LAMPIRAN – LAMPIRAN

LAMPIRAN QUERY BASIS DATA SISTEM

```sql
1.  SET SQL_MODE = "NO_AUTO_VALUE_ON_ZERO";
2.  SET AUTOCOMMIT = 0;
3.  START TRANSACTION;
4.  SET time_zone = "+00:00";
5.
6.  --
7.  -- Database: `db_sistem`
8.  --
9.
10. -- --------------------------------------------------------
11.
12. --
13. -- Struktur dari tabel `tbl_alternatif`
14. --
15.
16. CREATE TABLE `tbl_alternatif` (
17.   `alternatif_id` int(11) NOT NULL,
18.   `alternatif_nama` varchar(30) NOT NULL,
19.   `kriteria_1` int(11) NOT NULL,
20.   `kriteria_2` int(11) NOT NULL,
21.   `kriteria_3` int(11) NOT NULL,
22.   `kriteria_4` int(11) NOT NULL,
23.   `id_user` int(10) NOT NULL
24. ) ENGINE=InnoDB DEFAULT CHARSET=latin1;
25.
26. -- --------------------------------------------------------
27.
28. --
29. -- Struktur dari tabel `tbl_bobot`
30. --
31.
32. CREATE TABLE `tbl_bobot` (
33.   `id_bobot` int(11) NOT NULL,
34.   `bobot_keriteria1` double NOT NULL,
35.   `bobot_keriteria2` double NOT NULL,
36.   `bobot_keriteria3` double NOT NULL,
37.   `bobot_keriteria4` double NOT NULL,
38.   `id_user` int(11) NOT NULL
39. ) ENGINE=InnoDB DEFAULT CHARSET=latin1;
40.
41. -- --------------------------------------------------------
42. --
43. -- Struktur dari tabel `tbl_user`
44. --
45. CREATE TABLE `tbl_user` (
46.   `user_id` int(11) NOT NULL,
47.   `user_name` varchar(30) NOT NULL,
48.   `user_email` varchar(60) NOT NULL,
49.   `user_password` varchar(60) NOT NULL,
50.   `user_level` varchar(5) NOT NULL,
51.   `status` int(1) NOT NULL
52. ) ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

```sql
53.
54. --
55. -- Indeks untuk tabel `tbl_alternatif`
56. --
57. ALTER TABLE `tbl_alternatif`
58.   ADD PRIMARY KEY (`alternatif_id`),
59.   ADD KEY `id_user` (`id_user`);
60.
61. --
62. -- Indeks untuk tabel `tbl_bobot`
63. --
64. ALTER TABLE `tbl_bobot`
65.   ADD PRIMARY KEY (`id_bobot`),
66.   ADD KEY `id_user` (`id_user`);
67.
68. --
69. -- Indeks untuk tabel `tbl_user`
70. --
71. ALTER TABLE `tbl_user`
72.   ADD PRIMARY KEY (`user_id`);
73.
74. --
75. -- AUTO_INCREMENT untuk tabel `tbl_alternatif`
76. --
77. ALTER TABLE `tbl_alternatif`
78.   MODIFY `alternatif_id` int(11) NOT NULL AUTO_INCREMENT, AUTO_INCR
    EMENT=0;
79.
80. --
81. -- AUTO_INCREMENT untuk tabel `tbl_bobot`
82. --
83. ALTER TABLE `tbl_bobot`
84.   MODIFY `id_bobot` int(11) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT
    =0;
85.
86. --
87. -- AUTO_INCREMENT untuk tabel `tbl_user`
88. --
89. ALTER TABLE `tbl_user`
90.   MODIFY `user_id` int(11) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=
    0;
91.
92. --
93. -- Ketidakleluasaan untuk tabel `tbl_alternatif`
94. --
95. ALTER TABLE `tbl_alternatif`
96.   ADD CONSTRAINT `tbl_alternatif_ibfk_1` FOREIGN KEY (`id_user`) RE
    FERENCES `tbl_user` (`user_id`);
97.
98. --
99. -- Ketidakleluasaan untuk tabel `tbl_bobot`
100.        --
101.        ALTER TABLE `tbl_bobot`
102.          ADD CONSTRAINT `tbl_bobot_ibfk_1` FOREIGN KEY (`id_user`)
    REFERENCES `tbl_user` (`user_id`);
```

```
103.        COMMIT;
104.
105.        /*!40101 SET CHARACTER_SET_CLIENT=@OLD_CHARACTER_SET_CLIENT
     */;
106.        /*!40101 SET CHARACTER_SET_RESULTS=@OLD_CHARACTER_SET_RESULT
     S */;
107.        /*!40101 SET COLLATION_CONNECTION=@OLD_COLLATION_CONNECTION
     */;
```

LAMPIRAN SOURCE CODE APLIKASI

Lampiran sourcode dashboard

Lampiran source code dashboard.php (controller)

```php
1.  <?php
2.  defined('BASEPATH') or exit('No direct script access allowed');
3.
4.  class Dashboard extends CI_Controller
5.  {
6.      public function index()
7.      {
8.          if ($this->session-
    >userdata('user_level') === 'admin') {
9.              $data['_view'] = 'dashboard';
10.             $this->load->view('layouts/main', $data);
11.         } elseif ($this->session-
    >userdata('user_level') === 'user') {
12.             $data['_view'] = 'dashboard';
13.             $this->load->view('layouts/main', $data);
14.         } else {
15.             echo "Access Denied";
16.             redirect('login/index');
17.         }
18.     }
19. }
```

Lampiran source code main.php

```html
1.  <!DOCTYPE html>
2.  <html>
3.
4.  <head>
5.      <meta charset="utf-8">
6.      <meta http-equiv="X-UA-Compatible" content="IE=edge">
7.      <title>AdminLTE 3 | Dashboard</title>
8.      <!-- Tell the browser to be responsive to screen width -->
9.      <meta name="viewport" content="width=device-width, initial-
    scale=1">
10.     <!-- Font Awesome -->
11.     <link rel="stylesheet" href="<?php echo site_url('resources/pl
    ugins/fontawesome-free/css/all.min.css'); ?>">
12.     <!-- Ionicons -->
13.     <link rel="stylesheet" href="https://code.ionicframework.com/i
    onicons/2.0.1/css/ionicons.min.css">
14.     <!-- Tempusdominus Bbootstrap 4 -->
15.     <link rel="stylesheet" href="<?php echo site_url('resources/pl
    ugins/tempusdominus-bootstrap-4/css/tempusdominus-bootstrap-
```

```php
                4.min.css'); ?>">
16.     <!-- iCheck -->
17.     <link rel="stylesheet" href="<?php echo site_url('resources/pl
    ugins/icheck-bootstrap/icheck-bootstrap.min.css'); ?>">
18.     <!-- JQVMap -->
19.     <link rel="stylesheet" href="<?php echo site_url('resources/pl
    ugins/jqvmap/jqvmap.min.css'); ?>">
20.     <!-- Theme style -->
21.     <link rel="stylesheet" href="<?php echo site_url('resources/cs
    s/adminlte.min.css'); ?>">
22.     <!-- overlayScrollbars -->
23.     <link rel="stylesheet" href="<?php echo site_url('resources/pl
    ugins/overlayScrollbars/css/OverlayScrollbars.min.css'); ?>">
24.     <!-- Daterange picker -->
25.     <link rel="stylesheet" href="<?php echo site_url('resources/pl
    ugins/daterangepicker/daterangepicker.css'); ?>">
26.     <!-- summernote -->
27.     <link rel="stylesheet" href="<?php echo site_url('resources/pl
    ugins/summernote/summernote-bs4.css'); ?>">
28.     <link rel="stylesheet" href="<?php echo site_url('resources/pl
    ugins/datatables-bs4/css/dataTables.bootstrap4.css'); ?>">
29.     <!-- Google Font: Source Sans Pro -->
30.     <link href="https://fonts.googleapis.com/css?family=Source+San
    s+Pro:300,400,400i,700" rel="stylesheet">
31. </head>
32.
33. <body class="hold-transition sidebar-mini layout-fixed">
34.     <div class="wrapper">
35.
36.         <!-- Navbar -->
37.         <nav class="main-header navbar navbar-expand navbar-
    white navbar-light">
38.             <!-- Left navbar links -->
39.             <ul class="navbar-nav">
40.                 <li class="nav-item">
41.                     <a class="nav-link" data-
    widget="pushmenu" href="#"><i class="fas fa-bars"></i></a>
42.                 </li>
43.             </ul>
44.             <!-- Right navbar links -->
45.             <ul class="navbar-nav ml-auto">
46.                 <li class="nav-item">
47.                     <a class="nav-link" data-widget="control-
    sidebar" data-slide="true" href="#">
48.                         <i class="fas fa-th-large"></i>
49.                     </a>
50.                 </li>
51.             </ul>
52.         </nav>
53.         <!-- /.navbar -->
54.         <!-- Main Sidebar Container -->
55.         <aside class="main-sidebar sidebar-dark-primary elevation-
    4">
56.             <!-- Brand Logo -->
57.             <a href="index3.html" class="brand-link">
```

```
58.                    <img src="<?php echo site_url('resources/img/APK.p
      ng'); ?>" alt="AdminLTE Logo" class="brand-image img-
      circle elevation-3" style="opacity: .8">
59.                    <span class="brand-text font-weight-
      light">Aplikasi Entropy</span>
60.              </a>
61.
62.              <!-- Sidebar -->
63.              <div class="sidebar">
64.                  <!-- Sidebar user panel (optional) -->
65.                  <div class="user-panel mt-3 pb-3 mb-3 d-flex">
66.                      <div class="image">
67.                          <img src="<?php echo site_url('resources/i
      mg/USER.png'); ?>" class="img-circle elevation-
      2" alt="User Image">
68.                      </div>
69.                      <div class="info">
70.                          <a href="#" class="d-block"><?= $this-
      >session->userdata('user_name'); ?></a>
71.                      </div>
72.                  </div>
73.                  <?php if ($this->session-
      >userdata('user_level') === 'admin') { ?>
74.                      <nav class="mt-2">
75.                          <ul class="nav nav-pills nav-sidebar flex-
      column" data-widget="treeview" role="menu" data-
      accordion="false">
76.
77.                              <a href="<?= site_url('dashboard/index
      '); ?>" class="nav-link active">
78.                                  <i class="nav-icon fas fa-
      tachometer-alt"></i>
79.                                  <p>
80.                                      Dashboard
81.                                  </p>
82.                              </a>
83.
84.                              <li class="nav-item">
85.                                  <a href="<?php echo site_url('tbl_
      user'); ?>" class="nav-link">
86.                                      <i class="nav-icon fas fa-
      user-circle"></i>
87.                                      <p>
88.                                          Data User
89.                                      </p>
90.                                  </a>
91.                              </li>
92.                              <li class="nav-item has-treeview">
93.                                  <a href="<?php echo site_url('tbl_
      alternatif'); ?>" class="nav-link">
94.                                      <i class="nav-icon fas fa-
      file-alt"></i>
95.                                      <p>
96.                                          Data Alternatif
97.                                      </p>
```

