DAFTAR ISI

Halaman

ABSTRAK ........................................................................................................................................ vi
KATA PENGANTAR .................................................................................................................... vii
DAFTAR ISI ................................................................................................................................... ix
DAFTAR TABEL ............................................................................................................................. xiii
DAFTAR GAMBAR ......................................................................................................................... xvi
DAFTAR LAMPIRAN .................................................................................................................... xviii

BAB I  PENDAHULUAN ............................................................................................................. 1
  1.1 Latar Belakang Masalah ........................................................................................................ 1
  1.2 Perumusan Masalah .............................................................................................................. 4
  1.3 Pembatasan Masalah .............................................................................................................. 4
  1.4 Tujuan .................................................................................................................................... 4
  1.5 Manfaat ................................................................................................................................ 5
  1.6 Sistemika Penulisan .............................................................................................................. 5

BAB II  LANDASAN TEORI ......................................................................................................... 7
  2.1 Sumber Daya Manusia ......................................................................................................... 7
  2.2 Sumber Daya Manusia Kesehatan dan Tenaga Kesehatan ................................................... 8
  2.3 Beban Kerja .......................................................................................................................... 9
    2.3.1 Pengertian Beban Kerja ................................................................................................ 9
    2.3.2 Faktor-Faktor yang Mempengaruhi Beban Kerja ....................................................... 10
    2.3.3 Dampak dari Beban Kerja ............................................................................................ 11
  2.4 Analisis Jabatan .................................................................................................................. 12
    2.4.1 Pengertian Analisis Jabatan ....................................................................................... 12
Halaman

2.4.2 Tujuan Analisis Jabatan ................................................. 12
2.4.3 Manfaat Analisis Jabatan ............................................... 13
2.5 Perencanaan Sumber Daya Manusia......................................... 14
  2.5.1 Definisi Perencanaan Sumber Daya manusia ............... 14
  2.5.2 Tahapan Dalam Perencanaan Sumber Daya Manusia .... 14
  2.5.3 Tujuan Perencanaan Sumber Daya Manusia ............... 15
  2.5.4 Manfaat Perencanaan Sumber Daya Manusia ............. 16
2.6 Prosedur Perhitungan Kebutuhan Tenaga Kesehatan dengan Menggunakan Metode WISN (Workload Indicator Staff Need) ........................................................................................ 17
2.7 Puskesmas ............................................................................. 20
2.8 Definisi Data ........................................................................... 21
2.9 Konsep Dasar Sistem Informasi ............................................. 21
2.10 Metode Pengembangan Sistem ......................................... 22
  2.10.1 Analisa Kebutuhan Perangkat Lunak ..................... 23
  2.10.2 Desain Perangkat Lunak ........................................... 24
  2.10.3 Konstruksi Perangkat Lunak ................................. 35
  2.10.4 Uji Coba Perangkat Lunak ................................. 36
  2.10.5 Deploy Perangkat Lunak .................................. 37
BAB III ANALISIS DAN PERANCANGAN SISTEM....................... 38
  3.1 Identifikasi dan Analisis Permasalahan ................................. 38
    3.1.1 Alir Proses Pengisian Form ABK ......................... 41
    3.1.2 Alir Proses Penghitungan Beban Kerja dan Pelaporan Jumlah Kebutuhan Pegawai ................................. 43
3.1.3 Alir Proses Persetujuan Laporan Jumlah Kebutuhan Pegawai ................................................................. 47

3.2 Permasalahan......................................................................................................................... 49

3.2.1 Analisis pada Proses Pengisian Form ABK .................. 49

3.2.2 Analisis pada Proses Penghitungan Beban Kerja dan Pelaporan Jumlah Kebutuhan Pegawai ....................... 49

3.3 Solusi Permasalahan......................................................................................................... 50

