ABSTRAKSI

Modul Manajemen Data Transaksi Sistem Auto Voucher Refil ini merupakan salah satu dari tiga bagian modul Sistem Auto Refill Voucher Pulsa (Sistem ARV) yang dikembangkan. Program ini bertugas sebagai media penyimpanan atau pengolahan data yang terdapat di Sistem ARV. Hasil dari pengolahan data tersebut akan di simpan di dalam sebuah database. Disamping itu juga terdapat menu pencatatan laporan-laporan transaksi yang terjadi, sebagai bukti dari hasil terjadinya transaksi dan juga sebagai acuan perkembangan bisnis jual beli pulsa melalui media software ini. Dilihat dari segi kegunaannya, modul ini dapat juga dikatakan sebagai sistem manajemen data pada sistem Auto Refill Voucher. Sehingga sistem yang telah jadi ini dapat menciptakan kemudahan, keteraturan dan keleluasaan bagi user atau pemakai dalam menjalankan usaha penjualan pulsa elektrik melalui SMS. Dan akhirnya dapat membuat usaha atau bisnis tersebut dapat berkembang ke arah yang lebih baik.

Kata Kunci : Sistem ARV, Database, Media Penyimpanan dan Pengolahan Data
ABSTRACT

Data Management Of Transaction Auto Refill Voucher System one of three parts Auto Refill Voucher System (ARV System) that was developed. This program is use for a storage and data processing media. The result of data processing will be stored into a database. There also it has a menu for reporting of transaction, as a prove from the transaction result that happen and it also a reference for trading credit of cellphone business development. In point of view, this module it can be said as a data management system in Auto Refill Voucher System. With the result that, this system has already made will create easily, orderly, and generously for user to operate this business by short message service media. And the last, it can make this business will develop into a better way.

Keyword : ARV System, Database, Storage and Data Processing Media
DAFTAR ISI

LEMBAR PENGESAHAN ...............................................................................................................i
LEMBAR ORISINALITAS LAPORAN .........................................................................................ii
LEMBAR PERSETUJUAN PUBLIKASI KARYA ILMIAH ............................................................ iii
KATA PENGANTAR .................................................................................................................... iv
ABSTRAKSI ............................................................................................................................... vi
ABSTRACT .................................................................................................................................... vii
DAFTAR ISI .....................................................................................................................................viii
DAFTAR GAMBAR ....................................................................................................................... xi
Daftar Tabel ................................................................................................................................. xiii
BAB I PERSYARATAN PRODUK ................................................................................................. 1
  I.1. Proses Bisnis ......................................................................................................................... 1
      I.1.1. Latar Belakang ............................................................................................................. 1
      I.1.2. Keadaan Awal Bisnis Multi Level Penjualan Voucher ............................................. 2
      I.1.3. Pengertian Software ARV ......................................................................................... 4
      I.1.4. Target Pasar ............................................................................................................... 4
      I.1.5. Fitur Utama ............................................................................................................... 5
      I.1.6. Desain Alur Kerja Software ..................................................................................... 6
      I.1.7. Pengembangan Software ARV ................................................................................ 12
      I.1.8. Definisi, Akronim, dan Singkatan ........................................................................ 13
      I.1.9. Batasan – Batasan Masalah .................................................................................... 15
BAB II SPESIFIKASI PRODUK ................................................................................................. 17
  II.1. Pendahuluan Modul Dokumentasi Auto Refill Voucher ............................................ 17
      II.2.1. Ruang Lingkup Modul ........................................................................................... 17
  II.2. Gambaran Keseluruhan ................................................................................................... 18
      II.2.1. Perspektif Produk .................................................................................................. 18
      II.2.2. Fungsi Produk ........................................................................................................ 19
II.3. Persyaratan Antarmuka Eksternal

II.3.1. Antarmuka dengan Pengguna

II.3.2. Antarmuka Perangkat Keras

II.3.3. Antarmuka Perangkat Lunak

II.3.4. Antarmuka Komunikasi

II.4. Fitur Produk Perangkat Lunak

BAB III DESAIN PERANGKAT LUNAK

III.1. Pendahuluan

III.1.1. Identifikasi

III.2. Desain Arsitektur Perangkat Lunak

III.2.1. Use Case Diagram

III.2.1.1. Landasan Teori

III.2.2. Activity Diagram

III.2.2.1. Landasan Teori

III.2.2.2. Gambar Activity Diagram

III.2.3. Class Diagram

III.2.3.1. Landasan Teori

III.2.3.2. Gambar Diagram

III.2.4. Entitas Relasi Diagram (ERD)

