

DAFTAR ISI

halaman

PERSETUJUAN DOSEN PEMBIMBING TUGAS AKHIR	iv
PERSETUJUAN TIM PENGUJI TUGAS AKHIR.....	v
ABSTRAK	vi
ABTRACT	vii
KATA PENGANTAR.....	viii
DAFTAR ISI.....	x
DAFTAR GAMBAR.....	xiii
DAFTAR TABEL.....	xv
DAFTAR LAMPIRAN	xvi
BAB I PENDAHULUAN.....	17
1.1 Latar Belakang.....	17
1.2 Rumusan Masalah.....	21
1.3 Tujuan Penelitian	21
1.4 Batasan Masalah	21
1.5 Manfaat Penelitian	22
1.6 Metodologi Penelitian.....	23
1.7 Sistematika Penulisan	23
BAB II LANDASAN TEORI	25
2.1 Landasan Teori	25
2.1.1 Sistem.....	25
2.1.2 Informasi	26
2.1.3 Sistem Informasi	27
2.1.4 Web.....	29

2.1.5	Bahasa Pemograman.....	29
2.1.6	<i>Framework dan Library</i>	31
2.1.7	<i>Model View Controller (MVC)</i>	33
2.1.8	<i>Version Control System (VCS)</i>	35
2.1.9	<i>System Development Life Cycle (SDLC)</i>	36
2.1.10	<i>Cloud Computing (Komputasi Awan)</i>	38
2.2	Penelitian Terdahulu.....	39
2.3	Profil Perusahaan.....	43
BAB III ANALISIS DAN PERANCANGAN SISTEM.....		45
3.1	Analisis Sistem Berjalan.....	45
3.1.1	Analisis Kebutuhan Sistem	47
3.2	Perancangan Sistem.....	51
3.2.1	<i>Use Case Diagram (UCD)</i>	52
3.2.2	<i>Use Case Description</i>	53
3.2.3	<i>Activity diagram</i>	60
3.2.4	<i>Sequence Diagram</i>	66
3.2.5	<i>Class Diagram</i>	77
3.2.6	<i>Low-Fidelity Wireframe</i>	79
3.2.7	<i>Rancangan Infrastruktur Cloud GCP</i>	91
BAB IV HASIL DAN PEMBAHASAN.....		94
4.1	Hasil Penelitian.....	94
4.1.1	<i>Implementation Result</i>	94
4.1.2	<i>Feature Test</i>	113
4.1.3	<i>User Interface Result</i>	118
4.1.4	<i>Deployment Result</i>	135

4.2 Pembahasan	138
BAB V KESIMPULAN DAN SARAN	143
5.1 Kesimpulan	143
5.2 Saran	144
DAFTAR PUSTAKA	146



DAFTAR GAMBAR

Gambar 2. 1 Statistics of server-side programming (W3Tech, 2024)	30
Gambar 2.2 Metodologi Waterfall	38
Gambar 3.1 BPMN Sistem Berjalan	46
Gambar 3.2 BPMN Sistem UPH Room Ease	51
Gambar 3.3 Use case UPH RoomEase	53
Gambar 3.4 Activity Diagram untuk Pengajuan Peminjaman Ruangan.....	61
Gambar 3.5 Activity Diagram untuk Management Request.....	62
Gambar 3.6 Activity Diagram untuk Kelola Izin.....	63
Gambar 3.7 Activity Diagram untuk Kelola Data Ruangan	64
Gambar 3.8 Activity Diagram untuk Lihat Jadwal Penggunaan Ruangan	65
Gambar 3.9 Sequence Diagram untuk Login	66
Gambar 3.10 Sequence Diagram untuk Lupa Password	67
Gambar 3.11 Sequence Diagram untuk Ganti Password	68
Gambar 3.12 Sequence Diagram untuk Filltering Account	69
Gambar 3.13 Sequence Diagram untuk Edit User Role.....	70
Gambar 3.14 Sequence Diagram untuk Create New User	71
Gambar 3. 15 Sequence Diagram untuk View Request	72
Gambar 3. 16 Sequence Diagram untuk Approval Request	73
Gambar 3.17 Sequence Diagram untuk Room Booking Request.....	74
Gambar 3.18 Sequence Diagram untuk Add Room.....	75
Gambar 3.19 Sequence Diagram untuk Edit Room	76
Gambar 3.20 Sequence Diagram untuk View Room Schedule	77
Gambar 3. 21 Class Diagram Room Ease.....	78
Gambar 3.22 Login View.....	79
Gambar 3.23 Forget and Change Password View	80
Gambar 3.26 Home View	80
Gambar 3.25 Home View untuk Role Student Life dan Academic	81
Gambar 3.26 Room Detail View.....	82
Gambar 3.27 Room Reservation Request.....	83
Gambar 3.28 User Profile View	84
Gambar 3.29 Update Profile	85
Gambar 3.30 Change Password	86
Gambar 3.31 Dashboard View	86
Gambar 3.32 Room Management View.....	87
Gambar 3.33 Create & Edit Room View	88
Gambar 3.36 Booking Request View.....	88
Gambar 3.35 Viewing & Approval Booking Request	89
Gambar 3.36 List Account View	89
Gambar 3.37 Create & Edit Account Form View.....	90
Gambar 3.38 Rancangan arsitektur cloud web-app UPH Room Ease	91
Gambar 4.1 Booking Service Test Result	115
Gambar 4.2 Calendar Service Test Result	116
Gambar 4.3 Event Service Test Result	117
Gambar 4.4 Formatting Date Test Result	117

