

DAFTAR ISI

HALAMAN PERNYATAAN KEASLIAN SKRIPSI	ii
HALAMAN PENGESAHAN	iii
KATA PENGANTAR	iv
HALAMAN PERNYATAAN PERSETUJUAN PUBLIKASI SKRIPSI UNTUK KEPENTINGAN AKADEMIS	v
ABSTRAK	vi
ABSTRACT	vii
DAFTAR ISI	viii
DAFTAR GAMBAR	xi
DAFTAR TABEL	xii
BAB I PENDAHULUAN	1
1.1 Latar Belakang	1
1.2 Rumusan Masalah	4
1.3 Tujuan dan Manfaat	5
1.4 Ruang Lingkup	5
1.5 Sistematik Penulisan	5
BAB II TINJAUAN PUSTAKA	7
2.1. Literatur Review	7
2.2. Ikan Hias <i>Channa Maruloides</i>	10
2.3. <i>Internet of Things (IoT)</i>	11
2.4. <i>Web Application</i>	12
2.5. <i>Object Oriented Analysis and Design (OOAD)</i>	13
2.6. <i>Embedded System</i>	13
2.7. <i>ICONIX Process</i>	16
2.8. <i>Unified Modelling Language (UML)</i>	18
2.9. <i>Domain Model</i>	19
2.10. <i>Use Case Diagram</i>	19
2.11. <i>Robustness Diagram</i>	21

2.12.	<i>Sequence Diagram</i>	21
2.13.	<i>Class Diagram</i>	22
2.14.	<i>Flowchart</i>	23
BAB III	ALUR PENELITIAN PENELITIAN	25
3.1	Arsitektur Sistem	25
3.1.1	Web	27
3.1.2	Embedded system	28
3.2	Pengembangan Web	30
BAB IV	HASIL DAN PEMBAHASAN	32
4.1.	<i>Requirements</i>	32
4.1.1.	<i>Functional Requirements</i>	32
4.1.2.	<i>Domain Modelling</i>	33
4.1.3.	<i>Behavioral Requirements</i>	34
4.1.4.	<i>Requirement Review</i>	44
4.2.	<i>Analysis/Preliminary Design</i>	44
4.2.1.	<i>Robustness Analysis</i>	45
4.2.2.	<i>Update Domain Model</i>	50
4.2.3.	<i>Preliminary Design Review (PDR)</i>	51
4.3.	<i>Detailed Design</i>	51
5.3.1.	<i>Sequence Diagram</i>	51
5.3.2.	<i>Update Domain Model</i>	55
5.3.3.	<i>Critical Design Review (CDR)</i>	57
4.4.	<i>Implementation</i>	57
4.4.1.	Implementasi Alur Algoritma	58
4.4.2.	Implementasi Web	59
4.5.	<i>Testing Web</i>	62
4.5.1.	<i>Black box Testing</i>	62

4.5.2. <i>Traceability</i>	62
4.6. Pembuatan Alat Embedded Sytem	63
4.6.1. Implementasi Alat Embedded System	63
4.6.2. Implementasi Source Code Embedded Sytem	64
4.6.3. Pengujian Alat	64
BAB V PENUTUP	68
5.1. Kesimpulan	68
5.2. Saran	69
DAFTAR PUSTAKA	70
LAMPIRAN	73
Lampiran 1. Rencana Pengujian Web Smart Aquarium	74
Lampiran 2. Hasil Pengujian Web Smart Aquarium	76