DAFTAR ISI

ABSTRAK ..... **I**
ABSTRACT ..... **II**
KATA PENGANTAR ..... **III**
DAFTAR ISI ..... **V**
DAFTAR GAMBAR ..... **IX**
DAFTAR TABEL ..... **XIII**
DAFTAR SIMBOL ..... **XVI**
DAFTAR REFERENSI *PROPERTIES GAME* ..... **XIX**
DAFTAR LAMPIRAN ..... **XXII**
BAB I PENDAHULUAN **1**
I.1. Latar Belakang Masalah 1
I.2. Perumusan Masalah 2
I.3. Maksud dan Tujuan 2
I.4. Batasan Masalah 3
I.5. Metodologi Penelitian 3
I.6. Sistematika Penulisan 6
BAB II TINJAUAN PUSTAKA **8**
II.1. Multimedia 8
II.2. *Game* 9
II.2.1. Pengertian *Game* 10
II.2.2. *Game* 3D 10
II.2.3. Jenis-jenis *Game* 11
II.2.4. Third Person Shooter 11
II.3. Kecerdasan Buatan 12
II.4. Algoritma Pencarian 14
II.4.1. Pencarian Buta 15

II.4.2. Pencarian Terbimbing 15
II.5. Algoritma A*(A *Star*) 16
II.6. Fuzzy Logic 22
II.6.1. Himpunan *Fuzzy* 23
II.6.2. Fungsi Keanggotaan 26
II.6.3. Operator Dasar *Fuzzy* 30
II.6.4. Penalaran Monoton 31
II.6.5. Fungsi Implikasi 31
II.6.6. Metode Mamdani 32
II.6.7. Metode Sugeno 33
II.7. OOP (Object Oriented Programming) 35
II.8. UML (Unified Modeling Language) 36
II.8.1. Use Case Diagram 37
II.8.2. Class Diagram 38
II.8.3. Statechart Diagram 38
II.8.4. Activity Diagram 39
II.8.5. Sequence Diagram 39
II.8.6. Collaboration Diagram 40
II.8.7. Component Diagram 40
II.8.8. Deployment Diagram 40
II.9. C# 41
II.10. Unity Game Engine 41
II.11. 3D *Studio Max* 42
BAB III ANALISIS DAN PERANCANGAN SISTEM 44
III.1. Analisis Sistem 44
III.1.1 Analisis *Game* Sejenis 44
III.1.2 Analisis *Game* yang Akan Dibangun 49
III.1.2.1. *Storyline* 49

III.1.2.2. *Gameplay* 49
III.1.2.3. Deskripsi *Level*.....50
III.2. Analisis AI 52
III.2.1 Analisis Algoritma A* (*A Star*) 52
III.2.1 Analisis Algoritma *Fuzzy Logic*.....66
III.3. Analisis Kebutuhan Non Fungsional 73
III.3.1 Analisis Perangkat Lunak 74
III.3.2 Analisis Perangkat Keras 74
III.3.3 Analisis Pengguna.....75
III.4. Analisis Kebutuhan Fungsional 76
III.4.1. Use Case Diagram.....76
III.4.2. Scenario Use Case.....78
III.4.3. Activity Diagram 89
III.4.4. Sequence Diagram 103
III.4.5. *Class Diagram* 107
III.5. Perancangan Sistem 108
III.5.1. *Storyboard*.....108
III.5.2. Pengenalan Karakter 110
III.6. Perancangan Arsitektur.....117
III.6.1. Perancangan Struktur Menu.....117
III.6.2. Perancangan Antar Muka.....117
III.6.3. Perancangan Pesan.....122
III.6.4. Jaringan Semantik.....122
III.7. Perancangan *Method*.....122
BAB IV IMPLEMENTASI DAN PENGUJIAN SISTEM.....126
IV.1. Implementasi.....126
IV.1.1.Implementasi Antarmuka.....127
IV.2. Pengujian.....136

IV.2.1. Pengujian *Alpha* 136
IV.2.2. Pengujian *Beta* 160
BAB V KESIMPULAN DAN SARAN 167
V.1. Kesimpulan 167
V.2. Saran 167
DAFTAR PUSTAKA 168