3.3.1 Kebutuhan Perangkat Lunak ................................ 51

3.3.2 Desain Sistem (Software Design) ....................... 66

3.3.3 Context Diagram ............................................................ 79

3.3.4 Hirarki Input Proses Output ........................................ 80

3.3.5 Data Flow Diagram (DFD) ............................................ 81

3.3.6 Entity Relationship Diagram (ERD) ................. 98

3.3.7 Struktur Basis Data ...................................................... 100

3.3.8 Perancangan Prosedur dan Program Unit .......... 106

3.3.9 Program Unit ............................................................... 118

3.3.10 Desain Uji Coba Implementasi Data .................. 119

3.3.11 Desain Arsitektur ......................................................... 132

BAB IV IMPLEMENTASI DAN EVALUASI .................................................. 132

4.1 Implementasi .................................................................................................................... 133

4.1.1 Uji Coba Fungsional .................................................. 133

4.1.2 Uji Coba Non Fungsional .......................................... 141

4.1.3 Implementasi Data ....................................................... 150
<table>
<thead>
<tr>
<th>Tabel</th>
<th>Deskripsi</th>
<th>Halaman</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tabel 2.1</td>
<td>Simbol</td>
<td>26</td>
</tr>
<tr>
<td>Tabel 2.2</td>
<td>Jenis ERD</td>
<td>31</td>
</tr>
<tr>
<td>Tabel 3.1</td>
<td>Proses Bisnis Berdasarkan Stakeholder</td>
<td>39</td>
</tr>
<tr>
<td>Tabel 3.2</td>
<td>Penjelasan Alir Proses Pengisian Form ABK</td>
<td>42</td>
</tr>
<tr>
<td>Tabel 3.3</td>
<td>Penjelasan Alir Proses Penghitungan Beban Kerja</td>
<td>45</td>
</tr>
<tr>
<td>Tabel 3.4</td>
<td>Penjelasan Alir Proses Persetujuan Laporan Jumlah Kebutuhan Pegawai</td>
<td>48</td>
</tr>
<tr>
<td>Tabel 3.5</td>
<td>Detail Kebutuhan Fungsional Mengisi Form ABK</td>
<td>55</td>
</tr>
<tr>
<td>Tabel 3.6</td>
<td>Detail Kebutuhan Fungsional Penghitungan Beban Kerja dan Pelaporan Jumlah Kebutuhan Pegawai</td>
<td>58</td>
</tr>
<tr>
<td>Tabel 3.7</td>
<td>Detail Kebutuhan Fungsional Persetujuan Laporan Jumlah Kebutuhan Pegawai</td>
<td>64</td>
</tr>
<tr>
<td>Tabel 3.8</td>
<td>Hubungan Fungsional dan Non-Fungsional Sistem</td>
<td>65</td>
</tr>
<tr>
<td>Tabel 3.9</td>
<td>Kebijakan Berdasarkan Stakeholder Sesuai Sistem Baru</td>
<td>68</td>
</tr>
<tr>
<td>Tabel 3.10</td>
<td>Penjelasan Alir Sistem Pengisian Form ABK</td>
<td>70</td>
</tr>
<tr>
<td>Tabel 3.11</td>
<td>Penjelasan Alir Penghitungan Beban Kerja</td>
<td>74</td>
</tr>
<tr>
<td>Tabel 3.12</td>
<td>Penjelasan Alir Persetujuan Laporan Jumlah Kebutuhan Pegawai</td>
<td>78</td>
</tr>
<tr>
<td>Tabel 3.13</td>
<td>Penjelasan DFD Level 0</td>
<td>82</td>
</tr>
<tr>
<td>Tabel 3.14</td>
<td>Penjelasan DFD Level 1 Pengisian Form ABK</td>
<td>85</td>
</tr>
<tr>
<td>Tabel 3.15</td>
<td>Penjelasan DFD Level 1 Penghitungan Beban Kerja</td>
<td>90</td>
</tr>
<tr>
<td>Tabel 3.16</td>
<td>Penjelasan DFD Level 1 Laporan Jumlah Kebutuhan Pegawai</td>
<td>95</td>
</tr>
<tr>
<td>Tabel 3.17</td>
<td>Penjelasan DFD Level 1 Persetujuan Jumlah Kebutuhan Pegawai</td>
<td>97</td>
</tr>
<tr>
<td>Tabel 3.18</td>
<td>USER_ADMIN</td>
<td>100</td>
</tr>
</tbody>
</table>
Tabel 3.19 UNIT_KERJA ................................................................. 101
Tabel 3.20 DETAIL_UNIT_KERJA ................................................ 101
Tabel 3.21 KATEGORI_KERJA ...................................................... 102
Tabel 3.22 KEGIATAN_POKOK .................................................... 102
Tabel 3.23 KUANTITAS_KEGIATAN ........................................... 103
Tabel 3.24 WKT ......................................................................... 103
Tabel 3.25 STANDART_BEBAN_KERJA ....................................... 104
Tabel 3.26 KELONGGARAN_KERJA ............................................. 105
Tabel 3.27 WISN ........................................................................ 105
Tabel 3.28 Detail Form Pengisian Form ABK ................................. 107
Tabel 3.29 Detail Form Perhitungan Beban Kerja ......................... 109
Tabel 3.30 Detail Form Perhitungan Beban Kerja ......................... 115
Tabel 3.31 Detail Form Persetujuan Laporan Jumlah Kebutuhan Pegawai 117
Tabel 3.32 Program Unit Sistem .................................................. 118
Tabel 3.33 Data Unit Kerja .......................................................... 119
Tabel 3.34 Data Kategori Kerja .................................................... 120
Tabel 3.35 Data Kegiatan Pokok .................................................. 120
Tabel 3.36 Data Waktu Kerja Tersedia ....................................... 121
Tabel 3.37 Hasil Penghitungan Waktu Kerja Tersedia .................. 122
Tabel 3.38 Data Standart Beban Kerja ........................................ 123
Tabel 3.39 Hasil Penghitungan Standart Beban Kerja .................. 124
Tabel 3.40 Data Faktor Kelonggaran .......................................... 126
Tabel 3.41 Hasil Penghitungan Standart Kelonggaran .................. 126
Halaman