Gambar 4.5 QR Service Test Result	118
Gambar 4.6 Login View.....	118
Gambar 4.7 Homepage Categories Selected.....	119
Gambar 4.8 Halaman Utama Room Ease	120
Gambar 4.9 Searched Room Homapage	121
Gambar 4.10 My Application Page Room Ease	121
Gambar 4.11 How To Book Page Room Ease.....	122
Gambar 4.12 Room Detail Page Room Ease	123
Gambar 4.13 Form Modal For Filling Request Reservation Room.....	124
Gambar 4.14 Cancel Request Confirmation	125
Gambar 4.15 Update Request Form.....	125
Gambar 4.16 Delete Request Confirm	125
Gambar 4.17 UPH Room Ease with Dashboard Navigation	126
Gambar 4.18 Dashboard sistem UPH Room Ease	127
Gambar 4. 19 Request Managemement Page.....	127
Gambar 4. 20 Request Managemement Modal Approval.....	128
Gambar 4. 21 Request Room Page Modal Notify Updated.....	129
Gambar 4.22 Room Categories Page	129
Gambar 4.23 Create Room Category	130
Gambar 4.24 Room Management Room Page.....	130
Gambar 4.25 Room Management Room List	131
Gambar 4.26 Edit Room Page.....	132
Gambar 4.27 Category Assignment Page	133
Gambar 4.28 Category Assignment Edit Page.....	134
Gambar 4.29 User Management Page.....	134
Gambar 4.30 Konfigurasi Cloud Run	135
Gambar 4.31 Konfigurasi SQL Instance.....	136
Gambar 4.32 Konfigurasi Storage Bucket	136
Gambar 4.33 Principal List	137
Gambar 4.34 Servicess Account List.....	137

DAFTAR TABEL

Tabel 1.1 Tabel Rincian Penelitian Terdahulu.....	19
Tabel 3.1 Use Case Description - Kelola Izin dan Aktor.....	54
Tabel 3.2 <i>Use Case Description</i> – Pengajuan Peminjaman Ruangan.....	55
Tabel 3.3 Use Case Description – Otomatis Approve	56
Tabel 3.4 Use Case Description - Kelola Permintaan Peminjaman Ruangan.....	57
Tabel 3.5 Use Case Description - Kelola Data Ruangan	58
Tabel 3.6 Use Case Description – Lihat Jadwal Penggunaan Ruangan.....	59
Tabel 4.1 Hasil Create Booking Request Function.....	95
Tabel 4.2 Hasil View Booking Request Function.....	97
Tabel 4.3 Hasil Update Booking Request Function.....	98
Tabel 4.4 Hasil Cancel Booking Request Function	100
Tabel 4.5 Hasil Delete Booking Request Function.....	101
Tabel 4.6 Hasil Upcoming Event Service	102
Tabel 4.7 Hasil Ongoing Event Service	103
Tabel 4.8 Hasil Delete Booking Request Function.....	104
Tabel 4.9 Hasil Init Data Calendar Specific Room Function.....	105
Tabel 4.10 Hasil Init Data Request Specific Room Calendar Service.....	106
Tabel 4.11 Hasil Init Data Calendar Has Approved Function Calendar Service	106
Tabel 4.12 Hasil Store Data Function Calendar Service.....	107
Tabel 4.13 Hasil Store Data Function Calendar Service.....	108
Tabel 4.14 Hasil Formatting Date Function Formatting Date Service	109
Tabel 4.15 Hasil Formatting Using Separator Function Formatting Date Service	109
Tabel 4.16 Hasil Formatting Using Time Function Formatting Date Service...	110
Tabel 4.17 Hasil Formatting To String Function Formatting Date Service.....	111
Tabel 4.18 Hasil Formatting To String With Duration.....	111
Tabel 4.19 Hasil Generate QR Service	112
Tabel 4.20 Status Pemenuhan Fitur Website dan Dashboard	139

DAFTAR LAMPIRAN

LAMPIRAN A: LEMBAR (UAT) STUDENT LEADERS	A-1
LAMPIRAN B: LEMBAR (UAT) INTERNAL.....	B-1
LAMPIRAN C: PROSES PEMINJAMAN RUANGAN 2022/2023	C-1
LAMPIRAN D: PERTANYAAN WAWANCARA	D-1
LAMPIRAN E: KESIMPULAN WAWANCARA	E-1
LAMPIRAN F: FOTO BERSAMA PESERTA UAT 31 OKTOBER 2024	F-1
LAMPIRAN G: <i>TEST CODE</i> BookingServiceTest.php	G-1
LAMPIRAN H: <i>TEST CODE</i> EventServiceTest.php.....	H-1
LAMPIRAN I: <i>TEST CODE</i> CalendarServiceTest.php	I-1
LAMPIRAN J: <i>TEST CODE</i> FormattingServiceTest.php.....	J-1
LAMPIRAN K: <i>SOURCE CODE DEPLOYMENT CONFIGURATION</i>	K-1
LAMPIRAN L: <i>SOURCE CODE PROGRAM</i>	L-1