```
98.                                      </a>
99.                                  </li>
100.                                 <li class="nav-item has-
     treeview">
101.                                    <a href="<?php echo site_ur
     l('proses_entropy'); ?>" class="nav-link">
102.                                       <i class="nav-
     icon fas fa-edit"></i>
103.                                       <p>
104.                                          Proses Entropy
105.                                       </p>
106.                                    </a>
107.                                 </li>
108.                                 <li class="nav-item has-
     treeview">
109.                                    <a href="<?php echo site_ur
     l('login/logout'); ?>" class="nav-link">
110.                                       <i class="nav-
     icon fas fa-sign-out-alt"></i>
111.                                       <p>
112.                                          Sign Out
113.                                       </p>
114.                                    </a>
115.                                 </li>
116.                              </ul>
117.                           </nav>
118.                        <?php } elseif ($this->session-
     >userdata('user_level') === 'user') { ?>
119.                           <nav class="mt-2">
120.                              <ul class="nav nav-pills nav-
     sidebar flex-column" data-widget="treeview" role="menu" data-
     accordion="false">
121.
122.                                    <a href="<?= site_url('dashboar
     d/index'); ?>" class="nav-link active">
123.                                       <i class="nav-icon fas fa-
     tachometer-alt"></i>
124.                                       <p>
125.                                          Dashboard
126.                                       </p>
127.                                    </a>
128.                                 <li class="nav-item has-
     treeview">
129.                                    <a href="<?php echo site_ur
     l('tbl_alternatif/index_user'); ?>" class="nav-link">
130.                                       <i class="nav-
     icon fas fa-file-alt"></i>
131.                                       <p>
132.                                          Data Alternatif
133.                                       </p>
134.                                    </a>
135.                                 </li>
136.                                 <li class="nav-item has-
     treeview">
137.                                    <a href="<?php echo site_ur
```

```
l('proses_entropy/proses_user'); ?>" class="nav-link">
138.                                          <i class="nav-
     icon fas fa-edit"></i>
139.                                          <p>
140.                                              Proses Entropy
141.                                          </p>
142.                                      </a>
143.                                  </li>
144.                                  <li class="nav-item has-
     treeview">
145.                                      <a href="<?php echo site_ur
     l('login/logout'); ?>" class="nav-link">
146.                                          <i class="nav-
     icon fas fa-sign-out-alt"></i>
147.                                          <p>
148.                                              Sign Out
149.                                          </p>
150.                                      </a>
151.                                  </li>
152.                              </ul>
153.                          </nav>
154.                      <?php } ?>
155.                      <!-- Sidebar Menu -->
156.
157.                      <!-- /.sidebar-menu -->
158.                  </div>
159.                  <!-- /.sidebar -->
160.              </aside>
161.              <!-- Content Wrapper. Contains page content -->
162.              <div class="content-wrapper">
163.                  <!-- Content Header (Page header) -->
164.                  <?php
165.                  if (isset($_view) && $_view)
166.                      $this->load->view($_view);
167.                  ?>
168.                  <!-- /.content -->
169.              </div>
170.              <!-- /.content-wrapper -->
171.              <footer class="main-footer">
172.                  <strong>Copyright © 2020</strong>
173.                  All rights reserved.
174.                  <div class="float-right d-none d-sm-inline-
     block">
175.                      <b>Version</b> 1.0
176.                  </div>
177.              </footer>
178.          </div>
179.          <!-- ./wrapper -->
180.
181.          <!-- jQuery -->
182.          <script src="<?php echo site_url('resources/plugins/jqu
     ery/jquery.min.js'); ?>"></script>
183.          <!-- jQuery UI 1.11.4 -->
184.          <script src="<?php echo site_url('resources/plugins/jqu
     ery-ui/jquery-ui.min.js'); ?>"></script>
```

```php
185.            <!--
     Resolve conflict in jQuery UI tooltip with Bootstrap tooltip --
  >
186.            <script>
187.                $.widget.bridge('uibutton', $.ui.button)
188.            </script>
189.            <!-- Bootstrap 4 -->
190.            <script src="<?php echo site_url('resources/plugins/boo
   tstrap/js/bootstrap.bundle.min.js'); ?>"></script>
191.            <!-- ChartJS -->
192.            <script src="<?php echo site_url('resources/plugins/cha
   rt.js/Chart.min.js'); ?>"></script>
193.            <!-- Sparkline -->
194.            <script src="<?php echo site_url('resources/plugins/spa
   rklines/sparkline.js'); ?>"></script>
195.            <!-- JQVMap -->
196.            <script src="<?php echo site_url('resources/plugins/jqv
   map/jquery.vmap.min.js'); ?>"></script>
197.            <script src="<?php echo site_url('resources/plugins/jqv
   map/maps/jquery.vmap.usa.js'); ?>"></script>
198.            <!-- jQuery Knob Chart -->
199.            <script src="<?php echo site_url('resources/plugins/jqu
   ery-knob/jquery.knob.min.js'); ?>"></script>
200.            <!-- daterangepicker -->
201.            <script src="<?php echo site_url('resources/plugins/mom
   ent/moment.min.js'); ?>"></script>
202.            <script src="<?php echo site_url('resources/plugins/dat
   erangepicker/daterangepicker.js'); ?>"></script>
203.            <!-- Tempusdominus Bootstrap 4 -->
204.            <script src="<?php echo site_url('resources/plugins/tem
   pusdominus-bootstrap-4/js/tempusdominus-bootstrap-
   4.min.js'); ?>"></script>
205.            <!-- Summernote -->
206.            <script src="<?php echo site_url('resources/plugins/sum
   mernote/summernote-bs4.min.js'); ?>"></script>
207.            <!-- overlayScrollbars -->
208.            <script src="<?php echo site_url('resources/plugins/ove
   rlayScrollbars/js/jquery.overlayScrollbars.min.js'); ?>"></script>

209.            <!-- AdminLTE App -->
210.            <script src="<?php echo site_url('resources/js/adminlte
   .js'); ?>"></script>
211.            <!--
     AdminLTE dashboard demo (This is only for demo purposes) -->
212.            <script src="<?php echo site_url('resources/js/pages/da
   shboard.js'); ?>"></script>
213.            <!-- AdminLTE for demo purposes -->
214.            <script src="<?php echo site_url('resources/js/demo.js'
   ); ?>"></script>
215.            <script src="<?php echo site_url('resources/plugins/dat
   atables/jquery.dataTables.js'); ?>"></script>
216.            <script src="<?php echo site_url('resources/plugins/dat
   atables-bs4/js/dataTables.bootstrap4.js'); ?>"></script>
217.            <script>
218.                $(function() {
```

```
219.                    $("#example1").DataTable();
220.                    $('#example2').DataTable({
221.                        "paging": true,
222.                        "lengthChange": false,
223.                        "searching": false,
224.                        "ordering": true,
225.                        "info": true,
226.                        "autoWidth": false,
227.                    });
228.                });
229.            </script>
230.        </body>
231.
232.        </html>
```

Lampiran dashboard.php (view)

```
1.  <div class="content-header">
2.      <div class="container-fluid">
3.          <div class="row mb-2">
4.              <div class="col-sm-6">
5.                  <h1 class="m-0 text-dark">Dashboard</h1>
6.              </div><!-- /.col -->
7.          </div><!-- /.row -->
8.      </div><!-- /.container-fluid -->
9.  </div>
10. <!-- /.content-header -->
11.
12. <!-- Main content -->
13. <section class="content">
14.     <div class="container-fluid">
15.         <!-- Small boxes (Stat box) -->
16.         <?php if ($this->session-
    >userdata('user_level') === 'admin') { ?>
17.             <div class="row">
18.                 <div class="col-lg-4 col-6">
19.                     <!-- small box -->
20.                     <div class="small-box bg-info">
21.                         <div class="inner">
22.                             <h3></h3>
23.
24.                             <p>Data Alternatif</p>
25.                         </div>
26.                         <div class="icon">
27.                             <i class="ion ion-document"></i>
28.                         </div>
29.                         <a href="<?= base_url('tbl_alternatif') ?>"
    class="small-box-footer">More info <i class="fas fa-arrow-circle-
    right"></i></a>
30.                     </div>
31.                 </div>
32.                 <!-- ./col -->
33.                 <div class="col-lg-4 col-6">
```

```
34.                    <!-- small box -->
35.                    <div class="small-box bg-success">
36.                        <div class="inner">
37.                            <h3></h3>
38.
39.                            <p>Data Bobot</p>
40.                        </div>
41.                        <div class="icon">
42.                            <i class="ion ion-stats-bars"></i>
43.                        </div>
44.                        <a href="<?= base_url('tbl_bobot') ?>" clas
    s="small-box-footer">More info <i class="fas fa-arrow-circle-
    right"></i></a>
45.                    </div>
46.                </div>
47.                <!-- ./col -->
48.                <div class="col-lg-4 col-6">
49.                    <!-- small box -->
50.                    <div class="small-box bg-warning">
51.                        <div class="inner">
52.                            <h3></h3>
53.
54.                            <p>Data User</p>
55.                        </div>
56.                        <div class="icon">
57.                            <i class="ion ion-person-add"></i>
58.                        </div>
59.                        <a href="<?= base_url('tbl_user'); ?>" clas
    s="small-box-footer">More info <i class="fas fa-arrow-circle-
    right"></i></a>
60.                    </div>
61.                </div>
62.                <!-- ./col -->
63.            </div>
64.        <?php } elseif ($this->session-
    >userdata('user_level') === 'user') { ?>
65.            <div class="row">
66.                <div class="col-lg-6 col-6">
67.                    <!-- small box -->
68.                    <div class="small-box bg-info">
69.                        <div class="inner">
70.                            <h3></h3>
71.
72.                            <p>Data Alternatif</p>
73.                        </div>
74.                        <div class="icon">
75.                            <i class="ion ion-document"></i>
76.                        </div>
77.                        <a href="<?= base_url('tbl_alternatif/index
    _user') ?>" class="small-box-footer">More info <i class="fas fa-
    arrow-circle-right"></i></a>
78.                    </div>
79.                </div>
80.                <!-- ./col -->
81.                <div class="col-lg-6 col-6">
```

```html
82.                     <!-- small box -->
83.                     <div class="small-box bg-success">
84.                         <div class="inner">
85.                             <h3></h3>
86.
87.                             <p>Data Bobot</p>
88.                         </div>
89.                         <div class="icon">
90.                             <i class="ion ion-stats-bars"></i>
91.                         </div>
92.                         <a href="<?= base_url('tbl_bobot') ?>" class="small-box-footer">More info <i class="fas fa-arrow-circle-right"></i></a>
93.                     </div>
94.                 </div>
95.                 <!-- ./col -->
96.             </div>
97.         <?php } ?>
98.     </div><!-- /.container-fluid -->
99. </section>
```

Lampirlan Source Code Login

Controller (Login.php)