Tabel 3.42 Data Kuantitas Kegiatan ................................................................. 127
Tabel 3.43 Hasil Penghitungan Kuantitas Kegiatan ..................................... 128
Tabel 3.44 Data Kebutuhan SDM ................................................................. 130
Tabel 3.45 Hasil Penghitungan Kebutuhan SDM ........................................ 131
Tabel 4.1 Hasil Uji Fungsional Staff Unit Layanan ...................................... 134
Tabel 4.2 Hasil Uji Fungsional Pada Unit Layanan Puskesmas .................... 136
Tabel 4.3 Hasil Uji Fungsional Staff Tata Usaha .......................................... 139
Tabel 4.4 Hasil Uji Fungsional Kepala Puskesmas ....................................... 140
Tabel 4.5 Uji Coba Non-Fungsional Security ............................................... 142
Tabel 4.6 Uji Coba Non-Fungsional Correctness ........................................ 143
Tabel 4.7 Uji Coba Non-Fungsional Interface ............................................. 144
Tabel 4.8 Uji Coba Non-Fungsional Operability .......................................... 145
Tabel 4.9 Uji Coba Non-Fungsional Performance ...................................... 146
Tabel 4.10 Penjelasan Form Login .............................................................. 151
Tabel 4.11 Proses Pengisian Form ABK ..................................................... 152
Tabel 4.12 Proses Penghitungan Beban Kerja ............................................ 158
Tabel 4.13 Proses Pelaporan Jumlah Kebutuhan Pegawai ............................ 168
Tabel 4.14 Proses Persetujuan Laporan Jumlah Kebutuhan Pegawai ......... 170
### DAFTAR GAMBAR

