



UNIVERSITI TEKNOLOGI MALAYSIA

WEB-BASED CONVOCATION PHOTO STUDIO MANAGEMENT SYSTEM (CPSMS) FOR KELAB FOTOKREATIF

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Supervised by: Dr. Muhammad Khatibsyarbini Bin Abd Rahim

OVERVIEW

- 01** INTRODUCTION
- 02** LITERATURE REVIEW
- 03** SYSTEM DEVELOPMENT METHODOLOGY
- 04** REQUIREMENTS AND ANALYSIS DESIGN
- 05** CONCLUSION

INTRODUCTION



What is CPSMS?

Kelab Fotokreatif provide a photography studio service every year during convocation period.

- Designed to modernize convocation photo studio operations.
- Replaces manual booking and payment tracking processes.
- Provides real-time updates and streamlined workflows.

Target Users: Graduates, KFK Staff and Administrators



Problem Background



MANUAL PROCESS

- Google Forms for bookings
- Google Spreadsheets for payment tracking
- Prone to human errors and data duplication



LIMITED PAYMENT OPTIONS

- Only supports DuitNow QR payments
- No international payment methods
- Excludes international graduates



LACK OF REAL-TIME UPDATES

- No queue status visibility
- No photo delivery tracking
- Manual follow-ups required

Project Aim

To develop a Web-based CPSMS that improves operational efficiency, payment accessibility and transparency for graduates during convocations.

01

ELICIT REQUIREMENTS
for the CPSMS system

02

DESIGN AND DEVELOP
the web-based system

03

**CONDUCT TESTING
AND VALIDATION**
of the system

Proposed Solution and Project Scope

The Convocation Photo Studio Management System (CPSMS) is developed as a web application.

01

Authentication

Secure login for graduates, staff, and admins with role-based access.

02

Booking

Allows real-time session booking with multiple payment options.

03

Queue

Tracks live queue status and supports QR code check-in.

04

Task

Manages staff tasks and schedules based on user roles.

05

Admin

Handles staff accounts, studio scheduling and generates reports.

LITERATURE REVIEW

Current System Analysis

Comparison		
Features	Google Form + Google Spreadsheet	Convocation Photo Studio Management System (CPSMS)
User Authentication	Yes (using Google email)	Yes
Real-Time Booking	No	Yes
Payment Integration	No	Yes
Queue Management	No	Yes
Automated Notifications	Yes (only for responses)	Yes
Photo Delivery Tracking	No	Yes
Reporting & Analytics	Yes	Yes
Staff Task Assignment	No	Yes

Current System Analysis

BOOKING GFORM

File Edit View Insert Format Data Tools Extensions Help

100% View only

Column	Timestamp	Email address	Choose your option	Name (eg : AHMAD BIN MUHAMAD
1	09/11/2024 15:05:49	joelsimson822@gmail.com	Studio Booking	JOEL SIMSON
2	09/11/2024 15:15:19	mandytiexiangli0428@gmail.com	Studio Booking	MANDY TIE XIANG LI
3	09/11/2024 15:15:48	benedicherman@gmail.com	Studio Booking	BENEDIC HERMAN LANYING
4	09/11/2024 15:32:40	yayafatiha01@gmail.com	Studio Booking	NURALIYA FATIHA BT AHMAD SHAH
5	09/11/2024 15:41:51	nurulaliah8901@gmail.com	Studio Booking	NURUL ALIAH BINTI HANAN
6	09/11/2024 15:47:39	fatiniasfa@gmail.com	Studio Booking	ASFA FATINI BINTI MD ZURAI
7	09/11/2024 15:48:35	izzatjuhari4@gmail.com	Studio Booking	MUHAMMAD IZZAT BIN MOHD JUH
8	09/11/2024 16:07:59	aqilahhasyun00@gmail.com	Studio Booking	NUR AQILAH HAS-YUN BINTI KHAIR
9	09/11/2024 16:09:22	m.khairilaiman@gmail.com	Studio Booking	MUHAMMAD KHAIRIL AIDAN BIN A
10	09/11/2024 16:12:53	maria.ameina@gmail.com	Studio Booking	MARIA AMEINA BINTI AHMAD
11	09/11/2024 16:16:14	sitinoormaisarah@graduate.utm.my	Studio Booking	SITI NOOR MAISARAH BINTI SYED H
12	09/11/2024 16:22:27	farisyahatta@gmail.com	Studio Booking	NUR FARISYA BINTI MOHAMMAD H
13	09/11/2024 16:31:16	elinarosli07@gmail.com	Studio Booking	CHE ELINA BINTI CHE ROSLI
14	09/11/2024 16:45:01	deserley1412@gmail.com	Studio Booking	DESERLEY ERIC MARCUS DOMPOK
15	09/11/2024 16:48:53	muhamadshafiykmal@gmail.com	Studio Booking	Muhamad Shafiy Ikmal Bin Shahrin
16	09/11/2024 16:51:17	shyaranelisa00@gmail.com	Studio Booking	NUR SHYARANELISA BINTI JOHAN
17	09/11/2024 16:55:29	nurfarihinamanda@gmail.com	Studio Booking	NUR FARIHIN AMANDA BINTI MUHA
18	09/11/2024 16:58:19	batrisyiaazhar2@gmail.com	Studio Booking	NUR ATIKAH BATRISYIA BINTI AZHA
19	09/11/2024 17:18:39	zxook205@gmail.com	Studio Booking	KOO ZHI XUAN
20	09/11/2024 17:40:18	nurzahirah@graduate.utm.my	Studio Booking	NUR ZAHIRAH BINTI MOHD SO'UD
21	09/11/2024 17:46:24	azzaryme@gmail.com	Studio Booking	AHMAD ZIKRI BIN ZARYME
22	09/11/2024 17:50:16	qonitamuhamad@gmail.com	Studio Booking	QONITATULHAQUI BINTI MUHAMAD