```php
1.  <?php
2.  defined('BASEPATH') or exit('No direct script access allowed');
3.
4.  class Login extends CI_Controller
5.  {
6.      function __construct()
7.      {
8.          parent::__construct();
9.          $this->load->model('login_model');
10.         $this->load->library('enkripsi');
11.     }
12.
13.     public function index()
14.     {
15.         $this->form_validation-
    >set_rules('username', 'username', 'required');
16.         $this->form_validation-
    >set_rules('password', 'Password', 'required|min_length[4]');
17.         if ($this->form_validation->run() == FALSE) {
18.
19.             $this->load->view('login');
20.         } else {
21.             $username    = $this->input->post('username', TRUE);
22.             $password = $this->enkripsi->encryptIt($this->input-
    >post('password', TRUE));
23.             $validasi = $this->login_model-
    >validate($username, $password);
24.             if ($validasi->num_rows() > 0) {
25.                 $data   = $validasi->row();
26.                 $id     = $data->user_id;
27.                 $level = $data->user_level;
28.                 $user_name = $data->user_name;
29.                 $sesiondata = array(
30.                     'user_id'  => $id,
31.                     'user_level'    => $level,
32.                     'user_name' => $user_name,
33.                     'logged_in' => TRUE
34.                 );
35.                 $this->session->set_userdata($sesiondata);
36.
37.                 if ($level === 'admin') {
38.                     redirect('dashboard');
39.                 } elseif ($level === 'user') {
40.                     redirect('dashboard');
41.                 }
42.             } else {
43.                 echo $this->session-
    >set_flashdata('msg', 'Username or Password is Wrong');
```

```
44.              redirect('');
45.          }
46.      }
47.  }
48.  function logout()
49.  {
50.      $this->session->sess_destroy();
51.      redirect('Login');
52.  }
53. }
```

Model (Login_model.php)

```
1.  <?php
2.  class Login_model extends CI_Model
3.  {
4.
5.      function validate($email, $password)
6.      {
7.          $this->db->where('user_name', $email);
8.          $this->db->where('user_password', $password);
9.          $result = $this->db->get('tbl_user');
10.         return $result;
11.     }
12. }
```

Library (enkripsi.php)

```
1.  <?php
2.  class Enkripsi
3.  {
4.      public function encryptIt($password)
5.      {
6.          $cryptKey  = '1212';
7.          $qEncoded     = base64_encode(mcrypt_encrypt(MCRYPT_RIJNDA
    EL_256, md5($cryptKey), $password, MCRYPT_MODE_CBC, md5(md5($cryptK
    ey))));
8.          return ($qEncoded);
9.      }
10.     public function decryptIt($password)
11.     {
12.         $cryptKey  = '1212';
13.         $qDecoded     = rtrim(mcrypt_decrypt(MCRYPT_RIJNDAEL_256,
    md5($cryptKey), base64_decode($password), MCRYPT_MODE_CBC, md5(md5(
    $cryptKey))), "\0");
14.         return ($qDecoded);
15.     }
16. }
```

View (login.php)

```
1.  <!DOCTYPE html>
2.  <html>
3.
4.  <head>
5.      <meta charset="utf-8">
6.      <meta http-equiv="X-UA-Compatible" content="IE=edge">
7.      <title>AdminLTE 3 | Validation Form</title>
8.      <!-- Tell the browser to be responsive to screen width -->
9.      <meta name="viewport" content="width=device-width, initial-
    scale=1">
10.     <!-- Font Awesome -->
11.     <link rel="stylesheet" href="<?php echo site_url('resources/plu
    gins/fontawesome-free/css/all.min.css'); ?>">
12.     <!-- Ionicons -->
13.     <link rel="stylesheet" href="https://code.ionicframework.com/io
    nicons/2.0.1/css/ionicons.min.css">
14.     <!-- Theme style -->
15.     <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com
    /bootstrap/4.4.1/css/bootstrap.min.css" integrity="sha384-
    Vkoo8x4CGsO3+Hhxv8T/Q5PaXtkKtu6ug5TOeNV6gBiFeWPGFN9MuhOf23Q9Ifjh" c
    rossorigin="anonymous">
16.     <!-- Google Font: Source Sans Pro -->
17.     <link href="https://fonts.googleapis.com/css?family=Source+Sans
    +Pro:300,400,400i,700" rel="stylesheet">
18. </head>
19.
20. <body class="hold-transition sidebar-mini">
21.     <div class="wrapper">
22.         <!-- Content Wrapper. Contains page content -->
23.         <div class="content-wrapper">
24.             <!-- Content Header (Page header) -->
25.             <section class="content-header">
26.                 <div class="container-fluid">
27.                     <div class="row mb-2">
28.                         <div class="col-sm-6 offset-lg-3">
29.                             <center>
30.                                 <h1>Sistem Entropy</h1>
31.                             </center>
32.                         </div>
33.                     </div>
34.                 </div><!-- /.container-fluid -->
35.             </section>
36.
37.             <!-- Main content -->
38.
39.             <section class="content">
40.                 <div class="container-fluid">
41.                     <div class="row">
42.                         <!-- left column -->
43.                         <div class="col-lg-6 offset-lg-3">
44.                             <!-- jquery validation -->
45.                             <div class="card card-primary">
```

```html
46.                              <div class="card-header">
47.                                  <h3 class="card-
    title">Login Sistem</h3>
48.                              </div>
49.                              <!-- /.card-header -->
50.                              <!-- form start -->
51.                              <form role="form" id="quickForm" ac
    tion="" method="post">
52.                                  <div class="card-body">
53.                                      <div class="form-group">
54.                                          <label for="exampleInpu
    tUsername1">username</label>
55.                                          <input type="text" name
    ="username" class="form-
    control" id="exampleInputUsername1" placeholder="Enter username">
56.                                      </div>
57.                                      <div class="form-group">
58.                                          <label for="exampleInpu
    tPassword1">Password</label>
59.                                          <input type="password"
    name="password" class="form-
    control" id="exampleInputPassword1" placeholder="Password">
60.                                      </div>
61.                                  </div>
62.                                  <!-- /.card-body -->
63.                                  <div class="card-footer">
64.                                      <button class="btn btn-
    primary" value="Login" name="kirim" type="submit">Sign in
65.                                          <i class="nav-
    icon fas fa-sign-in-alt"></i>
66.                                      </button>
67.                                  </div>
68.                              </form>
69.                          </div>
70.                          <!-- /.card -->
71.                      </div>
72.                      <!--/.col (left) -->
73.                      <!-- right column -->
74.                      <div class="col-md-6">
75.                      </div>
76.                      <!--/.col (right) -->
77.                  </div>
78.                  <!-- /.row -->
79.              </div><!-- /.container-fluid -->
80.          </section>
81.          <!-- /.content -->
82.      </div>
83.      <!-- /.content-wrapper -->
84.  </div>
85.  <!-- ./wrapper -->
86.  <!-- jQuery -->
87.  <script src="<?php echo site_url('resources/plugins/jquery/jque
    ry.min.js'); ?>"></script>
88.  <!-- Bootstrap 4 -->
89.  <script src="<?php echo site_url('resources/plugins/bootstrap/j
```

```
          s/bootstrap.bundle.min.js'); ?>"></script>
90.      <!-- jquery-validation -->
91.      <!-- jquery-validation -->
92.      <script src="<?php echo site_url('resources/plugins/jquery-
         validation/jquery.validate.min.js'); ?>"></script>
93.      <script src="<?php echo site_url('resources/plugins/jquery-
         validation/additional-methods.min.js'); ?>"></script>
94.      <script type="text/javascript">
95.          $(document).ready(function() {
96.              $.validator.setDefaults({
97.                  submitHandler: function() {
98.                      alert("Form successful submitted!");
99.                  }
100.                 });
101.                 $('#quickForm').validate({
102.                     rules: {
103.                         username: {
104.                             required: true,
105.                             username: true,
106.                         },
107.                         password: {
108.                             required: true,
109.                             minlength: 5
110.                         },
111.                     },
112.                     messages: {
113.                         username: {
114.                             username: "Please enter a username a
         ddress",
115.                             email: "Please enter a vaild usernam
         e address"
116.                         },
117.                         password: {
118.                             required: "Please provide a password
         ",
119.                             minlength: "Your password must be at
         least 5 characters long"
120.                         },
121.                     },
122.                     errorElement: 'span',
123.                     errorPlacement: function(error, element) {
124.                         error.addClass('invalid-feedback');
125.                         element.closest('.form-
         group').append(error);
126.                     },
127.                     highlight: function(element, errorClass, val
         idClass) {
128.                         $(element).addClass('is-invalid');
129.                     },
130.                     unhighlight: function(element, errorClass, v
         alidClass) {
131.                         $(element).removeClass('is-invalid');
132.                     }
133.                 });
134.             });
```

```
135.            </script>
136.        <body>
137.        </html>
```

Lampiran Source Code CRUD Tabel Alternatif

Controller (Tbl_alternatif.php)

```php
1.  <?php
2.  class Tbl_alternatif extends CI_Controller
3.  {
4.      function __construct()
5.      {
6.          parent::__construct();
7.          $this->load->model('Tbl_alternatif_model');
8.      }
9.
10.     function index()
11.     {
12.         $data['tbl_alternatif'] = $this->Tbl_alternatif_model-
    >get_all_tbl_alternatif_admin();
13.         $data['_view'] = 'tbl_alternatif/index';
14.         $this->load->view('layouts/main', $data);
15.     }
16.
17.     function index_user()
18.     {
19.         $session = $this->session->userdata('user_id');
20.         $data['tbl_alternatif'] = $this->Tbl_alternatif_model-
    >get_all_tbl_alternatif($session);
21.         $data['_view'] = 'tbl_alternatif/index';
22.         $this->load->view('layouts/main', $data);
23.     }
24.
25.     function add()
26.     {
27.         $this->load->library('form_validation');
28.
29.         $this->form_validation-
    >set_rules('alternatif_nama', 'Alternatif Nama', 'required|max_leng
    th[30]');
30.         $this->form_validation-
    >set_rules('kriteria_1', 'Kriteria 1', 'required|integer');
31.         $this->form_validation-
    >set_rules('kriteria_2', 'Kriteria 2', 'required|integer');
32.         $this->form_validation-
    >set_rules('kriteria_3', 'Kriteria 3', 'required|integer');
33.         $this->form_validation-
    >set_rules('kriteria_4', 'Kriteria 4', 'required|integer');
34.         $this->form_validation-
    >set_rules('id_user', 'Id User', 'required|integer');
35.
36.         if ($this->form_validation->run()) {
37.             $params = array(
38.                 'alternatif_nama' => $this->input-
    >post('alternatif_nama'),
```

```php
                    'kriteria_1' => $this->input->post('kriteria_1'),
                    'kriteria_2' => $this->input->post('kriteria_2'),
                    'kriteria_3' => $this->input->post('kriteria_3'),
                    'kriteria_4' => $this->input->post('kriteria_4'),
                    'id_user' => $this->input->post('id_user'),
                );

                $tbl_alternatif_id = $this->Tbl_alternatif_model->add_tbl_alternatif($params);
                if ($this->session->userdata('user_level') === 'admin') {
                    redirect('tbl_alternatif/index');
                } else {
                    redirect('tbl_alternatif/index_user');
                }
            } else {
                $data['_view'] = 'tbl_alternatif/add';
                $this->load->view('layouts/main', $data);
            }
        }

    function edit($alternatif_id)
    {
        // check if the tbl_alternatif exists before trying to edit it
        $data['tbl_alternatif'] = $this->Tbl_alternatif_model->get_tbl_alternatif($alternatif_id);

        if (isset($data['tbl_alternatif']['alternatif_id'])) {
            $this->load->library('form_validation');