<table>
<thead>
<tr>
<th>Gambar</th>
<th>Judul</th>
<th>Halaman</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Model Waterfall</td>
<td>23</td>
</tr>
<tr>
<td>2.2</td>
<td>Simbol External Entity</td>
<td>29</td>
</tr>
<tr>
<td>2.3</td>
<td>Simbol Proses</td>
<td>29</td>
</tr>
<tr>
<td>2.4</td>
<td>Simbol Penyimpanan Data</td>
<td>30</td>
</tr>
<tr>
<td>2.5</td>
<td>Simbol Data Flow</td>
<td>30</td>
</tr>
<tr>
<td>2.6</td>
<td>Relasi One To One</td>
<td>33</td>
</tr>
<tr>
<td>2.7</td>
<td>Relasi One To Many</td>
<td>34</td>
</tr>
<tr>
<td>2.8</td>
<td>Relasi Many To Many</td>
<td>34</td>
</tr>
<tr>
<td>3.1</td>
<td>Alir Proses Pengisian Form ABK Saat Ini</td>
<td>42</td>
</tr>
<tr>
<td>3.2</td>
<td>Alir Proses Penghitungan Beban Kerja dan Pelaporan Jumlah Kebutuhan</td>
<td>44</td>
</tr>
<tr>
<td>3.3</td>
<td>Alir Proses Persetujuan Laporan Jumlah Kebutuhan Pegawai</td>
<td>47</td>
</tr>
<tr>
<td>3.4</td>
<td>Waterfall Mode</td>
<td>50</td>
</tr>
<tr>
<td>3.5</td>
<td>Blok Diagram Aplikasi Evaluasi Beban Kerja Tenaga Kesehatan</td>
<td>67</td>
</tr>
<tr>
<td>3.6</td>
<td>Detail Kebutuhan Fungsional Mengisi Form ABK</td>
<td>70</td>
</tr>
<tr>
<td>3.7</td>
<td>Detail Kebutuhan Fungsional Penghitungan Beban Kerja</td>
<td>73</td>
</tr>
<tr>
<td>3.8</td>
<td>Detail Kebutuhan Fungsional Persetujuan Laporan Jumlah Kebutuhan Pegawai</td>
<td>78</td>
</tr>
<tr>
<td>3.9</td>
<td>Context Diagram</td>
<td>79</td>
</tr>
<tr>
<td>3.10</td>
<td>Diagram HIPO Aplikasi Evaluasi Beban Kerja</td>
<td>81</td>
</tr>
<tr>
<td>3.11</td>
<td>DFD Level 0</td>
<td>82</td>
</tr>
<tr>
<td>3.12</td>
<td>DFD Level 1 Pengisian Form ABK</td>
<td>85</td>
</tr>
<tr>
<td>3.13</td>
<td>DFD Level 1 Penghitungan Beban Kerja</td>
<td>89</td>
</tr>
</tbody>
</table>
Gambar 3.14  DFD Level 1 Laporan Jumlah Kebutuhan Pegawai ............... 95
Gambar 3.15  DFD Level 1 Persetujuan Jumlah Kebutuhan Pegawai ........ 96
Gambar 3.16  Conceptual Data Model Aplikasi Evaluasi Beban Kerja ...... 99
Gambar 3.17  Physical Data Model Aplikasi Evaluasi Beban Kerja ........... 100
Gambar 3.18  Arsitektur Aplikasi .......................................................... 131
Gambar 4.1  Form Login ........................................................................ 151
Gambar 4.2  Laporan Jumlah Kebutuhan Tenaga Kesehatan dengan Aplikasi ................................................................. 172
Gambar 4.3  Laporan Jumlah Kebutuhan Tenaga Kesehatan dengan Manual .............................................................. 173
DAFTAR LAMPIRAN

<table>
<thead>
<tr>
<th>Lampiran 1</th>
<th>Biodata Penulis</th>
<th>Halaman 179</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lampiran 2</td>
<td>Struktur Organisasi Puskesmas Jagir Surabaya</td>
<td>Halaman 181</td>
</tr>
<tr>
<td>Lampiran 3</td>
<td>Form Daftar Pertanyaan dan Wawancara</td>
<td>Halaman 182</td>
</tr>
<tr>
<td>Lampiran 4</td>
<td>Hasil Wawancara</td>
<td>Halaman 183</td>
</tr>
</tbody>
</table>