user to manage their profile in the EMUN system

3.1.1.2 Auth [SDD-REQ-200]

Class Name	Description
login	A view class for user, staff and admin login into the EMUN system
register	A view class for user to register into the EMUN system
verify	A view class for user to verify the account in the EMUN system
confirm	A view class for user to confirm the account in the EMUN system
email	A view class for user to enter the email to reset password in the EMUN system
reset	A view class for user to reset password in the EMUN system.

3.1.1.3 Manage Preparation Course [SDD-REQ-300]

Class Name	Description
create	A view class for applicant to register the marriage preparation course by fill in the form
manage	A view class for applicant display the information regarding to marriage preparation course
applicantList	A view class for JAIP staff to see the list of applicants that apply marriage preparation course
payment	A view class for applicant to submit proof of payment

3.1.1.4 Manage Marriage Request [SDD-REQ-400]

Class Name	Description
create	A view class for applicant to register the marriage application by fill in the form
manage	A view class for applicant edit their information
document	A view class for applicant to submit document

3.1.1.5 Manage Registration [SDD-REQ-500]

Class Name	Description
spouseList	A view class that displays the spouse's information and allow the user to search, edit, delete, print and submit
create	A view class that allows the user to create a marriage registration application
manage	A view class that displays the user's marriage registration application and allow staff to accept or reject
manageUser	A view class that displays the marriage registration application
uploadPayment	A view class that displays payment receipt request and allow the user to upload their receipt

3.1.1.6 Manage Card [SDD-REQ-600]

Class Name	Description
create	A view class allow the user to request for the marriage card
manage	A view class that displays the user's marriage card application and allow staff to accept or reject
manageUser	A view class that displays the marriage card application
uploadPayment	A view class that displays payment receipt request and allow the user to upload their receipt

3.1.1.7 Manage consultation [SDD-REQ-700]

Class Name	Description
create	A view class to display form to allow the user to fill information details
show	A view class to allow JAIP staff to view the information of the application
edit	A view class to allow JAIP staff to fill user appointment detail and approve their application
userManage	A view class to allow user to check the list of consultation applications made

userShow	A view class to allow user to view the information of the application made
manage	A view class to display the list of application and allow JAIP staff to manage the consultation application

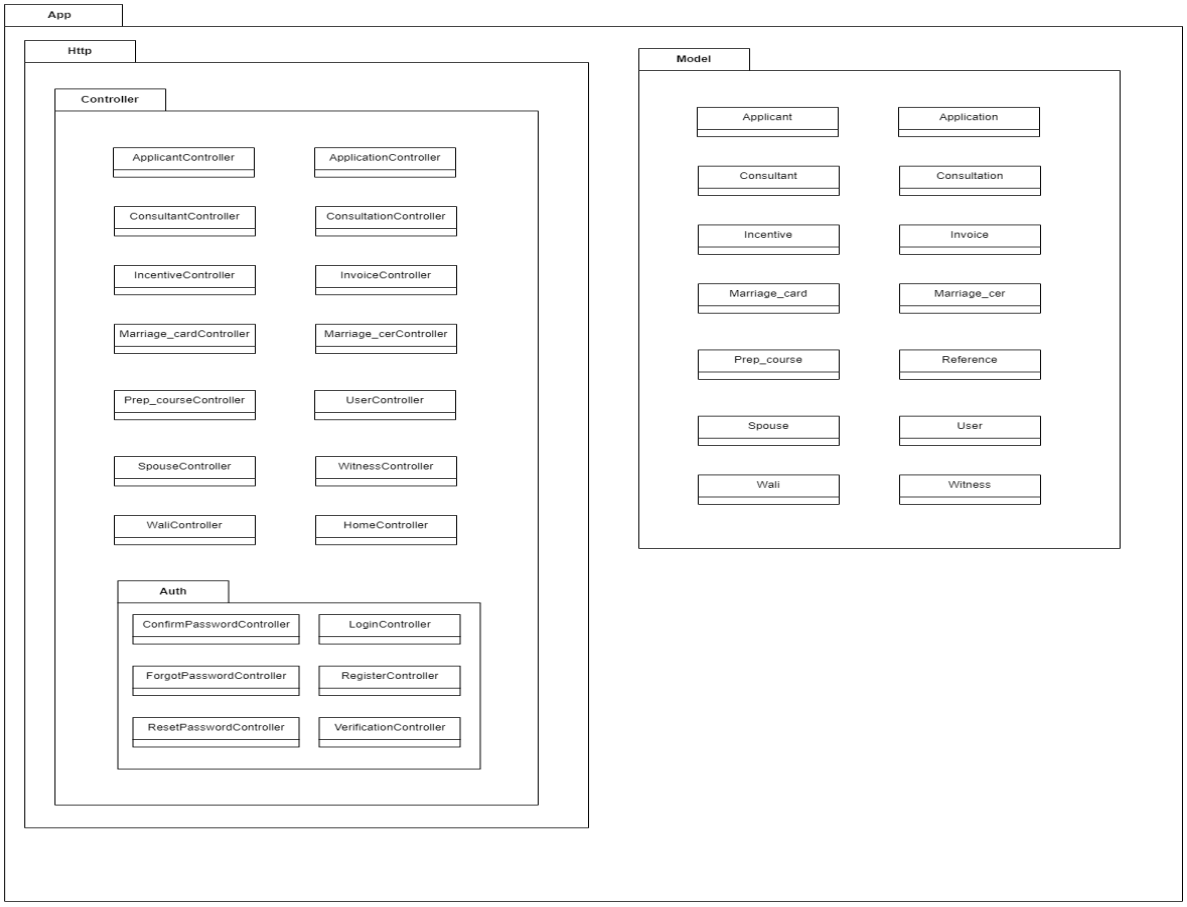
3.1.1.8 Manage consultant [SDD-REQ-800]

