

DAFTAR ISI

| | |
|-----------------------------------|------|
| ABSTRAK..... | i |
| DAFTAR ISI..... | ii |
| DAFTAR GAMBAR..... | vi |
| DAFTAR TABEL..... | viii |
| DAFTAR SIMBOL..... | x |
| DAFTAR LAMPIRAN..... | 1 |
| BAB 1 PENDAHULUAN..... | 2 |
| 1.1 Latar Belakang Masalah..... | 2 |
| 1.2 Identifikasi Masalah..... | 4 |
| 1.3 Maksud Dan Tujuan..... | 5 |
| 1.3.1 Maksud..... | 5 |
| 1.3.2 Tujuan..... | 5 |
| 1.4 Batasan Masalah..... | 5 |
| 1.5 Metodologi Penelitian..... | 6 |
| 1.6 Sistematika Penulisan..... | 9 |
| BAB 2 LANDASAN TEORI..... | 11 |
| 2.1 Penerjemah..... | 11 |
| 2.2 Bahasa Alami..... | 11 |
| 2.3 Source Code..... | 11 |
| 2.4 PASCAL..... | 11 |
| 2.5 Manipulasi String PASCAL..... | 12 |
| 2.5.1 Pos..... | 13 |

| | | |
|--------------------------------------|---------------------------------------|----|
| 2.5.2 | Insert..... | 14 |
| 2.5.3 | Copy | 14 |
| 2.5.4 | Length | 15 |
| 2.5.5 | Concat | 15 |
| 2.6 | Natural Language Processing..... | 16 |
| 2.7 | Case Folding..... | 16 |
| 2.8 | Filtering | 17 |
| 2.9 | Scanning | 17 |
| 2.9.1 | Identifier..... | 18 |
| 2.9.2 | Operator..... | 18 |
| 2.9.3 | Delimiter | 18 |
| 2.9.4 | Nilai Konstanta..... | 18 |
| 2.10 | Parsing | 19 |
| 2.11 | Hypertext Preprocessor (PHP)..... | 19 |
| 2.12 | Metode Pengujian | 19 |
| 2.13 | Unified Modeling Language (UML) | 20 |
| 2.13.1 | Use Case Diagram..... | 20 |
| 2.13.2 | Activity Diagram..... | 20 |
| 2.13.3 | Class Diagram | 21 |
| 2.13.4 | Sequence Diagram | 21 |
| BAB 3 ANALISIS DAN PERANCANGAN | | 22 |
| 3.1 | Analisis Masalah | 22 |
| 3.1.1 | Length | 23 |
| 3.1.2 | Insert..... | 24 |
| 3.1.3 | Pos..... | 25 |

| | | |
|---|---|------------|
| 3.1.4 | Copy | 26 |
| 3.1.5 | Concat | 27 |
| 3.2 | Analisis Data Masukan..... | 27 |
| 3.3 | Analisis Sistem | 28 |
| 3.4 | Analisis Proses Translasi..... | 31 |
| 3.4.1 | Pre-processing | 31 |
| 3.4.2 | Scanning..... | 33 |
| 3.4.3 | Parsing..... | 39 |
| 3.4.4 | Transalasi | 65 |
| 3.5 | Perancangan Sistem..... | 77 |
| 3.5.1 | Model Use Case | 77 |
| 3.5.2 | Activity Diagram..... | 88 |
| 3.5.3 | Class Diagram | 101 |
| 3.5.4 | Sequence Diagram | 107 |
| 3.5.5 | Perancangan Basis Data | 111 |
| 3.5.6 | Perancangan Antar Muka..... | 114 |
| 3.5.7 | Perancangan Pesan | 122 |
| 3.5.8 | Jaringan Semantik | 123 |
| 3.6 | Analisis Kebutuhan | 124 |
| 3.6.1 | Analisis Kebutuhan Non Fungsional | 124 |
| BAB 4 IMPLEMENTASI DAN PENGUJIAN | | 127 |
| 4.1 | Implementasi Sistem | 127 |
| 4.1.1. | Implementasi Perangkat Keras..... | 127 |
| 4.1.2. | Implementasi Perangkat Lunak..... | 127 |
| 4.1.3. | Implementasi Basis Data..... | 128 |

| | | |
|----------------|--------------------------------------|-----|
| 4.1.4. | Implementasi Antarmuka | 130 |
| 4.1.5. | Implementasi Pesan..... | 144 |
| 4.2 | Pengujian Sistem | 146 |
| 4.2.1 | Pengujian Fungsionalitas | 146 |
| 4.2.2 | Hasil Pengujian Fungsionalitas | 147 |
| 4.2.3 | Pengujian Akurasi | 154 |
| 4.2.4 | Skenario Pengujian..... | 155 |
| 4.2.5 | Analisis Hasil Pengujian | 159 |
| BAB 5 | KESIMPULAN DAN SARAN | 163 |
| 5.1. | Kesimpulan..... | 163 |
| 5.2. | Saran..... | 163 |
| DAFTAR PUSTAKA | | 165 |