

## DAFTAR ISI

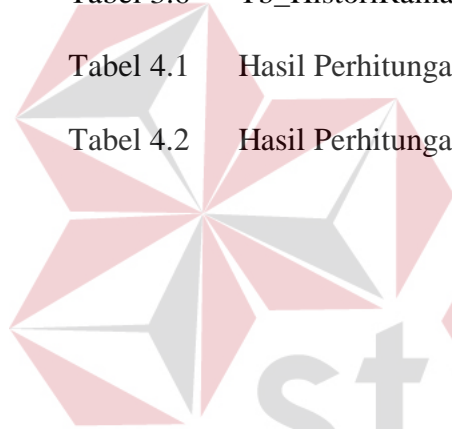
|  | Halaman |
|--|---------|
| ABSTRAK .....  | vi      |
| KATA PENGANTAR .....                                     | vii     |
| DAFTAR ISI .....   | ix      |
| DAFTAR TABEL .....                                       | xii     |
| DAFTAR GAMBAR .....                                      | xiii    |
| BAB I PENDAHULUAN .....                                  | 1       |
| 1.1 Latar Belakang Masalah .....                         | 1       |
| 1.2 Perumusan Masalah .....                              | 2       |
| 1.3 Batasan Masalah .....                                | 3       |
| 1.4 Tujuan .....   | 4       |
| 1.5 Sistematika Penulisan .....                          | 4       |
| BAB II LANDASAN TEORI .....                              | 6       |
| 2.1 Teknik Peramalan .....                               | 6       |
| 2.2 Peramalan Penjualan .....                            | 7       |
| 2.3 Metode Exponential Smoothing .....                   | 8       |
| 2.4 Metode Linier Exponential Smoothing Dari Brown ..... | 9       |
| 2.5 Ukuran Ketepatan Metode Peramalan .....              | 10      |
| 2.6 Konsep Dasar Sistem .....                            | 11      |
| 2.7 Konsep Dasar Informasi .....                         | 15      |
| 2.8 Konsep Dasar Sistem Informasi .....                  | 15      |
| 2.9 Pendekatan Sistem .....                              | 15      |

|   |           |
|---|-----------|
| 2.10 System Development Life Cycle .....                              | 16        |
| 2.11 Entity Relationship Diagram (ERD) .....                          | 18        |
| 2.12 Data Flow Diagram (DFD) .....                                    | 18        |
| 2.13 System Flow .....  | 19        |
| <b>BAB III PERANCANGAN SISTEM .....</b>                               | <b>20</b> |
| 3.1 Analisa Permasalahan .....  | 20        |
| 3.2 Desain Arsitektur .....   | 22        |
| 3.3 Perancangan Proses .....  | 23        |
| 3.4 Alur Sistem (System Flow) .....                                   | 25        |
| 3.5 Data Flow Diagram (DFD) .....                                     | 29        |
| 3.5.1 Context Diagram Sistem Informasi Peramalan Penjualan Buah ..... | 29        |
| 3.5.2 DFD Level 0 Sistem Informasi Peramalan Penjualan Buah .....     | 30        |
| 3.5.3 DFD Level 1 Subproses Peramalan Penjualan Buah .....            | 31        |
| 3.5.4 DFD Level 1 Subproses Pelaporan Hasil Ramalan .....             | 32        |
| 3.6 Entity Relationship Diagram (ERD) .....                           | 33        |
| 3.7 Struktur Database .....   | 35        |
| 3.8 Desain Input/Output .....   | 38        |
| <b>BAB IV IMPLEMENTASI DAN EVALUASI .....</b>                         | <b>43</b> |
| 4.1 Kebutuhan Sistem .....  | 43        |
| 4.1.1 Kebutuhan perangkat keras.....                                  | 43        |
| 4.1.2 Kebutuhan perangkat lunak .....                                 | 43        |
| 4.2 Implementasi Program .....  | 44        |
| 4.2.1 Form Utama .....  | 44        |

|       |   |    |
|-------|---|----|
| 4.2.2 | Form Login .....  | 45 |
| 4.2.3 | Form Maintenance Data Buah .....                              | 45 |
| 4.2.4 | Form Maintenance Data User .....                              | 46 |
| 4.2.5 | Form Penjualan .....  | 47 |
| 4.2.6 | Form Rekap Penjualan .....                                    | 47 |
| 4.2.7 | Form Peramalan .....  | 48 |
| 4.2.8 | Form Laporan Penjualan .....                                  | 49 |
| 4.2.9 | Form Laporan Peramalan .....                                  | 50 |
| 4.3   | Uji coba sistem .....   | 50 |
| 4.3.1 | Uji Coba Metode Linier Exponential Smoothing Dari Brown ..... | 50 |
| 4.4   | Evaluasi Sistem .....   | 57 |
| 4.4.1 | Analisa Hasil Uji Coba .....                                  | 57 |
| BAB V | PENUTUP .....   | 58 |
| 5.1   | Kesimpulan .....  | 58 |
| 5.2   | Saran .....   | 58 |
|       | DAFTAR PUSTAKA .....  | 60 |
|       | LAMPIRAN .....  | 61 |