ORIGINAL FORM ANALYSIS 20/11 19/11 24/11 23/11

Google Form Booking Response

BOOKING GFORM

File Edit View Insert Format Data Tools Extensions Help

100% View only

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15	09/11/2024 16:48:53	muhamadshafiykmal@gmail.com	Studio Booking	Muhamad Shafiy Ikmal Bin Shahrin
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22	09/11/2024 17:50:16	qonitamuhamad@gmail.com	Studio Booking	QONITATULHAQUI BINTI MUHAMAD

ORIGINAL FORM ANALYSIS 20/11 19/11 24/11 23/11

Proof of payments

Current System Analysis

BOOKING GFORM

File Edit View Insert Format Data Tools Extensions Help

75% View only

	A	B	C	D	E	F	G	H	I
1	COUNTA of Studio Packag Studio Package								
2	Date of Booking	Package A (RM 70.00)	Package B (RM 90.00)	Package C (RM 110.00)	Package D (RM 130.00)	Package E (RM 150.00)	Package F (RM 170.00)	Package G (RM 190.00)	Grand Total
3	16 November 2024	2		2	1	3	15		23
4	17 November 2024	3		5	1	7	7		23
5	18 November 2024	3		9		16	24		54
6	19 November 2024			4	1	22	17		44
7	20 November 2024	2	1	5		38	23		69
8	21 November 2024	8		3		26	20		57
9	22 November 2024						2		2
10	23 November 2024			1		1	2		4
11	24 November 2024						3		3
12	Grand Total	18	1	29	3	115	113		279

Date of Booking	Horizontal Frame RM 80	Vertical Frame RM 80	Horizontal Frame RM 85	Vertical Frame RM 85	Total Price
16 November 2024	8	13	0	0	£200.00
17 November 2024	2	8	0	0	£200.00
18 November 2024	6	24	0	0	£600.00
19 November 2024	2	13	0	0	£12.050.00
20 November 2024	8	31	0	0	£14.060.00
21 November 2024	6	19	0	0	£80.00
22 November 2024	0	1	0	0	£0.040.00
23 November 2024	2	3	0	0	£170.00
24 November 2024	0	0	0	0	£340.00
Grand Total	34	113	2	4	£44,280.00