Class Name	Description
edit	A view class to allow JAIP staff to update the consultant's information
manage	A view class to allow JAIP staff to manage the list of consultants
create	A view class to allow JAIP staff to enter information of new consultant
show	A class that handles the consultant information

3.1.1.9 Manage Incentive [SDD-REQ-900]

Class Name	Description
apply	A view class that displays the apply incentive page upon request which includes an application form
view	A view class that displays the user's incentive application details, hence information in a specified format
update	A view class that displays the user's information and allows the user to edit their information

3.1.2 Business Services Layer



3.1.2.1 Controller [SDD-REQ-1000]

Class Name	Description
ApplicantController	Handles the logic and actions related to managing applicants in the application. Contains methods for creating, updating, and deleting applicant records, as well as retrieving applicant information.
ApplicationController	Manages the application-related functionality within the application. Contains methods for handling the creation, editing, deletion, and retrieval of application records.
ConsultantController	Responsible for handling the actions and operations related to managing consultants in the application. Contains methods for creating, updating, deleting, and retrieving consultant information.

ConsultationController	Handles the actions and operations associated with managing consultations in the application. Contains methods for scheduling consultations, updating consultation details, and retrieving consultation information.
IncentiveController	Manages the logic and actions related to incentives in the application. Contains methods for creating, updating, deleting, and retrieving incentive records.
InvoiceController	Handles the actions and operations related to managing invoices within the application. Contains methods for creating, updating, deleting, and retrieving invoice records.
Marriage_cardController	Manages the functionality associated with marriage cards within the application. Contains methods for creating, updating, deleting, and retrieving marriage card records.
Marriage_cerController	Handles the actions and operations related to managing marriage ceremonies in the application. Contains methods for creating, updating, deleting, and retrieving marriage ceremony records.
Prep_courseController	Responsible for managing the functionality related to preparation courses in the application. Contains methods for creating, updating, deleting, and retrieving preparation course records.
SpouseController	Manages the functionality and operations related to spouses within the application. Contains methods for creating, updating, deleting, and retrieving spouse records.
UserController	Handles the actions and operations related to managing users within the application. Contains methods for user registration, authentication, updating user information, and retrieving user details.
WaliController	Manages the logic and actions associated with managing walis (guardians) within the application. Contains methods for creating, updating, deleting, and retrieving wali records.
WitnessController	Handles the actions and operations related to managing witnesses within the application. Contains methods for creating, updating, deleting, and retrieving witness records.