            $this->form_validation->set_rules('alternatif_nama', 'Alternatif Nama', 'required|max_length[30]');
            $this->form_validation->set_rules('kriteria_1', 'Kriteria 1', 'required|integer');
            $this->form_validation->set_rules('kriteria_2', 'Kriteria 2', 'required|integer');
            $this->form_validation->set_rules('kriteria_3', 'Kriteria 3', 'required|integer');
            $this->form_validation->set_rules('kriteria_4', 'Kriteria 4', 'required|integer');
            $this->form_validation->set_rules('id_user', 'Tipe Alternatif', 'required|max_length[10]');

            if ($this->form_validation->run()) {
                $params = array(
                    'alternatif_nama' => $this->input->post('alternatif_nama'),
                    'kriteria_1' => $this->input->post('kriteria_1'),
                    'kriteria_2' => $this->input->post('kriteria_2'),
                    'kriteria_3' => $this->input-
```

```php
                >post('kriteria_3'),
 79.                    'kriteria_4' => $this->input-
    >post('kriteria_4'),
 80.                    'id_user' => $this->input->post('id_user'),
 81.                );
 82.
 83.                $this->Tbl_alternatif_model-
    >update_tbl_alternatif($alternatif_id, $params);
 84.                if ($this->session-
    >userdata('user_level') === 'admin') {
 85.                    redirect('tbl_alternatif/index');
 86.                } else {
 87.                    redirect('tbl_alternatif/index_user');
 88.                }
 89.                // redirect('tbl_alternatif/index');
 90.            } else {
 91.                $data['_view'] = 'tbl_alternatif/edit';
 92.                $this->load->view('layouts/main', $data);
 93.            }
 94.        } else
 95.            show_error('The tbl_alternatif you are trying to edit d
    oes not exist.');
 96.    }
 97.
 98.    function detail($alternatif_id)
 99.    {
100.                $data['tbl_alternatif'] = $this-
    >Tbl_alternatif_model->get_tbl_alternatif($alternatif_id);
101.                $data['_view'] = 'tbl_alternatif/detail';
102.                $this->load->view('layouts/main', $data);
103.        }
104.
105.        function remove($alternatif_id)
106.        {
107.                $tbl_alternatif = $this->Tbl_alternatif_model-
    >get_tbl_alternatif($alternatif_id);
108.
109.                // check if the tbl_alternatif exists before trying
    to delete it
110.                if (isset($tbl_alternatif['alternatif_id'])) {
111.                    $this->Tbl_alternatif_model-
    >delete_tbl_alternatif($alternatif_id);
112.                    redirect('tbl_alternatif/index');
113.                } else
114.                    show_error('The tbl_alternatif you are trying to
    delete does not exist.');
115.            }
116.        }
```

Model (tbl_alternatif_model.php)

```php
1.  <?php
2.  class Tbl_alternatif_model extends CI_Model
3.  {
4.      function __construct()
5.      {
6.          parent::__construct();
7.      }
8.
9.      function get_tbl_alternatif($alternatif_id)
10.     {
11.         $this->db->select('*');
12.         $query = $this->db-
    >get_where('tbl_alternatif', array('alternatif_id' => $alternatif_i
    d));
13.         return $query->row_array();
14.     }
15.
16.     function get_all_tbl_alternatif_admin()
17.     {
18.         $query = $this->db->get('tbl_alternatif');
19.         return $query->result_array();
20.     }
21.
22.     function get_all_tbl_alternatif($where)
23.     {
24.         $this->db->select('*');
25.         $query = $this->db-
    >get_where('tbl_alternatif', array('id_user' => $where));
26.         return $query->result_array();
27.     }
28.
29.     function add_tbl_alternatif($params)
30.     {
31.         $this->db->insert('tbl_alternatif', $params);
32.         return $this->db->insert_id();
33.     }
34.
35.     function update_tbl_alternatif($alternatif_id, $params)
36.     {
37.         $this->db->where('alternatif_id', $alternatif_id);
38.         return $this->db->update('tbl_alternatif', $params);
39.     }
40.
41.     function delete_tbl_alternatif($alternatif_id)
42.     {
43.         return $this->db-
    >delete('tbl_alternatif', array('alternatif_id' => $alternatif_id))
    ;
44.     }
45. }
```

View (index.php)

```
1.  <div class="content-header">
2.      <div class="container-fluid">
3.          <div class="row mb-2">
4.              <div class="col-sm-6">
5.                  <h1 class="m-0 text-dark">Alternatif</h1>
6.              </div><!-- /.col -->
7.          </div><!-- /.row -->
8.      </div><!-- /.container-fluid -->
9.  </div>
10.
11. <section class="content">
12.     <div class="container-fluid">
13.         <div class="card">
14.             <div class="card-header">
15.                 <h3 class="card-
    title">Data Alternatif<small>( berupa handphone )</small></h3>
16.                 <div class="float-right">
17.                     <a href="<?php echo site_url('tbl_alternatif/ad
    d'); ?>" class="btn btn-success btn-sm">Tambah Data</a>
18.                 </div>
19.             </div>
20.             <!-- /.card-header -->
21.             <div class="card-body">
22.                 <table id="example2" class="table table-
    bordered table-striped">
23.                     <thead>
24.                         <tr>
25.                             <th>Alternatif Nama</th>
26.                             <th>Harga</th>
27.                             <th>kamera belakang</th>
28.                             <th>Kamera depan</th>
29.                             <th>memory</th>
30.                             <th>Actions</th>
31.                         </tr>
32.                     </thead>
33.                     <tbody>
34.                         <?php foreach ($tbl_alternatif as $t) { ?>

35.                             <tr>
36.                                 <td><?php echo $t['alternatif_nama'
    ]; ?></td>
37.                                 <td><?php echo $t['kriteria_1']; ?>
    </td>
38.                                 <td><?php echo $t['kriteria_2']; ?>
    </td>
39.                                 <td><?php echo $t['kriteria_3']; ?>
    </td>
40.                                 <td><?php echo $t['kriteria_4']; ?>
    </td>
41.                                 <td>
42.                                     <a href="<?php echo site_url('t
    bl_alternatif/detail/' . $t['alternatif_id']); ?>" class="btn btn-
```

```
        info btn-xs"><span class="fas fa-info"> </span> Detail Data</a>
43.                                    <a href="<?php echo site_url('t
    bl_alternatif/edit/' . $t['alternatif_id']); ?>" class="btn btn-
    warning btn-xs"><span class="fas fa-pencil-alt"> </span> Edit</a>
44.                                    <a href="<?php echo site_url('t
    bl_alternatif/remove/' . $t['alternatif_id']); ?>" class="btn btn-
    danger btn-xs"><span class="fas fa-trash"> </span> Delete</a>
45.                                </td>
46.                            </tr>
47.                        <?php } ?>
48.                    </tbody>
49.                    <tfoot>
50.                        <tr>
51.                            <th>Alternatif Nama</th>
52.                            <th>Harga</th>
53.                            <th>kamera belakang</th>
54.                            <th>Kamera depan</th>
55.                            <th>memory</th>
56.                            <th>Actions</th>
57.                        </tr>
58.                    </tfoot>
59.                </table>
60.            </div>
61.            <!-- /.card-body -->
62.        </div>
63.    </div><!-- /.container-fluid -->
64. </section>
```

View (add.php)

```
1.  <div class="content-header">
2.      <div class="container-fluid">
3.          <div class="row mb-2">
4.              <div class="col-sm-6">
5.                  <h3 class="m-0 text-
    dark">Form tampah Data Alternatif</h3>
6.              </div><!-- /.col -->
7.          </div><!-- /.row -->
8.      </div><!-- /.container-fluid -->
9.  </div>
10.
11. <section class="content">
12.     <div class="container-fluid">
13.         <div class="card card-primary">
14.             <div class="card-header">
15.                 <h3 class="card-
    title">Menambah Data Alternatif</h3>
16.             </div>
17.             <!-- /.card-header -->
18.             <!-- form start -->
19.             <?php echo form_open('tbl_alternatif/add'); ?>
20.             <div class="card-body">
21.                 <label for="alternatif_nama" class="control-
```

```php
        label"><span class="text-danger">*</span>Nama Alternatif</label>
22.                 <div class="form-group">
23.                     <input type="text" name="alternatif_nama" value
    ="<?php echo $this->input-
    >post('alternatif_nama'); ?>" class="form-
    control" id="alternatif_nama" />
24.                     <span class="text-
    danger"><?php echo form_error('alternatif_nama'); ?></span>
25.                 </div>
26.                 <label for="kriteria_1" class="control-
    label"><span class="text-danger">*</span>Harga</label>
27.                 <div class="form-group">
28.                     <input type="text" name="kriteria_1" value="<?p
    hp echo $this->input->post('kriteria_1'); ?>" class="form-
    control" id="kriteria_1" />
29.                     <span class="text-
    danger"><?php echo form_error('kriteria_1'); ?></span>
30.                 </div>
31.                 <label for="kriteria_2" class="control-
    label"><span class="text-danger">*</span>Kamera belakang</label>
32.                 <div class="form-group">
33.                     <input type="text" name="kriteria_2" value="<?p
    hp echo $this->input->post('kriteria_2'); ?>" class="form-
    control" id="kriteria_2" />
34.                     <span class="text-
    danger"><?php echo form_error('kriteria_2'); ?></span>
35.                 </div>
36.                 <label for="kriteria_3" class="control-
    label"><span class="text-danger">*</span>Kamera depan</label>
37.                 <div class="form-group">
38.                     <input type="text" name="kriteria_3" value="<?p
    hp echo $this->input->post('kriteria_3'); ?>" class="form-
    control" id="kriteria_3" />
39.                     <span class="text-
    danger"><?php echo form_error('kriteria_3'); ?></span>
40.                 </div>
41.                 <label for="kriteria_4" class="control-
    label"><span class="text-danger">*</span>Memori</label>
42.                 <div class="form-group">
43.                     <input type="text" name="kriteria_4" value="<?p
    hp echo $this->input->post('kriteria_4'); ?>" class="form-
    control" id="kriteria_4" />
44.                     <span class="text-
    danger"><?php echo form_error('kriteria_4'); ?></span>
45.                 </div>
46.                 <label for="id_user" class="control-
    label"><span class="text-danger">*</span>Id User</label>
47.                 <?php if ($this->session-
    >userdata('user_level') === 'admin') {    ?>
48.                     <div class="form-group">
49.                         <input type="text" name="id_user" value="<?
    php echo $this->session->userdata('user_id') ?>" class="form-
    control" id="id_user" />
50.                         <span class="text-
    danger"><?php echo form_error('id_user'); ?></span>
```

```
51.                    </div>
52.                <?php } else {    ?>
53.                    <div class="form-group">
54.                        <input type="text" name="id_user" value="<?
    php echo $this->session->userdata('user_id') ?>" class="form-
    control" id="id_user" readonly />
55.                        <span class="text-
    danger"><?php echo form_error('id_user'); ?></span>
56.                    </div>
57.                <?php } ?>
58.            </div>
59.
60.            <div class="card-footer">
61.                <button type="submit" class="btn btn-
    primary">Simpan Data</button>
62.            </div>
63.            <?php echo form_close(); ?>
64.        </div>
65.    </div><!-- /.container-fluid -->
66. </section>
```

View (edit.php)