ORIGINAL FORM ANALISIS

Manual analysis

BOOKING GFORM

File Edit View Insert Format Data Tools Extensions Help

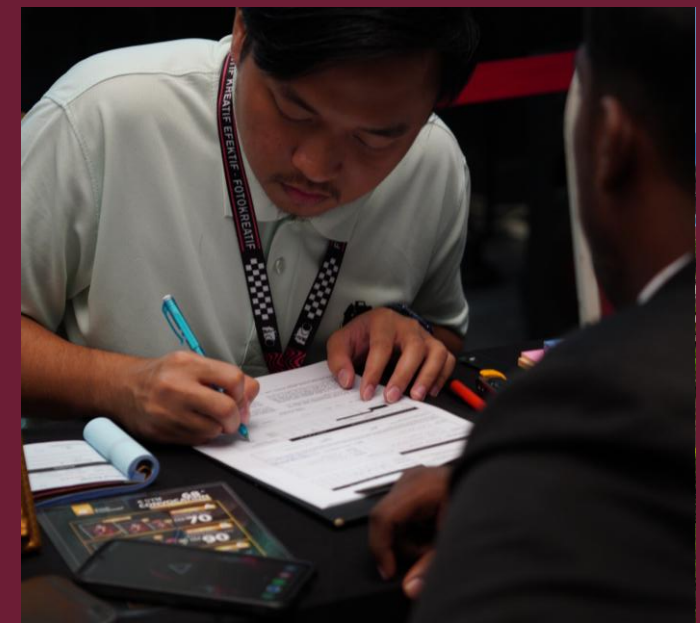
75% View only

Column 1	TimeStamp	Email address	Choose your opti	Name (e.g.: AHMAD BIN MUHAMAD)	Contact Number (e.g.: 012-3456789)
11	08/11/2022	stinoomaisarah@gmail.com	Studio Booking	SITI NOOR MAISARAH BINTI SYED HAMED	017-7393661
12	08/11/2022	farisayshah@gmail.com	Studio Booking	NUR FARISYA BINTI MOHAMMAD HATTA	017-7244673
14	08/11/2022	deserley1412@gmail.com	Studio Booking	DESERLEY ERIC MARCUS DOMPOK	0148844300
17	08/11/2022	nurfarhinamanda@gmail.com	Studio Booking	NUR FARIHIN AMANDA BINTI MUHAMMAD RAZALI	012-5237175
30	08/11/2022	ghaniesafienah17@gmail.com	Studio Booking	NUREENE DHANIEA AFRIENA BINTI MUHAMMAD ZAKI	011-50491717
35	08/11/2022	devenrichard@gmail.com	Studio Booking	DEVERIE RICHARD	01211334374
40	10/11/2022	puterianasyafiqah@gmail.com	Studio Booking	PUTERI AINA SYAFIQAH BINTI MEGAT ZAINUDDIN	0183592548
41	10/11/2022	p.shape95@gmail.com	Studio Booking	MUHAMMAD SHAPIE	0168160414
45	10/11/2022	s.owenzmagas@gmail.com	Studio Booking	STEWART OWEN JASPIN	011-31626030
63	10/11/2022	jusof12@gmail.com	Studio Booking	JULIT ANAK JASAT	013-7700352
64	10/11/2022	salfamansadon@gmail.com	Studio Booking	MUHAMMAD SAIF AAMAN BIN SADON	011-37771439
67	10/11/2022	nurayumarissa@gmail.com	Studio Booking	NUR AYU MARISSA BINTI ARIFFUDIN	017-7238597
61	10/11/2022	sitaishah2220@gmail.com	Studio Booking	SITI AISAH BINTI A. RAHMAN	010-7130824
67	10/11/2022	amirahayaz2001@gmail.com	Studio Booking	NUR AMIRAH SYAFIAH BINTI OTHMAN	0126079349
77	11/11/2022	afiqahaini@gmail.com	Studio Booking	NUR AFQIAH ALINI BINTI KAMARUZZAMAN	018-2611943
79	11/11/2022	anurallia@gmail.com	Studio Booking	ANUR ALLIA BINTI AZAMUDDIN	011-24202114
81	11/11/2022	refiqah@gmail.com	Studio Booking	NUR FARAH SYAFIEAH BINTI AHMAD SAIFUL BAHRE	019-8227351
83	11/11/2022	vanessadaria511@gmail.com	Studio Booking	VANESSA CLARA GUSAR	012-8703947
