

## DAFTAR ISI

LEMBAR PENGESAHAN .....	i
LEMBAR PERNYATAAN ORISINALITAS .....	i
ABSTRAK .....	iii
ABSTRACT .....	v
KATA PENGANTAR .....	vii
DAFTAR ISI .....	viii
DAFTAR GAMBAR DAN ILUSTRASI .....	x
DAFTAR TABEL .....	xiii
DAFTAR SINGKATAN DAN LAMBANG .....	xiv
Bab I	PENDAHULUAN..... 1
I.1	Latar Belakang..... 1
I.2	Perumusan Masalah..... 4
I.3	Tujuan Penelitian..... 4
I.4	Batasan Penelitian..... 5
I.5	Manfaat Penelitian..... 5
I.6	Metodologi..... 6
I.7	Sistematika Penulisan..... 6
Bab II	LANDASAN TEORI..... 8
II.1	Jembatan..... 8
II.2	<i>Structural Health Monitoring (SHM)</i> ..... 9
II.3	<i>Internet of Things (IoT)</i> ..... 15
II.4	Wireless Sensor Network (WSN)..... 19
II.4.1	WSN Bridge Rating..... 28
II.4.2	WSN Bridge Mode Shape..... 30
II.5	Java..... 30
II.6	Penelitian terdahulu..... 31
Bab III	METODOLOGI PENELITIAN..... 33
III.1	Konseptual Model..... 33
III.2	Sistematika Penelitian..... 34
Bab IV	ARSITEKTUR DAN DESAIN MODEL..... 37
IV.1	Arsitektur Model..... 37
IV.1.1	<i>Package Diagram</i> ..... 39
IV.1.2	<i>Component Diagram</i> ..... 40
IV.1.3	<i>Deployment Diagram</i> ..... 41
IV.2	Desain Model..... 42
IV.2.1	<i>Use case Diagram</i> ..... 44
IV.2.2	<i>Activity Diagram</i> ..... 45
IV.2.3	<i>Class Diagram</i> ..... 56
IV.2.4	<i>Sequence Diagram</i> ..... 57

	IV.2.5	<i>State Diagram</i> .....	68
	IV.3	Solusi Model.....	72
Bab V		HASIL PENGUJIAN.....	74
	V.1	Pengujian <i>Black box</i> .....	74
	V.2	Pengujian Kinerja .....	86
	V.3	Pengujian GUI .....	88
	V.4	Pengujian Miniatur Jembatan .....	99
	V.5	Validasi Data .....	107
Bab VI		KESIMPULAN .....	113
	VI.1	Kesimpulan .....	113
	VI.2	Saran .....	113
		DAFTAR PUSTAKA.....	114