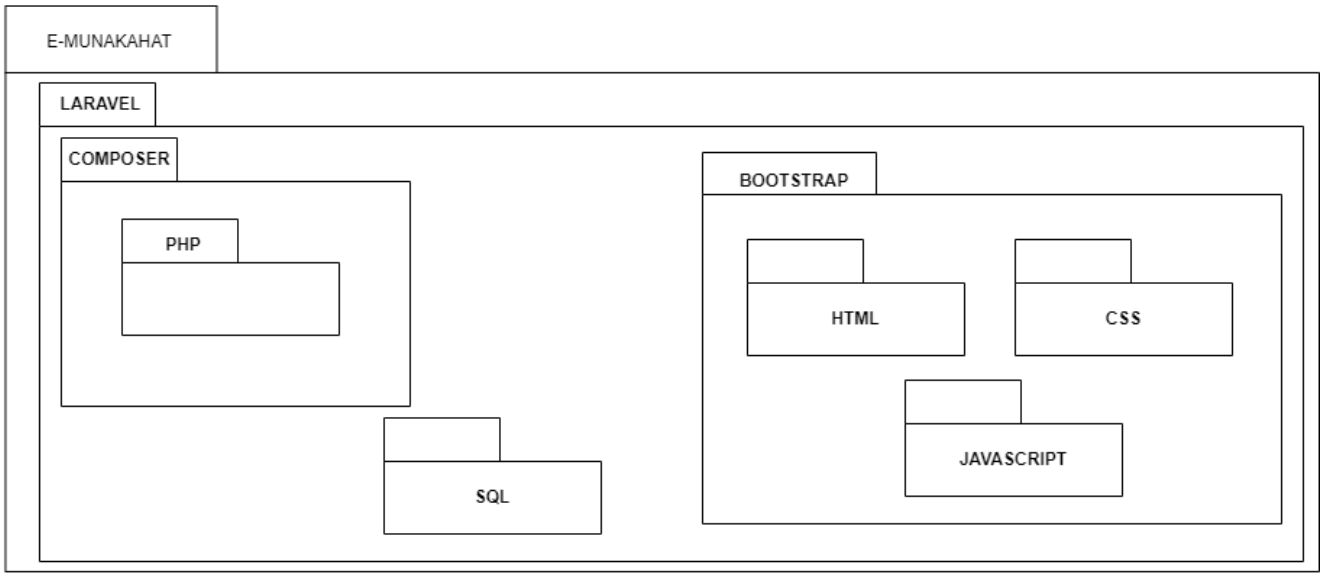
HomeController	Handles the main functionality and actions related to the home page or main dashboard of the application. Contains methods for retrieving and displaying relevant information on the home page.
ConfirmPasswordController	This controller is responsible for handling password confirmations and uses a simple trait to include the behaviour
ForgotPasswordController	This controller is responsible for handling password reset emails and includes a trait that assists in sending these notifications from your application to your users.
LoginController	This controller handles authenticating users for the application and redirecting them to your home screen.
RegisterController	This controller handles the registration of new users as well as their validation and creation.
ResetPasswordController	This controller is responsible for handling password reset requests and uses a simple trait to include this behaviour.
VerificationController	This controller is responsible for handling email verification for any user that recently registered with the application.

3.1.2.2 Model [SDD-REQ-1100]

Class Name	Description
Applicant	This class retrieve and store applicant details
Application	This class retrieve and store application details
Consultant	This class retrieve and store consultant details
Consultation	This class retrieve and store consultation details
Incentive	This class retrieve and store incentive details
Invoice	This class retrieve and store invoice details

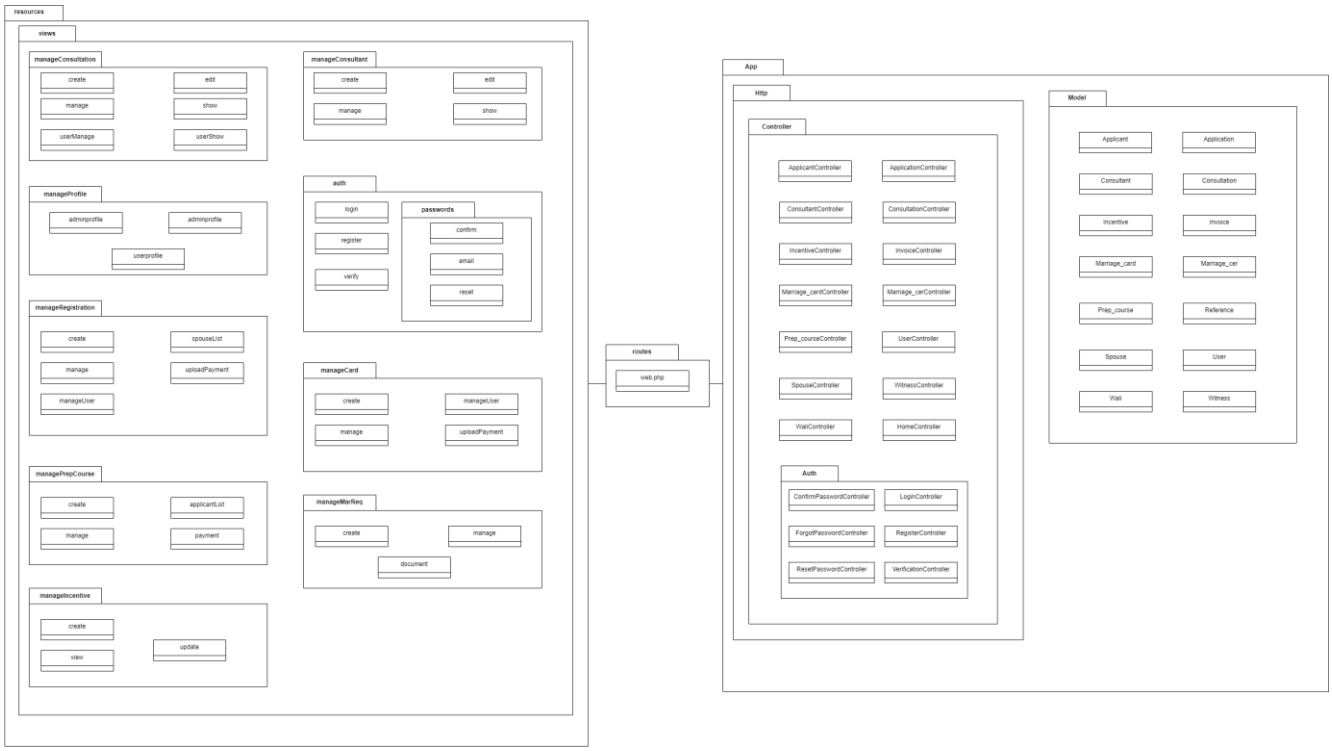
Marriage_card	This class retrieve and store marriage card details
Marriage_cer	This class retrieve and store marriage certificate details
Prep_course	This class retrieve and store preparation course details
Reference	This class retrieve and store reference details
Spouse	This class retrieve and store spouse details
User	This class retrieve and store user details
Wali	This class retrieve and store wali details
Witness	This class retrieve and store witness details