## DAFTAR TABEL

|   | Halaman |
|---|---------|
| Tabel 3.1 Tb_Penjualan .....  | 36      |
| Tabel 3.2 Tb_DetilPenjualan .....                                   | 36      |
| Tabel 3.3 Tb_Buah .....   | 36      |
| Tabel 3.4 Tb_Peramalan .....  | 37      |
| Tabel 3.5 Tb_Rekap_Penjualan .....                                  | 37      |
| Tabel 3.6 Tb_HistoriRamalan.....                                    | 37      |
| Tabel 4.1 Hasil Perhitungan Dan MAD Salak Bali Untuk 1 Periode..... | 54      |
| Tabel 4.2 Hasil Perhitungan Dan MAD Pear Sweet Untuk 1 Periode..... | 56      |



INSTITUT BISNIS  
& INFORMATIKA  
**stikom**  
SURABAYA

## DAFTAR GAMBAR

|  | Halaman |
|--|---------|
| Gambar 2.1 Karakteristik Sistem .....  | 14      |
| Gambar 3.1 Proses Sistem Peramalan .....                                       | 22      |
| Gambar 3.2 Arsitektur Proses Peramalan.....                                    | 23      |
| Gambar 3.3 Diagram Alir Proses Peramalan Linier Exponential Smoothing          | 24      |
| Gambar 3.4 Diagram Alir Proses Peramalan Exponential Smoothing .....           | 25      |
| Gambar 3.5 System Flow Pengelolaan Data Penjualan Buah.....                    | 26      |
| Gambar 3.6 System Flow Peramalan Linier Exponential Smoothing Oleh Brown ..... | 27      |
| Gambar 3.7 System Flow Perbandingan Peramalan .....                            | 28      |
| Gambar 3.8 Context Diagram Sistem Informasi Peramalan Penjualan Buah           | 29      |
| Gambar 3.9 DFD Level 0 Sistem Informasi Peramalan Penjualan Buah .....         | 30      |
| Gambar 3.10 DFD Level 1 Subproses Peramalan Penjualan Buah .....               | 32      |
| Gambar 3.11 DFD Level 1 Subproses Pelaporan Hasil Ramalan .....                | 33      |
| Gambar 3.12 CDM Sistem Informasi Peramalan Penjualan Buah .....                | 34      |
| Gambar 3.13 PDM Sistem Informasi Peramalan Penjualan Buah.....                 | 35      |
| Gambar 3.14 Desain Form Login .....  | 38      |
| Gambar 3.15 Desain Form Utama .....  | 38      |
| Gambar 3.16 Desain Form Maintenance Buah .....                                 | 39      |
| Gambar 3.17 Desain Form Maintenance User .....                                 | 39      |
| Gambar 3.18 Desain Form Penjualan .....  | 40      |
| Gambar 3.19 Desain Form Rekap Penjualan .....                                  | 41      |
| Gambar 3.20 Desain Form Ramalan .....  | 41      |

|             |  |    |
|-------------|--|----|
| Gambar 3.21 | Desain Form Laporan Penjualan .....  | 42 |
| Gambar 3.22 | Desain Form Laporan Peramalan .....  | 42 |
| Gambar 4.1  | Form Utama.....  | 44 |
| Gambar 4.2  | Form Login.....  | 45 |
| Gambar 4.3  | Form Maintenance Data Buah.....  | 46 |
| Gambar 4.4  | Form Maintenance Data User .....   | 46 |
| Gambar 4.5  | Form Penjualan .....   | 47 |
| Gambar 4.6  | Form Rekap Penjualan .....   | 48 |
| Gambar 4.7  | Form Peramalan .....   | 49 |
| Gambar 4.8  | Form Laporan Penjualan .....   | 49 |
| Gambar 4.9  | Form Laporan Peramalan .....   | 50 |
| Gambar 4.10 | Pilih Nama Buah .....  | 51 |
| Gambar 4.11 | Pilih Periode Ramalan .....  | 51 |
| Gambar 4.12 | Hasil Ramalan Dengan Metode Linier Exponential Smoothing<br>Dengan Alpha 0.1 ..... | 52 |
| Gambar 4.13 | Hasil Ramalan Dengan Metode Linier Exponential Smoothing<br>Dengan Alpha 0.9 ..... | 53 |
| Gambar 4.14 | Hasil Ramalan Exponential Smoothing Dengan Alpha 0.1 .....                         | 53 |
| Gambar 4.15 | Hasil Peramalan Dengan Kesalahan Terkecil .....                                    | 54 |