```
1.  <div class="content-header">
2.      <div class="container-fluid">
3.          <div class="row mb-2">
4.              <div class="col-sm-6">
5.                  <h3 class="m-0 text-
    dark">Form Edit Data Alternatif</h3>
6.              </div><!-- /.col -->
7.          </div><!-- /.row -->
8.      </div><!-- /.container-fluid -->
9.  </div>
10.
11. <section class="content">
12.     <div class="container-fluid">
13.         <div class="card card-primary">
14.             <div class="card-header">
15.                 <h3 class="card-
    title">Mengedit Data Alternatif</h3>
16.             </div>
17.             <!-- /.card-header -->
18.             <!-- form start -->
19.             <?php echo form_open('tbl_alternatif/edit/' . $tbl_alte
    rnatif['alternatif_id']); ?>
20.             <div class="card-body">
21.                 <label for="alternatif_nama" class="control-
    label"><span class="text-danger">*</span>Nama Alternatif</label>
22.                 <div class="form-group">
23.                     <input type="text" name="alternatif_nama" value
    ="<?php echo ($this->input->post('alternatif_nama') ? $this->input-
    >post('alternatif_nama') : $tbl_alternatif['alternatif_nama']); ?>"
     class="form-control" id="alternatif_nama" />
```

```php
24.                      <span class="text-
   danger"><?php echo form_error('alternatif_nama'); ?></span>
25.                 </div>
26.                 <label for="kriteria_1" class="control-
   label"><span class="text-danger">*</span>Harga</label>
27.                 <div class="form-group">
28.                     <input type="text" name="kriteria_1" value="<?p
   hp echo ($this->input->post('kriteria_1') ? $this->input-
   >post('kriteria_1') : $tbl_alternatif['kriteria_1']); ?>" class="fo
   rm-control" id="kriteria_1" />
29.                     <span class="text-
   danger"><?php echo form_error('kriteria_1'); ?></span>
30.                 </div>
31.                 <label for="kriteria_2" class="control-
   label"><span class="text-danger">*</span>Kamera Depan</label>
32.                 <div class="form-group">
33.                     <input type="text" name="kriteria_2" value="<?p
   hp echo ($this->input->post('kriteria_2') ? $this->input-
   >post('kriteria_2') : $tbl_alternatif['kriteria_2']); ?>" class="fo
   rm-control" id="kriteria_2" />
34.                     <span class="text-
   danger"><?php echo form_error('kriteria_2'); ?></span>
35.                 </div>
36.                 <label for="kriteria_3" class="control-
   label"><span class="text-danger">*</span>Kamera Belakang</label>
37.                 <div class="form-group">
38.                     <input type="text" name="kriteria_3" value="<?p
   hp echo ($this->input->post('kriteria_3') ? $this->input-
   >post('kriteria_3') : $tbl_alternatif['kriteria_3']); ?>" class="fo
   rm-control" id="kriteria_3" />
39.                     <span class="text-
   danger"><?php echo form_error('kriteria_3'); ?></span>
40.                 </div>
41.                 <label for="kriteria_4" class="control-
   label"><span class="text-danger">*</span>Memori</label>
42.                 <div class="form-group">
43.                     <input type="text" name="kriteria_4" value="<?p
   hp echo ($this->input->post('kriteria_4') ? $this->input-
   >post('kriteria_4') : $tbl_alternatif['kriteria_4']); ?>" class="fo
   rm-control" id="kriteria_4" />
44.                     <span class="text-
   danger"><?php echo form_error('kriteria_4'); ?></span>
45.                 </div>
46.                 <label for="id_user" class="control-
   label"><span class="text-danger">*</span>Id User</label>
47.                 <?php if ($this->session-
   >userdata('user_level') === 'admin') {     ?>
48.                 <div class="form-group">
49.                     <input type="text" name="id_user" value="<?
   php echo ($this->input->post('id_user') ? $this->input-
   >post('id_user') : $tbl_alternatif['id_user']); ?>" class="form-
   control" id="id_user" />
50.                     <span class="text-
   danger"><?php echo form_error('id_user'); ?></span>
51.                 </div>
```

```php
52.                 <?php } else {    ?>
53.                     <div class="form-group">
54.                         <input type="text" name="id_user" value="<?
    php echo ($this->input->post('id_user') ? $this->input-
    >post('id_user') : $tbl_alternatif['id_user']); ?>" class="form-
    control" id="id_user" readonly />
55.                         <span class="text-
    danger"><?php echo form_error('id_user'); ?></span>
56.                     </div>
57.                 <?php } ?>
58.             </div>
59.             <div class="card-footer">
60.                 <button type="submit" class="btn btn-
    primary">Submit</button>
61.             </div>
62.             <?php echo form_close(); ?>
63.         </div>
64.     </div><!-- /.container-fluid -->
65. </section>
```

View (detail.php)

```php
1.  <div id="container-fluid">
2.      <h1>Detail Data Alternatif</h1>
3.      <div class="container-fluid">
4.          <div class="row">
5.              <div class="col-md-12">
6.                  <div class="card">
7.                      <!-- /.card-header -->
8.                      <div class="card-body">
9.                          <table class="table table-bordered">
10.                             <thead>
11.                                 <tr>
12.                                     <th style="width: 10px">#</th>
13.                                     <th>Nama Kriteria</th>
14.                                     <th>Nilai masing-
    masing kriteria</th>
15.                                 </tr>
16.                             </thead>
17.                         <?php echo form_open('tbl_bobot/add'); ?>
18.                             <tbody>
19.                                 <tr>
20.                                     <td>1.</td>
21.                                     <td>id alternatif</td>
22.                                     <td><?= $tbl_alternatif['altern
    atif_id']; ?>
23.                                     </td>
24.                                 </tr>
25.                                 <tr>
26.                                     <td>2.</td>
27.                                     <td>Nama Alternatif</td>
28.                                     <td><?= $tbl_alternatif['altern
    atif_nama']; ?>
```

```
29.                                          </td>
30.                                      </tr>
31.                                      <tr>
32.                                          <td>3.</td>
33.                                          <td>Harga</td>
34.                                          <td><?= $tbl_alternatif['kriter
    ia_1']; ?>
35.                                          </td>
36.                                      </tr>
37.                                      <tr>
38.                                          <td>4.</td>
39.                                          <td>Kamera Belakang</td>
40.                                          <td><?= $tbl_alternatif['kriter
    ia_2']; ?>
41.                                          </td>
42.                                      </tr>
43.                                      <tr>
44.                                          <td>5.</td>
45.                                          <td>Kamera depan</td>
46.                                          <td><?= $tbl_alternatif['kriter
    ia_3']; ?></td>
47.                                      </tr>
48.                                      <tr>
49.                                          <td>6.</td>
50.                                          <td>Memori</td>
51.                                          <td><?= $tbl_alternatif['kriter
    ia_4']; ?></td>
52.                                      </tr>
53.                                      <tr>
54.                                          <td>7.</td>
55.                                          <td>id user</td>
56.                                          <td><?= $tbl_alternatif['id_use
    r']; ?></td>
57.                                      </tr>
58.                                      <tr>
59.                                          <td>8.</td>
60.                                          <th>Aksi</th>
61.                                          <td>
62.                                              <a href="<?php echo site_ur
    l('tbl_alternatif/'); ?>" class="btn btn-
    secondary"><span class="fa fa-pencil"></span> Kembali</a>
63.                                              <a href="<?php echo site_ur
    l('tbl_alternatif/edit/' . $tbl_alternatif['alternatif_id']); ?>" c
    lass="btn btn-warning"><span class="fas fa-pencil-
    alt"></span> Edit Data</a></td>
64.                                      </tr>
65.                                  </tbody>
66.                                  <?php echo form_close(); ?>
67.                              </table>
68.                          </div>
69.                      </div>
70.                  </div>
71.              </div>
72.          </div>
```

```
73. </div>
```

Lampiran Source Code CRUD Tabel User

Controller (Tbl_user.php)

```php
1.  <?php
2.  class Tbl_user extends CI_Controller
3.  {
4.      function __construct()
5.      {
6.          parent::__construct();
7.          $this->load->model('Tbl_user_model');
8.          $this->load->library('enkripsi');
9.      }
10.
11.     function index()
12.     {
13.         $data['tbl_user'] = $this->Tbl_user_model-
    >get_all_tbl_user();
14.
15.         $data['_view'] = 'tbl_user/index';
16.         $this->load->view('layouts/main', $data);
17.     }
18.
19.     function add()
20.     {
21.         $this->load->library('form_validation');
22.
23.         $this->form_validation-
    >set_rules('user_password', 'User Password', 'required|max_length[6
    0]');
24.         $this->form_validation-
    >set_rules('user_name', 'User Name', 'required|max_length[30]');
25.         $this->form_validation-
    >set_rules('user_email', 'User Email', 'required|max_length[60]|val
    id_email');
26.         $this->form_validation-
    >set_rules('user_level', 'User Level', 'required|max_length[5]');
27.         $this->form_validation-
    >set_rules('status', 'Status', 'required|integer');
28.
29.         if ($this->form_validation->run()) {
30.             $params = array(
31.                 'user_password' => $this->enkripsi-
    >encryptIt($this->input->post('user_password')),
32.                 'user_name' => $this->input->post('user_name'),
33.                 'user_email' => $this->input->post('user_email'),
34.                 'user_level' => $this->input->post('user_level'),
35.                 'status' => $this->input->post('status'),
36.             );
```

```
37.
38.            $tbl_user_id = $this->Tbl_user_model-
   >add_tbl_user($params);
39.            redirect('tbl_user/index');
40.        } else {
41.            $data['_view'] = 'tbl_user/add';
42.            $this->load->view('layouts/main', $data);
43.        }
44.    }
45.
46.    function edit($user_id)
47.    {
48.        $data['tbl_user'] = $this->Tbl_user_model-
   >get_tbl_user($user_id);
49.
50.        if (isset($data['tbl_user']['user_id'])) {
51.            $this->load->library('form_validation');
52.
53.            $this->form_validation-
   >set_rules('user_password', 'User Password', 'required|max_length[6
   0]');
54.            $this->form_validation-
   >set_rules('user_name', 'User Name', 'required|max_length[30]');
55.            $this->form_validation-
   >set_rules('user_email', 'User Email', 'required|max_length[60]|val
   id_email');
56.            $this->form_validation-
   >set_rules('user_level', 'User Level', 'required|max_length[5]');
57.            $this->form_validation-
   >set_rules('status', 'Status', 'required|integer');
58.
59.            if ($this->form_validation->run()) {
60.                $params = array(
61.                    'user_password' => $this->enkripsi-
   >encryptIt($this->input->post('user_password')),
62.                    'user_name' => $this->input-
   >post('user_name'),
63.                    'user_email' => $this->input-
   >post('user_email'),
64.                    'user_level' => $this->input-
   >post('user_level'),
65.                    'status' => $this->input->post('status'),
66.                );
67.
68.                $this->Tbl_user_model-
   >update_tbl_user($user_id, $params);
69.                redirect('tbl_user/index');
70.            } else {
71.                $data['_view'] = 'tbl_user/edit';
72.                $this->load->view('layouts/main', $data);
73.            }
74.        } else
75.            show_error('The tbl_user you are trying to edit does no
   t exist.');
76.    }
```