3.1.3 Middleware Layer



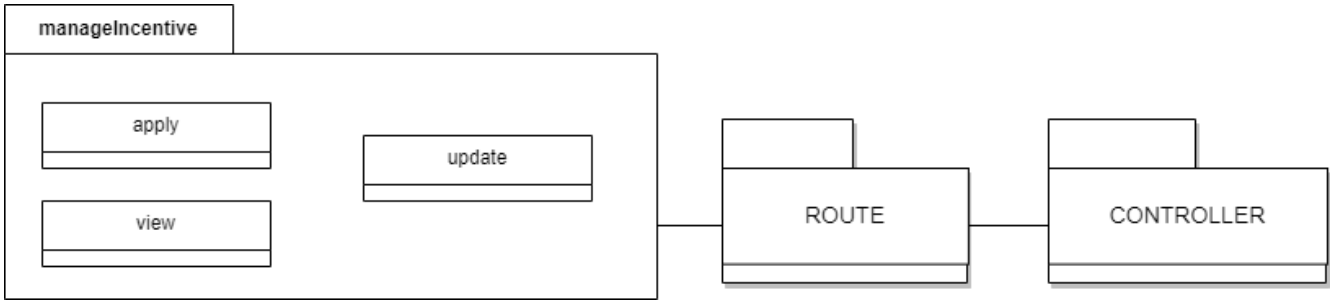
Package Name	Description
HTML	The package that contains of creating and design a website page
CSS	The package that contains of styling of the HTML package
JAVASCRIPT	The package that contains of enhancing the interactivity and functionality of website pages
LARAVEL	PHP web application framework. It contains various packages and classes for building web application.
PHP	The package that contains of code that builds dynamic web applications
SQL	The package that contains the database management

3.2 MVC Package Relationship



4. DETAIL DESIGN

4.1 Manage Incentive [SDD-REQ-100]



4.1 apply [SDD-REQ-101]

Class Type	Boundary Class	
Responsibility	An interface that provides the capability to the user to apply incentives for marriage	
Attributes	Attributes Name	Attributes Type
	id name job job_type salary date status heir docs created_at updated_at	INT STRING VARCHAR (255) VARCHAR (255) DOUBLE DATE (50) VARCHAR (255) VARCHAR (255) BLOB TIMESTAMP TIMESTAMP
Methods	Method Name	Description
	create ()	To apply an incentive by entering the required data into the system.
Algorithm	None	

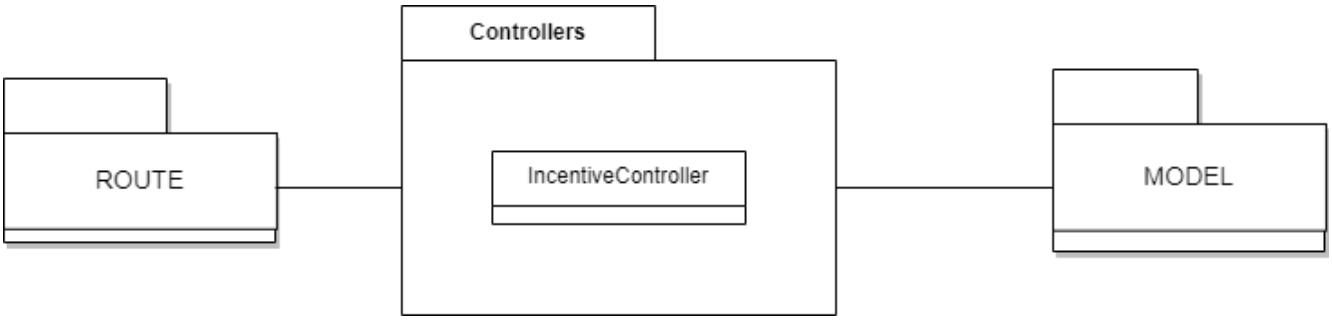
4.1.2 view [SDD-REQ-102]

