

## DAFTAR ISI

<b>LEMBAR PERNYATAAN ORISINALITAS .....</b>	i
<b>LEMBAR PENGESAHAN .....</b>	ii
<b>KATA PENGANTAR.....</b>	iii
<b>ABSTRAK .....</b>	iv
<b>ABSTRACT .....</b>	v
<b>DAFTAR ISI.....</b>	vi
<b>DAFTAR GAMBAR.....</b>	ix
<b>DAFTAR TABEL .....</b>	xii
<b>DAFTAR LAMPIRAN .....</b>	xiii
<b>BAB I PENDAHULUAN.....</b>	1
I.1    Latar Belakang .....	1
I.2    Perumusan Masalah.....	3
I.3    Tujuan Penelitian.....	3
I.4    Batasan Penelitian .....	3
I.5    Manfaat Penelitian.....	4
I.6    Sistematika Penulisan.....	4
<b>BAB II TINJAUAN PUSTAKA.....</b>	6
II.1 <i>Software Engineering</i> .....	6
II.2 <i>Software Development</i> .....	7
II.2.1    Scrum .....	7
II.2.2    Waterfall.....	9
II.2.3    Metode Rapid Application (RAD) .....	10
II.2.4    Spiral Model.....	11
II.2.5    Prototyping Model .....	12
II.3 <i>Unified Modeling Language (UML)</i> .....	16
II.3.1 <i>Use Case Diagram</i> .....	16
II.3.2 <i>Activity Diagram</i> .....	18
II.3.3 <i>Sequence Diagram</i> .....	19
II.3.4 <i>Class Diagram</i> .....	21

II.3.5	<i>Deployment Diagram</i>	23
II.4	<i>Software Architecture</i>	23
II.4.1	Client-Server	24
II.4.2	MVC	24
II.4.3	Monolithic	25
II.4.4	Microservices	26
II.5	<i>Website Development</i>	27
II.5.1	<i>Front-End Framework</i>	28
II.5.2	<i>Back-End Framework</i>	30
II.6	<i>Database</i>	31
II.7	<i>Application Programming Interface (API)</i>	33
II.8	<i>Software Testing</i>	35
II.8.1	<i>Manual Testing (Static Testing)</i>	36
II.8.2	<i>Automated Testing (Dynamic Testing)</i>	36
II.9	Covid-19	37
II.10	Sistem Monitoring	38
II.11	<i>State of The Art</i>	41
<b>BAB III METODE PENELITIAN</b>		47
III.1	Konseptual Model	47
III.2	Sistematika Penyelesaian Masalah	48
<b>BAB IV ANALISIS DAN PERANCANGAN</b>		50
IV.1	<i>Fase Requirement Analysis</i>	50
IV.1.1	<i>Card Sorting</i>	50
IV.1.2	Analisis Kebutuhan Sistem	52
IV.2	<i>Fase System Design</i>	53
IV.2.1	<i>Use Case Diagram</i>	53
IV.2.2	<i>Use Case Scenario</i>	54
IV.2.3	<i>Activity Diagram</i>	56
IV.2.4	<i>Sequence Diagram</i>	62
IV.2.5	<i>Class Diagram</i>	69
IV.2.6	<i>Deployment Diagram</i>	70
IV.2.7	Perancangan Arsitektur	71

IV.2.8	Perancangan <i>Entity Relationship Diagram</i> .....	74
<b>BAB V IMPLEMENTASI DAN PENGUJIAN</b>	.....	<b>76</b>
V.1	Fase <i>Implementation</i> .....	76
V.1.1	Implementasi <i>Database</i> .....	76
V.1.2	Implementasi Model.....	83
V.1.3	Implementasi <i>Controller</i> .....	90
V.1.4	Implementasi <i>Routes API</i> .....	107
V.1.5	Implementasi <i>View</i> .....	108
V.2	Fase <i>Testing, Deployment, &amp; Maintenance</i> .....	114
V.2.1	<i>Black Box Testing</i> .....	114
<b>BAB VI KESIMPULAN DAN SARAN</b>	.....	<b>117</b>
VI.1	Kesimpulan.....	117
VI.2	Saran.....	117
<b>DAFTAR PUSTAKA</b>	.....	vii
<b>LAMPIRAN</b>	.....	xii