```
77.
78.    function detail($user_id)
79.    {
80.        $data['tbl_user'] = $this->Tbl_user_model-
    >get_tbl_user($user_id);
81.        $data['_view'] = 'tbl_user/detail';
82.        $this->load->view('layouts/main', $data);
83.    }
84.
85.    function remove($user_id)
86.    {
87.        $tbl_user = $this->Tbl_user_model-
    >get_tbl_user($user_id);
88.
89.        if (isset($tbl_user['user_id'])) {
90.            $this->Tbl_user_model->delete_tbl_user($user_id);
91.            redirect('tbl_user/index');
92.        } else
93.            show_error('The tbl_user you are trying to delete does
    not exist.');
94.    }
95. }
```

Model (Tbl_user_model.php)

```
1.  <?php
2.  class Tbl_user_model extends CI_Model
3.  {
4.      function __construct()
5.      {
6.          parent::__construct();
7.      }
8.
9.      function get_tbl_user($user_id)
10.     {
11.         $tbl_user = $this->db->query("
12.             SELECT
13.                 *
14.
15.             FROM
16.                 `tbl_user`
17.
18.             WHERE
19.                 `user_id` = ?
20.         ", array($user_id))->row_array();
21.
22.         return $tbl_user;
23.     }
24.     function get_all_tbl_user()
25.     {
26.         $tbl_user = $this->db->query("
27.             SELECT
28.                 *
```

```
29.
30.            FROM
31.                `tbl_user`
32.
33.            WHERE
34.                1 = 1
35.
36.            ORDER BY `user_id` DESC
37.        ")->result_array();
38.
39.        return $tbl_user;
40.    }
41.    function add_tbl_user($params)
42.    {
43.        $this->db->insert('tbl_user', $params);
44.        return $this->db->insert_id();
45.    }
46.    function update_tbl_user($user_id, $params)
47.    {
48.        $this->db->where('user_id', $user_id);
49.        return $this->db->update('tbl_user', $params);
50.    }
51.    function delete_tbl_user($user_id)
52.    {
53.        return $this->db-
    >delete('tbl_user', array('user_id' => $user_id));
54.    }
55. }
```

View (Index.php)

```
1.  <div class="content-header">
2.      <div class="container-fluid">
3.          <div class="row mb-2">
4.              <div class="col-sm-6">
5.                  <h1 class="m-0 text-dark">User</h1>
6.              </div><!-- /.col -->
7.          </div><!-- /.row -->
8.      </div><!-- /.container-fluid -->
9.  </div>
10.
11. <section class="content">
12.     <div class="container-fluid">
13.         <div class="card">
14.             <div class="card-header">
15.                 <h3 class="card-title">Data User</h3>
16.                 <div class="float-right">
17.                     <a href="<?php echo site_url('tbl_user/add'); ?
    >" class="btn btn-success btn-sm">Tambah Data</a>
18.                 </div>
19.             </div>
20.             <!-- /.card-header -->
21.             <div class="card-body">
```

```php
22.                 <table id="example2" class="table table-
    bordered table-striped">
23.                     <thead>
24.                         <tr>
25.                             <th>User Name</th>
26.                             <th>User Email</th>
27.                             <th>User Level</th>
28.                             <th>Actions</th>
29.                         </tr>
30.                     </thead>
31.                     <tbody>
32.                         <?php foreach ($tbl_user as $t) { ?>
33.                             <tr>
34.                                 <td><?php echo $t['user_name']; ?><
    /td>
35.                                 <td><?php echo $t['user_email']; ?>
    </td>
36.                                 <td><?php echo $t['user_level']; ?>
    </td>
37.                                 <td>
38.                                     <a href="<?php echo site_url('t
    bl_user/detail/' . $t['user_id']); ?>" class="btn btn-info btn-
    xs"><span class="fas fa-info"> </span> Detail Data</a>
39.                                     <a href="<?php echo site_url('t
    bl_user/edit/' . $t['user_id']); ?>" class="btn btn-warning btn-
    xs"><span class="fas fa-pencil-alt"></span> Edit</a>
40.                                     <a href="<?php echo site_url('t
    bl_user/remove/' . $t['user_id']); ?>" class="btn btn-danger btn-
    xs"><span class="fa fa-trash"></span> Delete</a>
41.                                 </td>
42.                             </tr>
43.                         <?php } ?>
44.                     </tbody>
45.                     <tfoot>
46.                         <tr>
47.                             <th>User Name</th>
48.                             <th>User Email</th>
49.                             <th>User Level</th>
50.                             <th>Actions</th>
51.                         </tr>
52.                     </tfoot>
53.                 </table>
54.             </div>
55.             <!-- /.card-body -->
56.         </div>
57.     </div><!-- /.container-fluid -->
58. </section>
```

View (add.php)

```php
1.   <div class="content-header">
2.       <div class="container-fluid">
3.           <div class="row mb-2">
4.               <div class="col-sm-6">
5.                   <h1 class="m-0 text-
     dark">Form Tambah Data User</h1>
6.               </div><!-- /.col -->
7.           </div><!-- /.row -->
8.       </div><!-- /.container-fluid -->
9.   </div>
10.
11.  <section class="content">
12.      <div class="container-fluid">
13.          <div class="card card-primary">
14.              <div class="card-header">
15.                  <h3 class="card-title">Menambah Data User</h3>
16.              </div>
17.              <!-- /.card-header -->
18.              <!-- form start -->
19.              <?php echo form_open('tbl_user/add'); ?>
20.              <div class="card-body">
21.                  <label for="user_password" class="control-
     label"><span class="text-danger">*</span>User Password</label>
22.                  <div class="form-group">
23.                      <input type="password" name="user_password" val
     ue="<?php echo $this->input-
     >post('user_password'); ?>" class="form-
     control" id="user_password" />
24.                      <span class="text-
     danger"><?php echo form_error('user_password'); ?></span>
25.                  </div>
26.                  <label for="user_name" class="control-
     label"><span class="text-danger">*</span>User Name</label>
27.                  <div class="form-group">
28.                      <input type="text" name="user_name" value="<?ph
     p echo $this->input->post('user_name'); ?>" class="form-
     control" id="user_name" />
29.                      <span class="text-
     danger"><?php echo form_error('user_name'); ?></span>
30.                  </div>
31.                  <label for="user_email" class="control-
     label"><span class="text-danger">*</span>User Email</label>
32.                  <div class="form-group">
33.                      <input type="text" name="user_email" value="<?p
     hp echo $this->input->post('user_email'); ?>" class="form-
     control" id="user_email" />
34.                      <span class="text-
     danger"><?php echo form_error('user_email'); ?></span>
35.                  </div>
36.                  <label for="user_level" class="control-
     label"><span class="text-danger">*</span>User Level</label>
37.                  <div class="form-group">
```

```
38.                    <select class="form-control select2 select2-
    hidden-accessible" style="width: 100%;" name="user_level" data-
    select2-id="1" tabindex="-1" aria-hidden="true" id="user_level">
39.                        <option selected="selected" data-select2-
    id="admin" value="admin">Admin</option>
40.                        <option data-select2-
    id="30" value="user">User</option>
41.                    </select>
42.                </div>
43.                <label for="status" class="control-
    label"><span class="text-danger">*</span>Status</label>
44.                <div class="form-group">
45.                    <select class="form-control select2 select2-
    hidden-accessible" style="width: 100%;" name="status" data-select2-
    id="1" tabindex="-1" aria-hidden="true" id="user_level">
46.                        <option selected="selected" data-select2-
    id="3" value="1">Aktif</option>
47.                        <option data-select2-
    id="30" value="0">tidak aktif</option>
48.                    </select>
49.                </div>
50.            </div>
51.            <div class="card-footer">
52.                <button type="submit" class="btn btn-
    primary">Simpan Data</button>
53.            </div>
54.            <?php echo form_close(); ?>
55.        </div>
56.    </div><!-- /.container-fluid -->
57. </section>
```

View (edit.php)

```
1.  <div class="content-header">
2.      <div class="container-fluid">
3.          <div class="row mb-2">
4.              <div class="col-sm-6">
5.                  <h3 class="m-0 text-
    dark">Form Edit Data User</h3>
6.              </div><!-- /.col -->
7.          </div><!-- /.row -->
8.      </div><!-- /.container-fluid -->
9.  </div>
10.
11. <section class="content">
12.     <div class="container-fluid">
13.         <div class="card card-primary">
14.             <div class="card-header">
15.                 <h3 class="card-title">Mengedit Data User</h3>
```

```
16.            </div>
17.            <!-- /.card-header -->
18.            <!-- form start -->
19.            <?php echo form_open('tbl_user/edit/' . $tbl_user['user
    _id']); ?>
20.            <div class="card-body">
21.                <label for="user_password" class="control-
    label"><span class="text-danger">*</span>User Password</label>
22.                <div class="form-group">
23.                    <input type="text" name="user_password" value="
    <?php echo ($this->input->post('user_password') ? $this->input-
    >post('user_password') : $this->enkripsi-
    >decryptIt($tbl_user['user_password'])); ?>" class="form-
    control" id="user_password" />
24.                    <span class="text-
    danger"><?php echo form_error('user_password'); ?></span>
25.                </div>
26.                <label for="user_name" class="control-
    label"><span class="text-danger">*</span>User Name</label>
27.                <div class="form-group">
28.                    <input type="text" name="user_name" value="<?ph
    p echo ($this->input->post('user_name') ? $this->input-
    >post('user_name') : $tbl_user['user_name']); ?>" class="form-
    control" id="user_name" />
29.                    <span class="text-
    danger"><?php echo form_error('user_name'); ?></span>
30.                </div>
31.                <label for="user_email" class="control-
    label"><span class="text-danger">*</span>User Email</label>
32.                <div class="form-group">
33.                    <input type="text" name="user_email" value="<?p
    hp echo ($this->input->post('user_email') ? $this->input-
    >post('user_email') : $tbl_user['user_email']); ?>" class="form-
    control" id="user_email" />
34.                    <span class="text-
    danger"><?php echo form_error('user_email'); ?></span>
35.                </div>
36.                <label for="user_level" class="control-
    label"><span class="text-danger">*</span>User Level</label>
37.                <div class="form-group">
38.                    <select class="form-control select2 select2-
    hidden-accessible" style="width: 100%;" name="user_level" data-
    select2-id="1" tabindex="-1" aria-hidden="true" id="user_level">
39.                        <option selected="selected" data-select2-
    id="admin" value="admin">Admin</option>
40.                        <option data-select2-
    id="30" value="user">User</option>
41.                    </select>
42.                </div>
43.                <label for="status" class="control-
    label"><span class="text-danger">*</span>Status</label>
44.                <div class="form-group">
45.                    <select class="form-control select2 select2-
    hidden-accessible" style="width: 100%;" name="status" data-select2-
    id="1" tabindex="-1" aria-hidden="true" id="user_level">
```

```
46.                           <option selected="selected" data-select2-
   id="3" value="1">Aktif</option>
47.                           <option data-select2-
   id="30" value="0">tidak aktif</option>
48.                        </select>
49.                     </div>
50.                 </div>
51.             <div class="card-footer">
52.                     <button type="submit" class="btn btn-
   primary">Submit</button>
53.             </div>
54.             <?php echo form_close(); ?>
55.         </div>
56.     </div><!-- /.container-fluid -->
57. </section>
```

View (detail.php)