Class Type	Boundary Class	
Responsibility	An interface that provides the capability for the user to view incentive application status and download reports.	
Attributes	Attributes Name	Attributes Type
	id name job job_type salary date status heir docs created_at updated_at	INT STRING VARCHAR (255) VARCHAR (255) DOUBLE DATE (50) VARCHAR (255) VARCHAR (255) BLOB TIMESTAMP TIMESTAMP
Methods	Method Name	Description
	view ()	To view the status of the incentive application report
Algorithm	None	

4.1.3 update [SDD-REQ-102]

Class Type	Boundary Class	
Responsibility	An interface that provides the capability for the user to update information of the incentive application.	
Attributes	Attributes Name	Attributes Type
	id name job job_type salary date status heir docs created_at updated_at	INT STRING VARCHAR (255) VARCHAR (255) DOUBLE DATE (50) VARCHAR (255) VARCHAR (255) BLOB TIMESTAMP TIMESTAMP
Methods	Method Name	Description
	update ()	To modify the incentive application details in the system.
Algorithm	None	

4.2 Manage Incentive Controller [SDD-REQ-200]



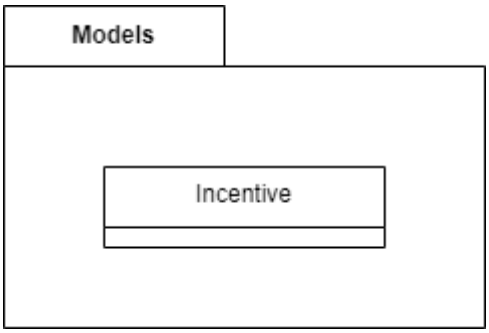
4.2.1 IncentiveController [SDD-REQ-201]

Class Type	**Controller Class**	
Responsibility	Manages the logic and actions related to incentives in the application. Contains methods for creating, updating, deleting, and retrieving incentive records.	
Attributes	Attributes Name	Attributes Type
	id name job job_type salary date status heir docs created_at updated_at	INT STRING VARCHAR (255) VARCHAR (255) DOUBLE DATE (50) VARCHAR (255) VARCHAR (255) BLOB TIMESTAMP TIMESTAMP
Methods	Method Name	Description
	indexInc ()	To save incentive application data for INCENTIVE table in database.
	view ()	To view the status of the incentive application report
	insert ()	To update incentive application data in database.
	delete ()	To delete specific incentive application data based on ‘id’ in database.

	view2 ()	To view the incentive application

Algorithm	BEGIN
	IF **indexInc()** is called
	THEN create object **Incentive** to connect to Incentive Model
	RETURN to manageIncentive.apply page
	ELSE IF **view ()** is called
	THEN create object update approved status to connect to Incentive Model
	RETURN to manageIncentive.view page
	ELSE IF **insert ()** is called
	THEN create object insert to connect to Incentive Model
	RETURN to manageIncentive.apply page
	ELSE IF **delete ()** is called
	THEN create object delete to connect to Incentive Model
	RETURN to manageIncentive.view2 page
	ELSE IF **view2()** is called
	THEN create object **Incentive** to connect to Incentive Model
	RETURN to manageIncentive.update page.
	END IF
	END	

4.3 Manage Incentive Model [SDD-REQ-300]



4.3.1 incentiveModel [SDD-REQ-301]

Class Type	**Entity Class**	
Responsibility	This class retrieve and store incentive details	
Attributes	Attributes Name	Attributes Type
	id name job job_type salary date status heir docs created_at updated_at	INT STRING VARCHAR (255) VARCHAR (255) DOUBLE DATE (50) VARCHAR (255) VARCHAR (255) BLOB TIMESTAMP TIMESTAMP
Methods	Method Name	Description
	None	None
Algorithm	None	

5. REQUIREMENT TRACEABILITY

5.1 Manage Incentive [SRS-REQ-900]

SHAMMENE MUNEESVARAN [CB21018]