80	11/11/2022	sharifahfaizatul@gmail.com	Studio Booking	SHARIFAH FAIZATUL NAZIRAH BINTI IWAN ABDUL HAM	014-6209105
91	11/11/2022	rebyah410@gmail.com	Studio Booking	RACHEAL REBECCA AIP VALIAPPEN	0172209591
93	11/11/2022	yogalaksmi@gmail.com	Studio Booking	YOGALAKSMI AIP K.SIVASUBRAMANIAM	0160659082
95	12/11/2022	ainolazizie@gmail.com	Studio Booking	AINOL AZIZIE BIN MOHD ROOZI	013-6655001
103	12/11/2022	nadia.hadzri@gmail.com	Studio Booking	LATIFAH TUNNADIA BINTI HADZRI	0148415773
104	12/11/2022	ahanafe525@gmail.com	Studio Booking	AFIQ AFNAN BIN SURJANA	0197540493
106	12/11/2022	nabilahbinti@gmail.com	Studio Booking	NABILA BINTI ANWAR	012-8496868
110	12/11/2022	aisyahmoom@gmail.com	Studio Booking	SITI AISYAH BINTI MOHD AMIRUDDIN	011-3035198
114	12/11/2022	asrulhuzhaimi@gmail.com	Studio Booking	MUHAMMAD ASRUL HUZHAIMI BIN SALAMAT	017-4042987
116	12/11/2022	ninorazam@gmail.com	Studio Booking	NURFATIMALYA BATRISYA BINTI NOR AZAM	014-3397008
120	12/11/2022	najihazahar03@gmail.com	Studio Booking	NUR NAJIAH BINTI AL-ZAHARI	0126078222
121	12/11/2022	ntsy.insy@gmail.com	Studio Booking	NATASYA INSYIRA BINTI SAIM	0182014290
128	13/11/2022	nurulainna2806@gmail.com	Studio Booking	NURULAINNA BINTI ABDUL RAHMAN	017-5467780
130	13/11/2022	nurashirajamal12@gmail.com	Studio Booking	NUR ASHIRIN BINTI JAMAL	011-1183997
147	13/11/2022	afifah57@gmail.com	Studio Booking	NUR ATQIA AFFIE BINTI AZMAN	0159554100
160	14/11/2022	fatimahyikoni98@gmail.com	Studio Booking	FATIN ASHYKIN BINTI HAMDANI	019-9687350
174	14/11/2022	abdrahmannuramirah@gmail.com	Studio Booking	NUR AMIRAH BINTI ABD RAHMAN	018-3144779
177	14/11/2022	nurdalilahmohdzamr@gmail.com	Studio Booking	NURDALILAH BINTI MOHD ZAMRI	011-23653854
183	14/11/2022	aqmalwafiy21@gmail.com	Studio Booking	AQMAL WAFIY BIN MOHD HELMY	017-3889078
192	14/11/2022	gameray1151@gmail.com	Studio Booking	MUHAMMAD HAZIQ AAMAN BIN NOR HALIM	017-7394482
193	14/11/2022	aisyahashash@gmail.com	Studio Booking	AISHAH SOFEA BINTI SHAMSUL HANIFF	0199937478
196	15/11/2022	n.farhana2806@gmail.com	Studio Booking	NURUL FARHANA BINTI MOHD AZUAN	0195236901