```
1.  <div id="container-fluid">
2.      <h1>Detail Data User</h1>
3.      <div class="container-fluid">
4.          <div class="row">
5.              <div class="col-md-12">
6.                  <div class="card">
7.                      <!-- /.card-header -->
8.                      <div class="card-body">
9.                          <table class="table table-bordered">
10.                             <thead>
11.                                 <tr>
12.                                     <th style="width: 10px">#</th>
13.                                     <th style="width: 250px">Nama K
   riteria</th>
14.                                     <th>Nilai masing-
   masing kriteria</th>
15.                                 </tr>
16.                             </thead>
17.                         <?php echo form_open('tbl_bobot/add'); ?>
18.                             <tbody>
19.                                 <tr>
20.                                     <td>1.</td>
21.                                     <td>id user</td>
22.                                    <td><?= $tbl_user['user_id']; ?>
23.                                     </td>
24.                                 </tr>
25.                                 <tr>
26.                                     <td>2.</td>
27.                                     <td>User name</td>
28.                                     <td><?= $tbl_user['user_name'];
   ?>
29.                                     </td>
30.                                 </tr>
31.                                 <tr>
32.                                     <td>3.</td>
```

```php
33.                                    <td>User Email</td>
34.                                    <td><?= $tbl_user['user_email']
    ; ?>
35.                                    </td>
36.                                </tr>
37.                                <tr>
38.                                    <td>4.</td>
39.                                    <td>User Password</td>
40.                                    <td>
41.                                        <?php echo $this->enkripsi-
    >decryptIt($tbl_user['user_password']); ?>
42.                                    </td>
43.                                </tr>
44.                                <tr>
45.                                    <td>5.</td>
46.                                    <td>Level User</td>
47.                                    <td><?= $tbl_user['user_level']
    ; ?></td>
48.                                </tr>
49.                                <tr>
50.                                    <td>6.</td>
51.                                    <td>Status</td>
52.                                    <td>
53.                                        <?php if ($tbl_user['status
    '] === '1') {
54.                                            echo 'aktif';
55.                                        } else {
56.                                            echo 'tidak aktif';
57.                                        }
58.                                        ?>
59.                                    </td>
60.                                </tr>
61.                                <tr>
62.                                    <td>7.</td>
63.                                    <th>Aksi</th>
64.                                    <td>
65.                                        <a href="<?php echo site_ur
    l('tbl_user/'); ?>" class="btn btn-secondary"><span class="fa fa-
    pencil"></span> Kembali</a>
66.                                        <a href="<?php echo site_ur
    l('tbl_user/edit/' . $tbl_user['user_id']); ?>" class="btn btn-
    warning"><span class="fas fa-pencil-
    alt"></span> Edit Data</a></td>
67.                                </tr>
68.                            </tbody>
69.                            <?php echo form_close(); ?>
70.                        </table>
71.                    </div>
72.                </div>
73.            </div>
74.        </div>
75.    </div>
76. </div>
```

Lampiran Source Code CRUD Tabel Bobot

Controller (Tbl_bobot.php)

```php
1.  <?php
2.  class Tbl_bobot extends CI_Controller
3.  {
4.      function __construct()
5.      {
6.          parent::__construct();
7.          $this->load->model('Tbl_bobot_model');
8.      }
9.      function index()
10.     {
11.         $data['tbl_bobot'] = $this->Tbl_bobot_model-
    >get_all_tbl_bobot();
12.
13.         $data['_view'] = 'tbl_bobot/index';
14.         $this->load->view('layouts/main', $data);
15.     }
16.     function add()
17.     {
18.         $this->load->library('form_validation');
19.
20.         $this->form_validation-
    >set_rules('bobot_keriteria1', 'Bobot Keriteria1', 'required');
21.         $this->form_validation-
    >set_rules('bobot_keriteria2', 'Bobot Keriteria2', 'required');
22.         $this->form_validation-
    >set_rules('bobot_keriteria3', 'Bobot Keriteria3', 'required');
23.         $this->form_validation-
    >set_rules('bobot_keriteria4', 'Bobot Keriteria4', 'required');
24.         $this->form_validation-
    >set_rules('id_user', 'Id User', 'required');
25.
26.         if ($this->form_validation->run()) {
27.             $params = array(
28.                 'bobot_keriteria1' => $this->input-
    >post('bobot_keriteria1'),
29.                 'bobot_keriteria2' => $this->input-
    >post('bobot_keriteria2'),
30.                 'bobot_keriteria3' => $this->input-
    >post('bobot_keriteria3'),
31.                 'bobot_keriteria4' => $this->input-
    >post('bobot_keriteria4'),
32.                 'id_user' => $this->input->post('id_user'),
33.             );
34.
35.             $tbl_bobot_id = $this->Tbl_bobot_model-
    >add_tbl_bobot($params);
36.             redirect('tbl_bobot/index');
37.         } else {
38.             $data['_view'] = 'tbl_bobot/add';
```

```php
39.                $this->load->view('layouts/main', $data);
40.          }
41.       }
42.
43.       function edit($id_bobot)
44.       {
45.           // check if the tbl_bobot exists before trying to edit it
46.           $data['tbl_bobot'] = $this->Tbl_bobot_model-
    >get_tbl_bobot($id_bobot);
47.
48.           if (isset($data['tbl_bobot']['id_bobot'])) {
49.               $this->load->library('form_validation');
50.
51.               $this->form_validation-
    >set_rules('bobot_keriteria1', 'Bobot Keriteria1', 'required');
52.               $this->form_validation-
    >set_rules('bobot_keriteria2', 'Bobot Keriteria2', 'required');
53.               $this->form_validation-
    >set_rules('bobot_keriteria3', 'Bobot Keriteria3', 'required');
54.               $this->form_validation-
    >set_rules('bobot_keriteria4', 'Bobot Keriteria4', 'required');
55.               $this->form_validation-
    >set_rules('id_user', 'Id User', 'required');
56.
57.               if ($this->form_validation->run()) {
58.                   $params = array(
59.                       'bobot_keriteria1' => $this->input-
    >post('bobot_keriteria1'),
60.                       'bobot_keriteria2' => $this->input-
    >post('bobot_keriteria2'),
61.                       'bobot_keriteria3' => $this->input-
    >post('bobot_keriteria3'),
62.                       'bobot_keriteria4' => $this->input-
    >post('bobot_keriteria4'),
63.                       'id_user' => $this->input->post('id_user'),
64.                   );
65.
66.                   $this->Tbl_bobot_model-
    >update_tbl_bobot($id_bobot, $params);
67.                   redirect('tbl_bobot/index');
68.               } else {
69.                   $data['_view'] = 'tbl_bobot/edit';
70.                   $this->load->view('layouts/main', $data);
71.               }
72.           } else {
73.               show_error('The tbl_bobot you are trying to edit does n
    ot exist.');
74.           }
75.       function remove($id_bobot)
76.       {
77.           $tbl_bobot = $this->Tbl_bobot_model-
    >get_tbl_bobot($id_bobot);
78.
79.           // check if the tbl_bobot exists before trying to delete it
```

```
80.          if (isset($tbl_bobot['id_bobot'])) {
81.              $this->Tbl_bobot_model->delete_tbl_bobot($id_bobot);
82.              redirect('tbl_bobot/index');
83.          } else
84.              show_error('The tbl_bobot you are trying to delete does
     not exist.');
85.      }
86. }
```

Model (Tbl_bobot_model.php)

```
1.  <?php
2.  class Tbl_bobot_model extends CI_Model
3.  {
4.      function __construct()
5.      {
6.          parent::__construct();
7.      }
8.
9.      function get_tbl_bobot($id_bobot)
10.     {
11.         return $this->db-
    >get_where('tbl_bobot',array('id_bobot'=>$id_bobot))-
    >row_array();
12.     }
13.
14.     function get_all_tbl_bobot()
15.     {
16.         $this->db->order_by('id_bobot', 'desc');
17.         return $this->db->get('tbl_bobot')->result_array();
18.     }
19.
20.     function add_tbl_bobot($params)
21.     {
22.         $this->db->insert('tbl_bobot',$params);
23.         return $this->db->insert_id();
24.     }
25.
26.     function update_tbl_bobot($id_bobot,$params)
27.     {
28.         $this->db->where('id_bobot',$id_bobot);
29.         return $this->db->update('tbl_bobot',$params);
30.     }
31.
32.     function delete_tbl_bobot($id_bobot)
33.     {
34.         return $this->db-
    >delete('tbl_bobot',array('id_bobot'=>$id_bobot));
35.     }
36. }
```

View (Index.php)

```php
1.  <div class="content-header">
2.      <div class="container-fluid">
3.          <div class="row mb-2">
4.              <div class="col-sm-6">
5.                  <h1 class="m-0 text-dark">Bobot</h1>
6.              </div><!-- /.col -->
7.          </div><!-- /.row -->
8.      </div><!-- /.container-fluid -->
9.  </div>
10.
11. <section class="content">
12.     <div class="container-fluid">
13.         <div class="card">
14.             <div class="card-header">
15.                 <h3 class="card-
    title">Data Bobot Menggunakan Entropy</h3>
16.                 <div class="float-right">
17.                     <?php if ($this->session-
    >userdata('user_level') === 'admin') { ?>
18.                         <a href="<?php echo site_url('tbl_bobot/add
    '); ?>" class="btn btn-success btn-sm">Add</a>
19.                     <?php } ?>
20.                 </div>
21.             </div>
22.             <!-- /.card-header -->
23.             <div class="card-body">
24.                 <table id="example2" class="table table-
    bordered table-striped">
25.                     <thead>
26.                         <tr>
27.                             <th>Id Bobot</th>
28.                             <th>Bobot Harga</th>
29.                             <th>Bobot Kamera belakang</th>
30.                             <th>Bobot Kamera depan</th>
31.                             <th>Bobot Memori</th>
32.                             <th>Id User</th>
33.                             <th>Actions</th>
34.                         </tr>
35.                     </thead>
36.                     <tbody>
37.                         <?php foreach ($tbl_bobot as $t) { ?>
38.                             <tr>
39.                                 <td><?php echo $t['id_bobot']; ?></
    td>
40.                                 <td><?php echo $t['bobot_keriteria1
    ']; ?></td>
41.                                 <td><?php echo $t['bobot_keriteria2
    ']; ?></td>
42.                                 <td><?php echo $t['bobot_keriteria3
    ']; ?></td>
43.                                 <td><?php echo $t['bobot_keriteria4
    ']; ?></td>
```

```
44.                                    <td><?php echo $t['id_user']; ?></t
   d>
45.                                    <td>
46.                                        <a href="<?php echo site_url('t
   bl_bobot/edit/' . $t['id_bobot']); ?>" class="btn btn-info btn-
   xs"><span class="fa fa-pencil"></span> Edit</a>
47.                                        <a href="<?php echo site_url('t
   bl_bobot/remove/' . $t['id_bobot']); ?>" class="btn btn-danger btn-
   xs"><span class="fa fa-trash"></span> Delete</a>
48.                                    </td>
49.                                </tr>
50.                            <?php } ?>
51.                        </tbody>
52.                        <tfoot>
53.                            <tr>
54.                                <th>Id Bobot</th>
55.                                <th>Bobot Harga</th>
56.                                <th>Bobot Kamera belakang</th>
57.                                <th>Bobot Kamera depan</th>
58.                                <th>Bobot Memori</th>
59.                                <th>Id User</th>
60.                                <th>Actions</th>
61.                            </tr>
62.                        </tfoot>
63.                    </table>
64.                </div>
65.                <!-- /.card-body -->
66.            </div>
67.        </div><!-- /.container-fluid -->
68. </section>
```

View (add.php)