III.2.4.1. Landasan Teori

III.2.4.2. Pembahasan ERD

BAB IV PENGEMBANGAN SISTEM

IV.1. Perencanaan Tahap Implementasi

IV.1.1. Keterkaitan Antar Class

IV.1.1. Keterkaitan Antar Tabel di Database

Penjelasan Tabel Yang Ada di Dalam Database

IV.2. Perjalanan Tahap Implementasi (Coding)

IV.2.1. Bottom Up Implementasi
BAB V TESTING DAN EVALUASI SISTEM ................................................................. 90
  V.1.  Rencana Pengujian Sistem Terimplementasi ............................................. 90
    V.1.1.  Test Case ......................................................................................... 90
  V.2.  Perjalanan Metodologi Pengujian ............................................................ 91
    V.2.1.  Metode White Box ........................................................................... 91
    V.2.2.  Metode Black Box ........................................................................... 95
  V.3.  Ulasan Hasil Evaluasi ............................................................................. 96
BAB VI KESIMPULAN DAN SARAN ..................................................................... 97
  VI.1.  Keterkaitan Antara Kesimpulan dengan Hasil Evaluasi ......................... 97
  VI.2.  Keterkaitan Antara Saran dengan Hasil Evaluasi .................................... 98
DAFTAR PUSTAKA ............................................................................................... 99
Lampiran I : Daftar Index / Istilah / Kata Sukar ................................................... 100
Lampiran II : Kuesioner Black Box ..................................................................... 102
Lampiran III : Identitas Diri ................................................................................ 108
<table>
<thead>
<tr>
<th>Gambar III. 1 Gambar Aktor</th>
<th>28</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gambar III. 2 Gambar Use Case</td>
<td>28</td>
</tr>
<tr>
<td>Gambar III. 3 Gambar Garis Relasi</td>
<td>29</td>
</tr>
<tr>
<td>Gambar III. 4 Gambar Include</td>
<td>29</td>
</tr>
<tr>
<td>Gambar III. 5 Gambar Extends</td>
<td>29</td>
</tr>
<tr>
<td>Gambar III. 6 Use Case GUI</td>
<td>30</td>
</tr>
<tr>
<td>Gambar III. 7 Use Case DBase</td>
<td>31</td>
</tr>
<tr>
<td>Gambar III. 8 Inisial Awal</td>
<td>32</td>
</tr>
<tr>
<td>Gambar III. 9 Control Flow</td>
<td>32</td>
</tr>
<tr>
<td>Gambar III. 10 Action State</td>
<td>32</td>
</tr>
<tr>
<td>Gambar III. 11 Decision</td>
<td>33</td>
</tr>
<tr>
<td>Gambar III. 12 Inisialisasi Akhir</td>
<td>33</td>
</tr>
<tr>
<td>Gambar III. 13 Proses Otomatisasi</td>
<td>33</td>
</tr>
<tr>
<td>Gambar III. 14 Proses Tekan Off</td>
<td>34</td>
</tr>
<tr>
<td>Gambar III. 15 Activity Tambah Downline</td>
<td>34</td>
</tr>
<tr>
<td>Gambar III. 16 Activity Edit Downline</td>
<td>35</td>
</tr>
<tr>
<td>Gambar III. 17 Activity Hapus Member</td>
<td>36</td>
</tr>
<tr>
<td>Gambar III. 18 Activity Tambah Saldo</td>
<td>37</td>
</tr>
<tr>
<td>Gambar III. 19 Activity Edit Saldo</td>
<td>38</td>
</tr>
<tr>
<td>Gambar III. 20 Activity Tambah Produk</td>