SRS-UC-500-REQ-01	Apply the Incentive and Download the Document. The system provides the capability to the user to apply for incentives for marriage and download document incentives.	*SDD-REQ-101* *SDD-REQ-201* *SDD-REQ-301*
SRS-UC-500-REQ-02	Upload Document. The system provides the capability to Upload documents	*SDD-REQ-101* *SDD-REQ-201* *SDD-REQ-301*
SRS-UC-500-REQ-03	View Status The system provides the capability for the user to view incentive application status	*SDD-REQ-102* *SDD-REQ-201* *SDD-REQ-301*
SRS-UC-500-REQ-04	Invalid user information. The system can verify that the user details that are entered by users are invalid, and the system provides the capability to re-enter the information.	*SDD-REQ-101*
SRS-UC-500-REQ-05	Missing Documents. The system can verify that the user did not upload any documents and the system provides the capability to re-upload the incentive documents.	*SDD-REQ-101*
SRS-UC-500-REQ-06	Valid IC Number length. The system can verify if the IC length is shorter than 12 Numbers.	*SDD-REQ-101*
SRS-UC-500-REQ-07	One state citizen (Pahang) can apply for an incentive.	*SDD-REQ-101*

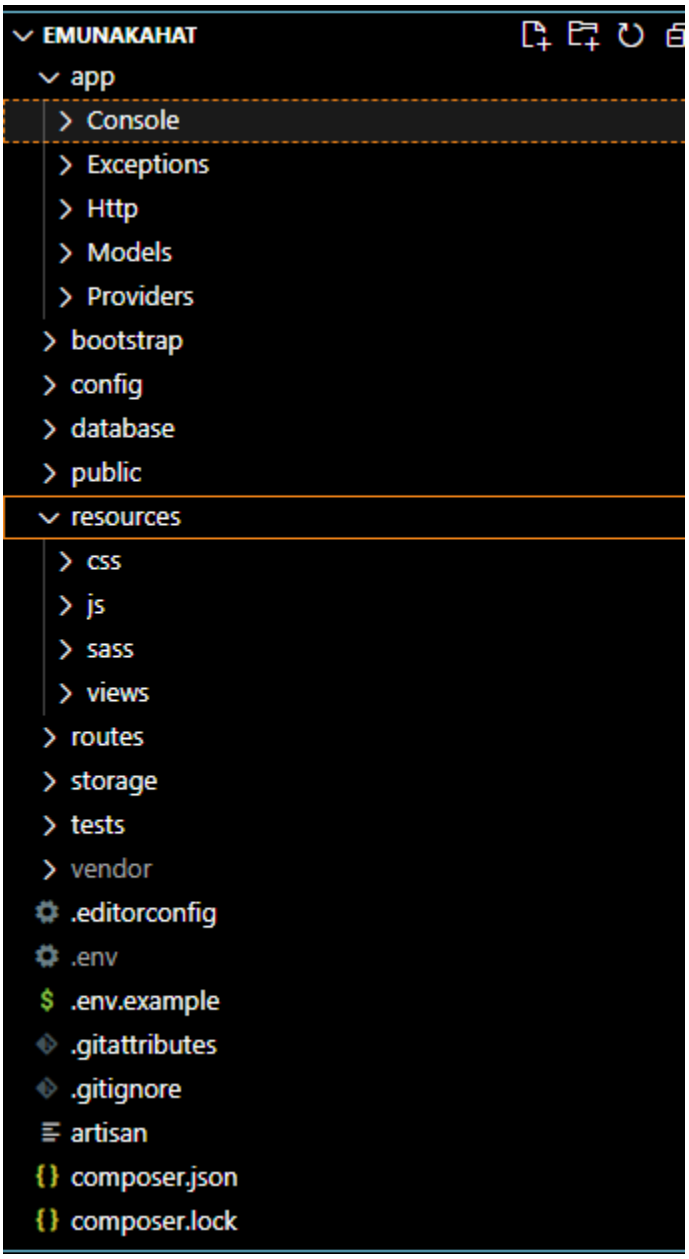
	The system verifies the user is from Pahang state before they can apply for an incentive and proceed to the next step.	

APPENDIX A

Requirements	Description
SRS-UC-500-REQ-01	Apply the Incentive and Download the Document. The system provides the capability to the user to apply for incentives for marriage and download document incentives.
SRS-UC-500-REQ-02	Upload Document. The system provides the capability to Upload documents and download reports.
SRS-UC-500-REQ-03	View Status and Report. The system provides the capability for the user to view incentive application status and download reports.
SRS-UC-500-REQ-04	Invalid user information. The system can verify that the user details that are entered by users are invalid, and the system provides the capability to re-enter the information.
SRS-UC-500-REQ-05	Missing Documents. The system can verify that the user did not upload any documents and the system provides the capability to re-upload the incentive documents.
SRS-UC-500-REQ-06	Valid IC Number length. The system can verify if the IC length is shorter than 12 Numbers.
SRS-UC-500-REQ-07	One state citizen (Pahang) can apply for an incentive. The system verifies the user is from Pahang state before they can apply for an incentive and proceed to the next step.