22/11 21/11 18/11 17/11 16/11 10/11 11/11 12/11

Manual sorting based on the booking response

Current System Analysis



FRONTEND

01 **REACT.JS**
User interface development

02 **REACT REDUX**
State management

03 **MATERIAL UI**
Component library

BACKEND

01 **NODE.JS**
Runtime environment

02 **EXPRESS.JS**
Web framework

03 **FASTIFY**
High-performance request handling

DATABASE

01 MONGODB

NoSQL document database

02 MONGODB ATLAS

Cloud database service

DEVELOPMENT TOOLS

01 GITHUB

Version control

02 VISUAL STUDIO CODE

Code editor

03 JIRA

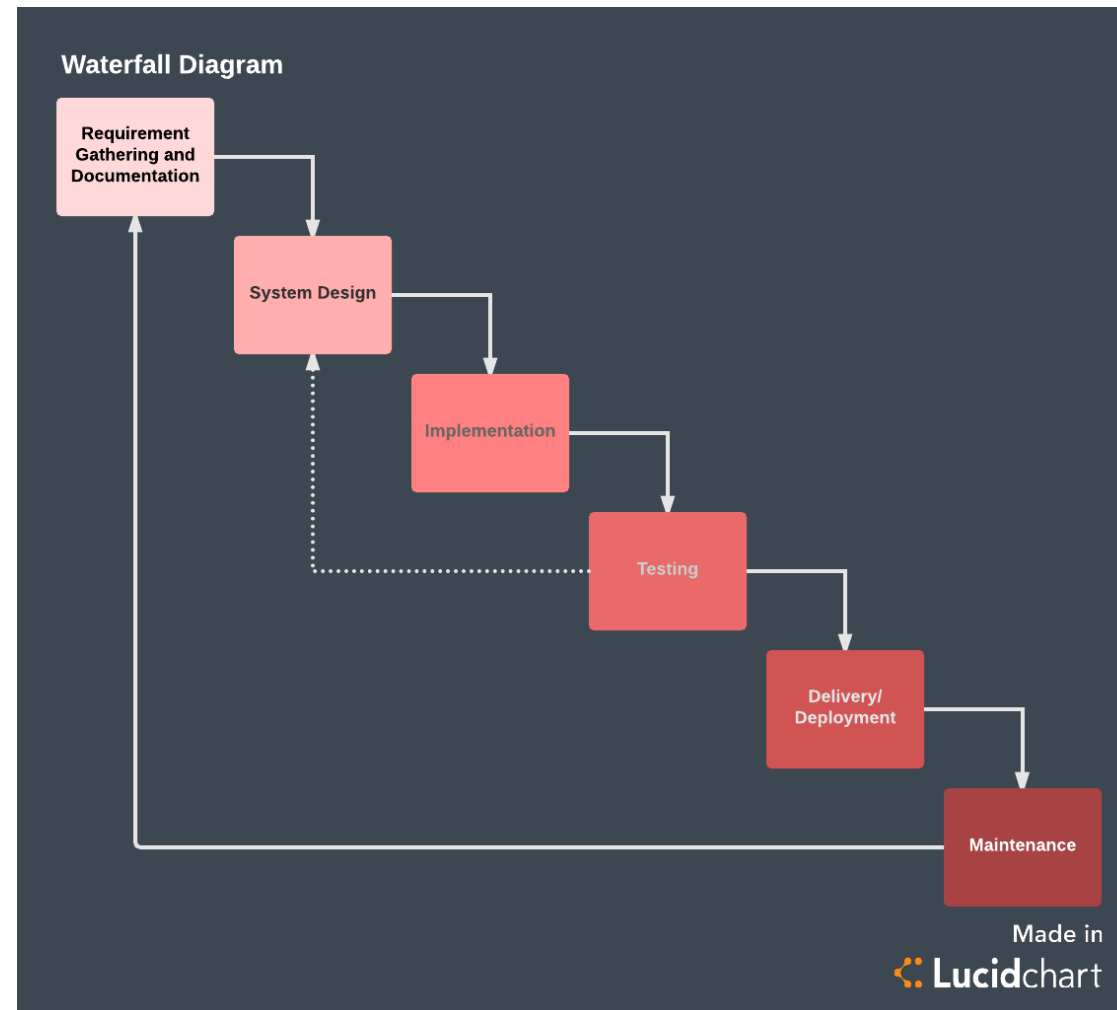
Project management

04 POSTMAN

API testing

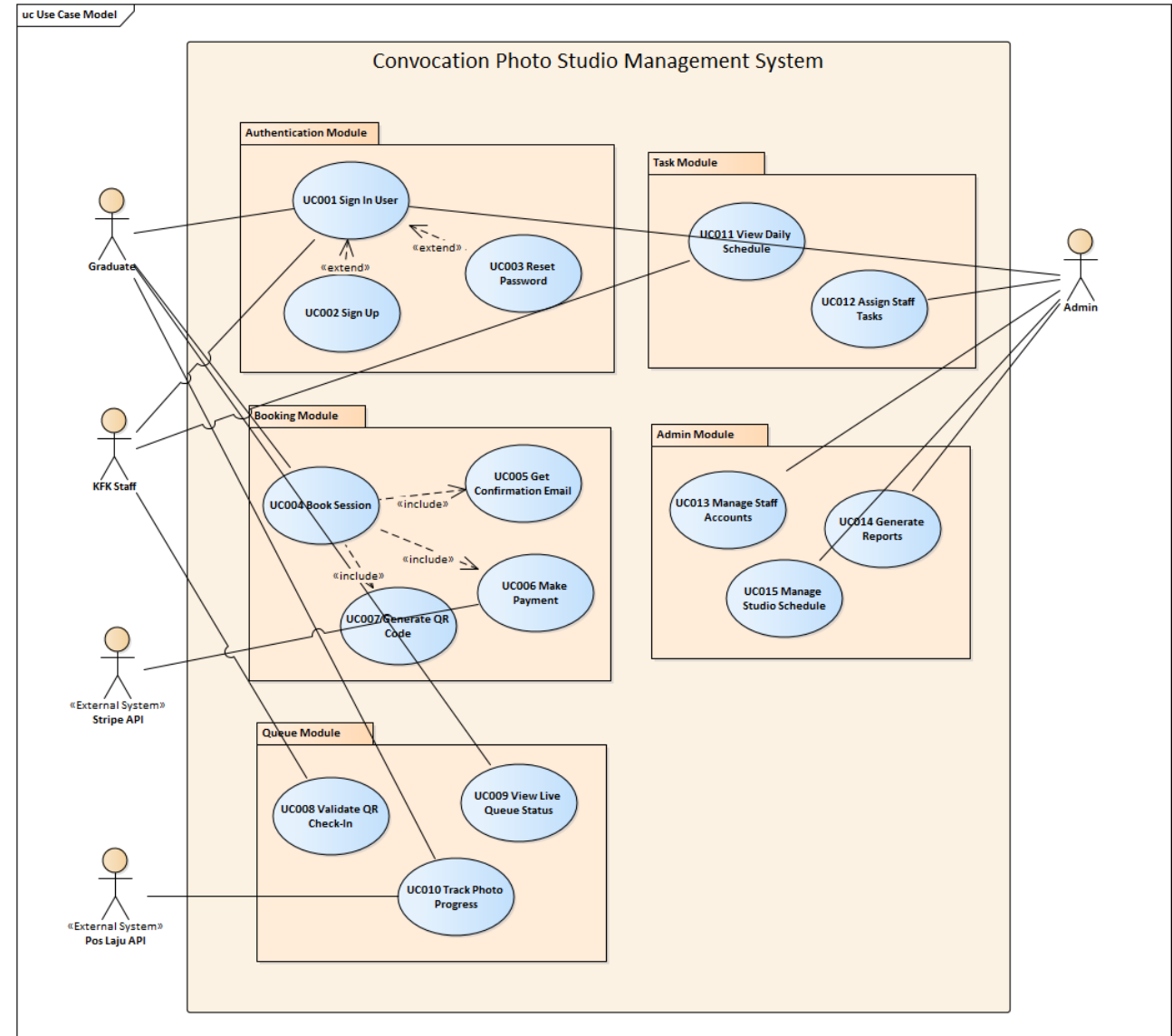
SYSTEM DEVELOPMENT METHODOLOGY

Waterfall Methodology

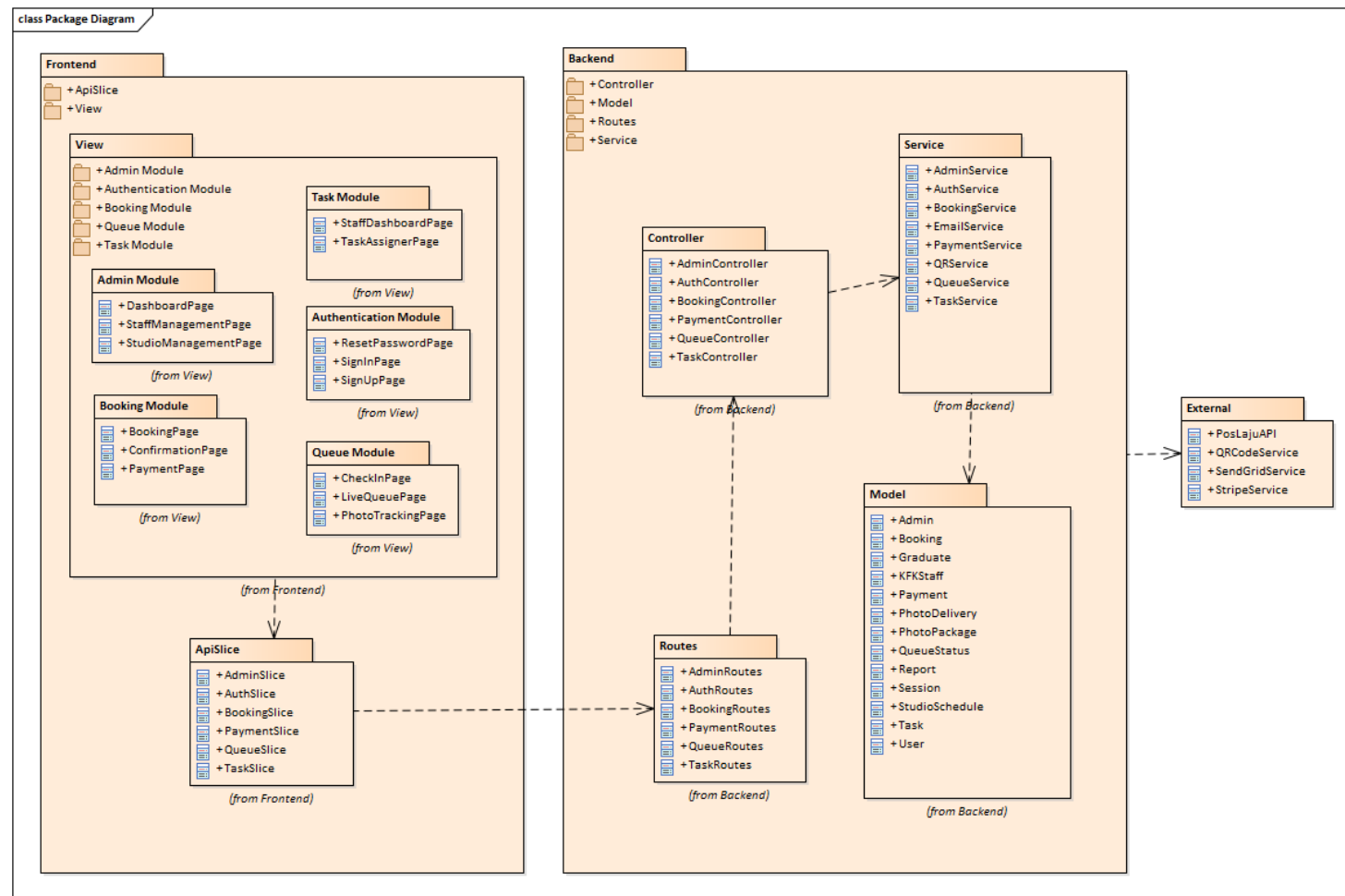


REQUIREMENT ANALYSIS AND DESIGN

USE CASE DIAGRAM



SYSTEM ARCHITECTURE



Book Your Convocation Photo Session

Choose your preferred session and package for professional graduation photos

1 **Select Session** — 2 Choose Package — 3 Confirm

Available Sessions

Convocation Photo Session - Morning

Available

📅 15/07/2024

🕒 09:00 AM - 12:00 PM

📍 Main Studio A

👤 8 of 20 slots available

Select Session

Convocation Photo Session - Afternoon

Available

📅 15/07/2024

🕒 02:00 PM - 05:00 PM

📍 Main Studio B

👤 12 of 20 slots available

Select Session

View Session

Book Your Convocation Photo Session

Choose your preferred session and package for professional graduation photos