<td>39</td>
</tr>
<tr>
<td>Gambar III. 21 Activity Edit Produk</td>
<td>40</td>
</tr>
<tr>
<td>Gambar III. 22 Activity Delete Produk</td>
<td>41</td>
</tr>
<tr>
<td>Gambar III. 23 Activity Kirim Pesan</td>
<td>42</td>
</tr>
<tr>
<td>Gambar III. 24 Activity Pesan Masuk</td>
<td>43</td>
</tr>
<tr>
<td>Gambar III. 25 Activity Pesan Keluar</td>
<td>43</td>
</tr>
<tr>
<td>Gambar III. 26 Activity Transaksi Request</td>
<td>44</td>
</tr>
<tr>
<td>Gambar III. 27 Activity Transaksi Sending</td>
<td>45</td>
</tr>
<tr>
<td>Gambar III. 28 Activity Konfigurasi SMS Device</td>
<td>46</td>
</tr>
<tr>
<td>Gambar III. 29 Activity Cetak Laporan</td>
<td>47</td>
</tr>
<tr>
<td>Gambar III. 30 Management Table</td>
<td>49</td>
</tr>
<tr>
<td>Gambar III. 31 Service</td>
<td>50</td>
</tr>
<tr>
<td>Gambar III. 32 Class ARVDBManager</td>
<td>51</td>
</tr>
<tr>
<td>Gambar IV. 1 Keterkaitan Class I</td>
<td>56</td>
</tr>
<tr>
<td>Gambar IV. 2 Keterkaitan Class II</td>
<td>57</td>
</tr>
<tr>
<td>Gambar IV. 3 Keterkaitan Database</td>
<td>58</td>
</tr>
<tr>
<td>Gambar IV. 4 Tampilan Login</td>
<td>68</td>
</tr>
<tr>
<td>Gambar IV. 5 Pengisian Login</td>
<td>68</td>
</tr>
<tr>
<td>Gambar IV. 6 Tampilan Aktifkan ARV</td>
<td>69</td>
</tr>
<tr>
<td>Gambar IV. 7 Tampilan Data Member</td>
<td>70</td>
</tr>
<tr>
<td>Gambar IV. 8 Tampilan Tambah Member</td>
<td>71</td>
</tr>
<tr>
<td>Gambar IV. 9 Tampilan Ubah Member</td>
<td>72</td>
</tr>
<tr>
<td>Gambar IV. 10 Tampilan Hapus Member</td>
<td>73</td>
</tr>
<tr>
<td>Gambar IV. 11 Tampilan Data Produk</td>
<td>74</td>
</tr>
<tr>
<td>Gambar IV. 12 Tampilan Tambah Produk</td>
<td>75</td>
</tr>
<tr>
<td>Gambar IV. 13 Tampilan Hapus Produk</td>
<td>76</td>
</tr>
<tr>
<td>Gambar IV. 14 Tampilan Data Saldo</td>
<td>77</td>
</tr>
<tr>
<td>Gambar IV. 15 Tampilan Tambah Saldo</td>
<td>78</td>
</tr>
<tr>
<td>Gambar IV. 16 Tampilan Saldo Setelah Ditambah</td>
<td>79</td>
</tr>
<tr>
<td>Gambar IV. 17 Tampilan Mengurangi Saldo</td>
<td>80</td>
</tr>
<tr>
<td>Gambar IV. 18 Tampilan Data Saldo Setelah Dikurangkan</td>
<td>81</td>
</tr>
<tr>
<td>Gambar IV. 19 Tampilan Konfigurasi Data Pengguna</td>
<td>82</td>
</tr>
<tr>
<td>Gambar IV. 20 Tampilan Menu About</td>
<td>83</td>
</tr>
<tr>
<td>Gambar IV. 21 Tampilan Keluar Aplikasi</td>
<td>84</td>
</tr>
</tbody>
</table>
Daftar Tabel

Tabel V. 1 Pengujian `getTable` di `DbManager` Class .................................................. 91
Tabel V. 2 Pengujian `getResultSet` di `DbManager` Class ............................................. 92
Tabel V. 3 Pengujian `connect` di `DbService` Class ....................................................... 92
Tabel V. 4 Pengujian `disconnect` di `DbService` Class .................................................. 94
Tabel V. 5 Pengujian `updateQuery` di `DbService` Class ................................................. 94
Tabel V. 6 Pengujian `query` di `DbService` Class ......................................................... 94
Tabel V. 7 Black Box Login .......................................................................................... 95