APPENDIX B

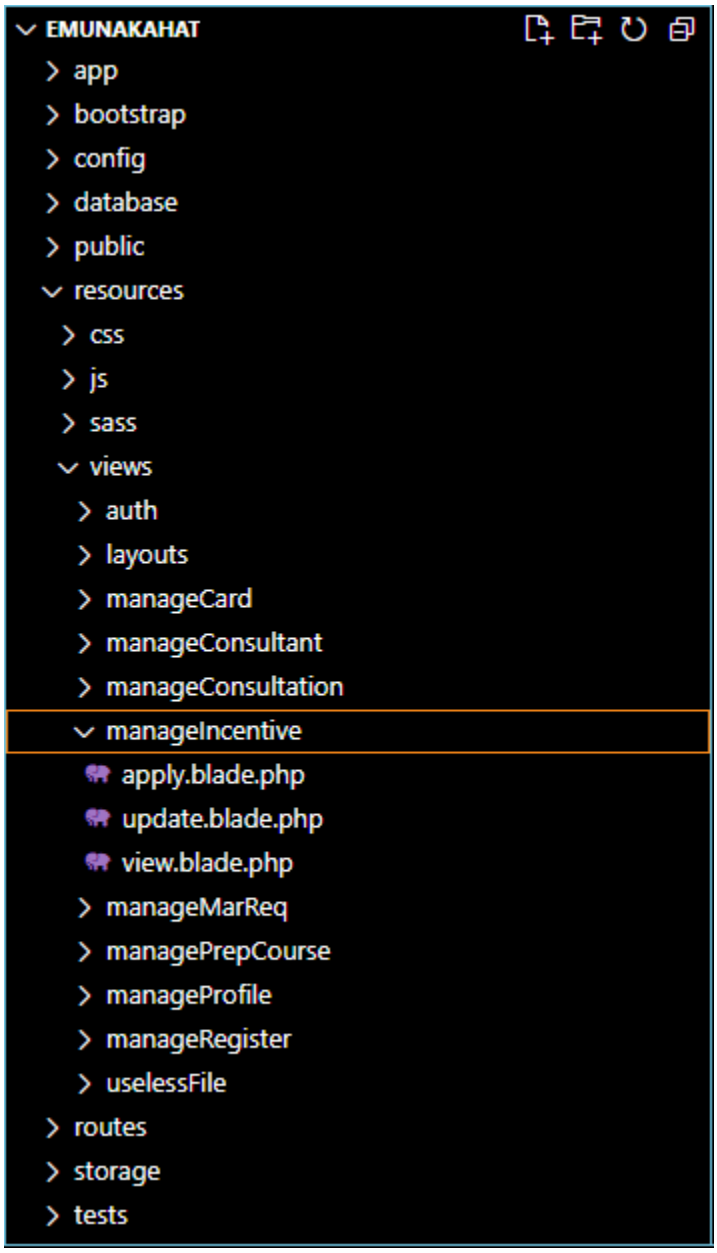
General Architecture (Chapter 3)



System Name	Layers		
emunakahat	resources	Views	
	app	Http	Controllers
		Model	
	route		