1 Select Session — 2 Choose Package — 3 **Confirm**


← Confirm Your Booking


Please review your selection before confirming

Session Details

Convocation Photo Session - Morning

 15/07/2024

 09:00 AM - 12:00 PM

 Main Studio A

Package Details

Premium Package

Complete graduation photo experience

- 25 edited photos
- Digital + Physical copies
- Professional retouching
- Photo album
- Family group shots

Payment Summary

Premium Package

Photo session package

RM 250

Total amount

[Back to Packages](#)

[Confirm Booking](#)

Confirm Booking

www.utm.my

Book Your Convocation Photo Session

Choose your preferred session and package for professional graduation photos

1 Select Session — 2 Choose Package — 3 Confirm



Booking Confirmed!

Your photo session has been successfully booked

Booking Reference

KF674410

Booking Details

Session Information

📅 15/07/2024

🕒 09:00 AM - 12:00 PM

📍 Main Studio A

Package Information

Premium Package

Complete graduation photo experience

RM 250

What's Next?

✉ Confirmation Email

A confirmation email with your booking details has been sent to your registered email address.

📱 QR Code Access

Booking Details

[← Back to Dashboard](#)

Queue Management

Scan QR codes to check in graduates

Waiting

1



Checked In

1




Total Today

2



QR Code Scanner

Scan graduate QR codes or enter manually

 Start Camera

Or enter QR code manually:

Check In

Current Queue

Today's session queue