APPENDIX C1

manageIncentive (Chapter 4) – views layer



Layer	Package	Class
views	manageIncentive	Apply Update view

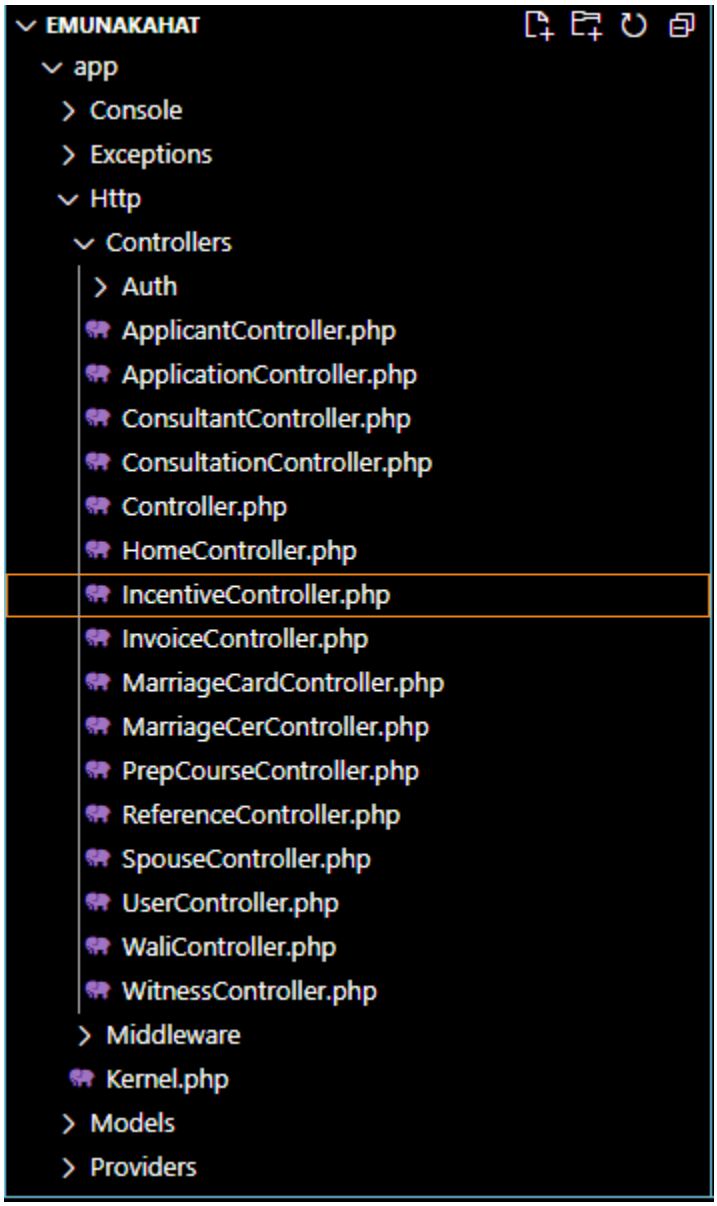
APPENDIX C2

manageIncentive (Chapter 4) – design patern layer

Layer	Class
routes	web

APPENDIX C3

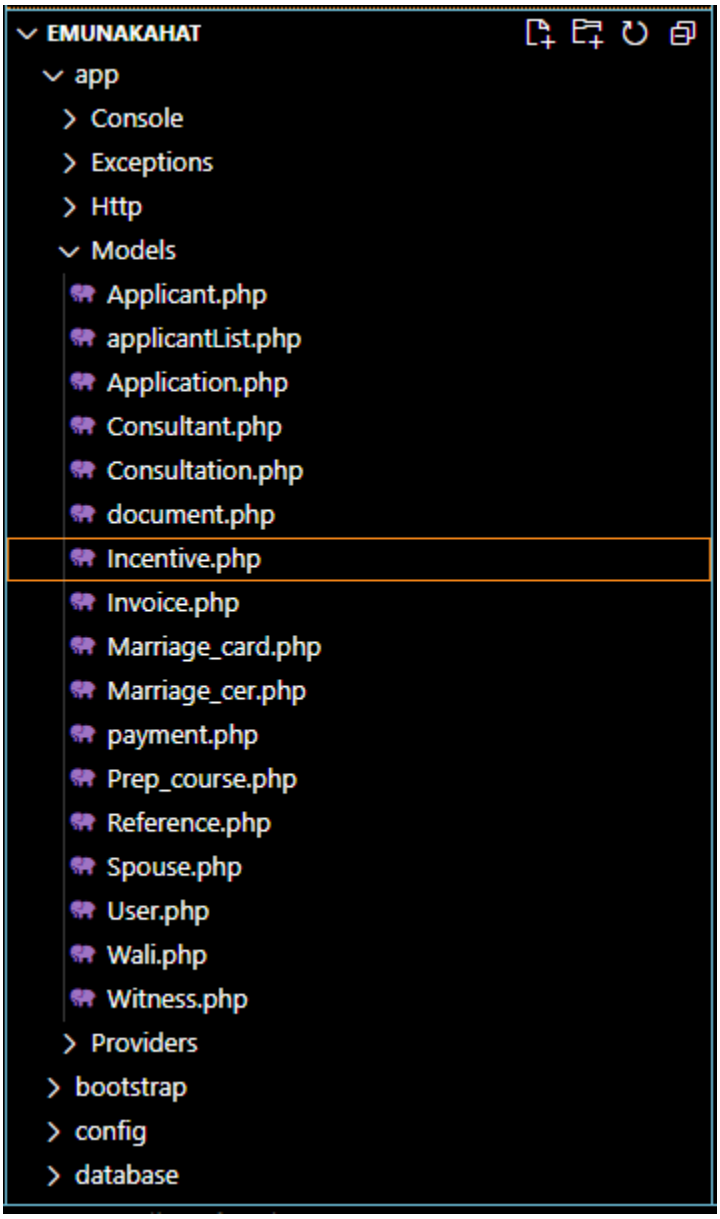
manageIncentive (Chapter 4) – controller layer



Layer	Class
Controllers	IncentiveController

APPENDIX C4

manageIncentive (Chapter 4) – model layer



Layer	Class
Models	Incentive