Alice Johnson

Morning Session - 09:00 AM

waiting

Bob Smith

Morning Session - 09:30 AM

Checked in at 09:25 AM

checked in

Check-In

[← Back to Dashboard](#)

Staff Schedule

View your daily tasks and assignments

John Photographer
ID: STAFF001

Upcoming
2



Completed
1



Graduates
35



📅 Schedule for 2024-07-15

🔄 Refresh



Equipment Setup

Morning Convocation Session

completed

🕒 07:30 - 08:30

📍 Main Studio A

setup



Main Photographer

Morning Convocation Session

upcoming

🕒 08:30 - 12:00

📍 Main Studio A

👥 20 graduates

Note: Setup equipment 30 minutes early

photography

Staff Task

[← Back to Dashboard](#)

Queue Status

Monitor your position and wait time

CHECKED IN

You have been checked in

Your Position

#3

in queue

Currently serving: #1


Estimated Wait

15


minutes


Total in queue: 8

Session Details

 Refresh

Session Morning Convocation Session

 09:00 AM - 12:00 PM

 Main Studio A

Last updated: 4:12:09 pm

Live Queue

[← Back to Dashboard](#)

Photo Progress

Track your photo order status and delivery



Order #PO-2024-001

Morning Convocation Session

EDITING

Photos are being edited and enhanced

Order Details

Session Date:	2024-07-15
Package:	Premium Package
Tracking Number:	PL123456789MY
Estimated Delivery:	2024-07-25

Progress Timeline

Track your order through each stage



Photo Session

Completed on 2024-07-15



Photo Editing

Expected by 2024-07-22



Shipping

Photo Track

[← Back to Dashboard](#)

Admin Panel

Manage staff assignments and schedules

[📅 Assignments](#)[👤 Staff](#)[⚙️ Sessions](#)

+ Create New Assignment

Session

Select Session

Staff Member

Select Staff

Role

e.g., Lead Photographer

Create Assignment

Current Assignments

Manage existing staff assignments

John Photographer

Morning Convocation Session
08:30 - 12:00

Lead Photographer



Mary Assistant

Morning Convocation Session
09:00 - 12:00

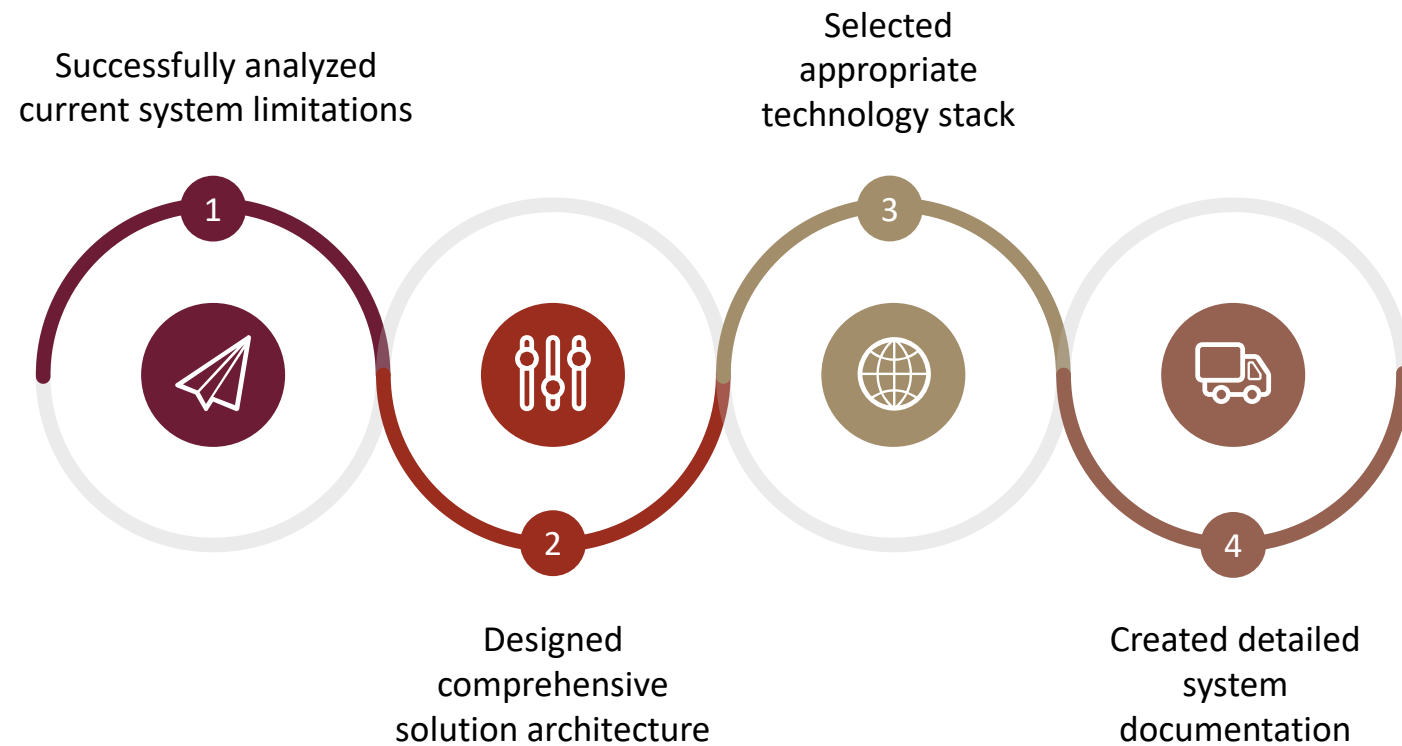
Assistant



Assign Task

CONCLUSION

Project Achievement Summary







PSM 2
IMPLEMENTATION
PHASE

Expected Outcome







Quantitative Benefits

-  80% reduction in manual processing time
-  95% booking accuracy rate
-  60% faster payment processing
-  40% increase in booking capacity






Qualitative Benefits

-  Enhanced user satisfaction
-  Streamlined operations
-  Better international accessibility
-  Modern, professional image



Long-term Impact

-  Scalable solution for future convocations
-  Template for other university services
-  Improved graduation experience

THANK YOU



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