```
1.  <div class="content-header">
2.      <div class="container-fluid">
3.          <div class="row mb-2">
4.              <div class="col-sm-6">
5.                  <h3 class="m-0 text-
   dark">Form tampah Data Bobot</h3>
6.              </div><!-- /.col -->
7.          </div><!-- /.row -->
8.      </div><!-- /.container-fluid -->
9.  </div>
10.
11. <section class="content">
12.     <div class="container-fluid">
13.         <div class="card card-primary">
14.             <div class="card-header">
15.                 <h3 class="card-title">Menambah Data Bobot</h3>
16.             </div>
17.             <!-- /.card-header -->
18.             <!-- form start -->
19.             <?php echo form_open('tbl_bobot/add'); ?>
```

```
20.                <div class="card-body">
21.                    <label for="bobot_keriteria1" class="control-
    label"><span class="text-
    danger">*</span>Bobot Keriteria1<small>(Harga)</small></label>
22.                    <div class="form-group">
23.                        <input type="text" name="bobot_keriteria1" valu
    e="<?php echo $this->input-
    >post('bobot_keriteria1'); ?>" class="form-
    control" id="bobot_keriteria1" />
24.                        <span class="text-
    danger"><?php echo form_error('bobot_keriteria1'); ?></span>
25.                    </div>
26.                    <label for="bobot_keriteria2" class="control-
    label"><span class="text-
    danger">*</span>Bobot Keriteria2<small>(Kamera belakang)</small></l
    abel>
27.                    <div class="form-group">
28.                        <input type="text" name="bobot_keriteria2" valu
    e="<?php echo $this->input-
    >post('bobot_keriteria2'); ?>" class="form-
    control" id="bobot_keriteria2" />
29.                        <span class="text-
    danger"><?php echo form_error('bobot_keriteria2'); ?></span>
30.                    </div>
31.                    <label for="bobot_keriteria3" class="control-
    label"><span class="text-
    danger">*</span>Bobot Keriteria3<small>(Kamera Depan)</small></labe
    l>
32.                    <div class="form-group">
33.                        <input type="text" name="bobot_keriteria3" valu
    e="<?php echo $this->input-
    >post('bobot_keriteria3'); ?>" class="form-
    control" id="bobot_keriteria3" />
34.                        <span class="text-
    danger"><?php echo form_error('bobot_keriteria3'); ?></span>
35.                    </div>
36.                    <label for="bobot_keriteria4" class="control-
    label"><span class="text-
    danger">*</span>Bobot Keriteria4<small>(Memori)</small></label>
37.                    <div class="form-group">
38.                        <input type="text" name="bobot_keriteria4" valu
    e="<?php echo $this->input-
    >post('bobot_keriteria4'); ?>" class="form-
    control" id="bobot_keriteria4" />
39.                        <span class="text-
    danger"><?php echo form_error('bobot_keriteria4'); ?></span>
40.                    </div>
41.                    <label for="id_user" class="control-
    label"><span class="text-danger">*</span>Id User</label>
42.                    <div class="form-group">
43.                        <input type="text" name="id_user" value="<?php
    echo $this->input->post('id_user'); ?>" class="form-
    control" id="id_user" />
44.                        <span class="text-
    danger"><?php echo form_error('id_user'); ?></span>
```

```
45.                      </div>
46.                  </div>
47.                  <div class="card-footer">
48.                      <button type="submit" class="btn btn-
    primary">Simpan Data</button>
49.                  </div>
50.                  <?php echo form_close(); ?>
51.              </div>
52.          </div><!-- /.container-fluid -->
53. </section>
```

View (edit.php)

```
1.  <div class="content-header">
2.      <div class="container-fluid">
3.          <div class="row mb-2">
4.              <div class="col-sm-6">
5.                  <h3 class="m-0 text-
    dark">Form Edit Data Bobot</h3>
6.              </div><!-- /.col -->
7.          </div><!-- /.row -->
8.      </div><!-- /.container-fluid -->
9.  </div>
10.
11. <section class="content">
12.     <div class="container-fluid">
13.         <div class="card card-primary">
14.             <div class="card-header">
15.                 <h3 class="card-title">Mengedit Data Bobot</h3>
16.             </div>
17.             <!-- /.card-header -->
18.             <!-- form start -->
19.             <?php echo form_open('tbl_bobot/edit/' . $tbl_bobot['id
    _bobot']); ?>
20.             <div class="card-body">
21.                 <label for="bobot_keriteria1" class="control-
    label"><span class="text-
    danger">*</span>Bobot Keriteria1<small>(Harga)</small></label>
22.                 <div class="form-group">
23.                     <input type="text" name="bobot_keriteria1" valu
    e="<?php echo ($this->input->post('bobot_keriteria1') ? $this-
    >input-
    >post('bobot_keriteria1') : $tbl_bobot['bobot_keriteria1']); ?>" cl
    ass="form-control" id="bobot_keriteria1" />
24.                     <span class="text-
    danger"><?php echo form_error('bobot_keriteria1'); ?></span>
25.                 </div>
26.                 <label for="bobot_keriteria2" class="control-
    label"><span class="text-
    danger">*</span>Bobot Keriteria2<small>(Kamera Belakang)</small></l
    abel>
27.                 <div class="form-group">
28.                     <input type="text" name="bobot_keriteria2" valu
```

```php
e="<?php echo ($this->input->post('bobot_keriteria2') ? $this-
>input-
>post('bobot_keriteria2') : $tbl_bobot['bobot_keriteria2']); ?>" cl
ass="form-control" id="bobot_keriteria2" />
                        <span class="text-
danger"><?php echo form_error('bobot_keriteria2'); ?></span>
                    </div>
                    <label for="bobot_keriteria3" class="control-
label"><span class="text-
danger">*</span>Bobot Keriteria3<small>(Kamera Depan)</small></labe
l>
                    <div class="form-group">
                        <input type="text" name="bobot_keriteria3" valu
e="<?php echo ($this->input->post('bobot_keriteria3') ? $this-
>input-
>post('bobot_keriteria3') : $tbl_bobot['bobot_keriteria3']); ?>" cl
ass="form-control" id="bobot_keriteria3" />
                        <span class="text-
danger"><?php echo form_error('bobot_keriteria3'); ?></span>
                    </div>
                    <label for="bobot_keriteria4" class="control-
label"><span class="text-
danger">*</span>Bobot Keriteria4<small>(Memori)</small></label>
                    <div class="form-group">
                        <input type="text" name="bobot_keriteria4" valu
e="<?php echo ($this->input->post('bobot_keriteria4') ? $this-
>input-
>post('bobot_keriteria4') : $tbl_bobot['bobot_keriteria4']); ?>" cl
ass="form-control" id="bobot_keriteria4" />
                        <span class="text-
danger"><?php echo form_error('bobot_keriteria4'); ?></span>
                    </div>
                    <label for="id_user" class="control-
label"><span class="text-danger">*</span>Id User</label>
                    <div class="form-group">
                        <input type="text" name="id_user" value="<?php
echo ($this->input->post('id_user') ? $this->input-
>post('id_user') : $tbl_bobot['id_user']); ?>" class="form-
control" id="id_user" />
                        <span class="text-
danger"><?php echo form_error('id_user'); ?></span>
                    </div>
                </div>

                <div class="card-footer">
                    <button type="submit" class="btn btn-
primary">Submit</button>
                </div>
                <?php echo form_close(); ?>
            </div>
        </div><!-- /.container-fluid -->
</section>
```

Lampiran Source Code Proses Entropy

Controller (Proses_entropy.php)

```php
1.  <?php
2.  defined('BASEPATH') or exit('No direct script access allowed');
3.
4.  class Proses_entropy extends CI_Controller
5.  {
6.      function __construct()
7.      {
8.          parent::__construct();
9.          $this->load->model('Entropy_model');
10.     }
11.
12.     public function index()
13.     {
14.         $data['_view'] = 'entropy/index';
15.         $this->load->view('layouts/main', $data);
16.     }
17.
18.     public function proses()
19.     {
20.         $where = $this->input->post('parameter');
21.         $data_criteria = $this->Entropy_model-
    >get_criteria($where);
22.         $data_sum = $this->Entropy_model->sumdata($where);
23.         if ($data_sum->num_rows() > 0) {
24.
25.             $total = $data_sum->row();
26.             $criteria1 = $total->c1;
27.             $criteria2 = $total->c2;
28.             $criteria3 = $total->c3;
29.             $criteria4 = $total->c4;
30.         }
31.
32.         $cr1 = 0;
33.         $cr2 = 0;
34.         $cr3 = 0;
35.         $cr4 = 0;
36.         $totalAlternatif = count($data_criteria);
37.         $N = (-1 / log($totalAlternatif));
38.
39.         $hasil = array();
40.         foreach ($data_criteria as $row) {
41.             $hasil[] = array(
42.                 $cr1 += $row->kriteria_1 / $criteria1 * log($row-
    >kriteria_1 / $criteria1),
43.                 $cr2 += $row->kriteria_2 / $criteria2 * log($row-
    >kriteria_2 / $criteria2),
44.                 $cr3 += $row->kriteria_3 / $criteria3 * log($row-
    >kriteria_3 / $criteria3),
45.                 $cr4 += $row->kriteria_4 / $criteria4 * log($row-
```

```php
        >kriteria_4 / $criteria4),
            );
        }
        $nilaitotal_ej = ((1 - ($N * $cr1)) + (1 -
    ($N * $cr2)) + (1 - ($N * $cr3)) + (1 - ($N * $cr4)));

        $w_c1 = ((1 - ($N * $cr1)) / $nilaitotal_ej);
        $w_c2 = ((1 - ($N * $cr2)) / $nilaitotal_ej);
        $w_c3 = ((1 - ($N * $cr3)) / $nilaitotal_ej);
        $w_c4 = ((1 - ($N * $cr4)) / $nilaitotal_ej);
        $total = (($w_c1) + ($w_c2) + ($w_c3) + ($w_c4));
        // print_r($total);
        $data = array(
            'c1' => $w_c1,
            'c2' => $w_c2,
            'c3' => $w_c3,
            'c4' => $w_c4,
            'total' => $total,
            'tipe' => $this->input->post('parameter'),
            'id_user' => $this->session->userdata('user_id'),
            '_view' => 'entropy/hasil'
        );
        $this->load->view('layouts/main', $data);
    }

    public function proses_user()
    {
        $where = $this->session->userdata('user_id');
        $data_criteria = $this->Entropy_model-
    >get_criteria($where);
        $data_sum = $this->Entropy_model->sumdata($where);
        if ($data_sum->num_rows() > 0) {

            $total = $data_sum->row();
            $criteria1 = $total->c1;
            $criteria2 = $total->c2;
            $criteria3 = $total->c3;
            $criteria4 = $total->c4;
        }

        $cr1 = 0;
        $cr2 = 0;
        $cr3 = 0;
        $cr4 = 0;
        $totalAlternatif = count($data_criteria);
        $N = (-1 / log($totalAlternatif));

        $hasil = array();
        foreach ($data_criteria as $row) {
            $hasil[] = array(
                $cr1 += $row->kriteria_1 / $criteria1 * log($row-
    >kriteria_1 / $criteria1),
                $cr2 += $row->kriteria_2 / $criteria2 * log($row-
    >kriteria_2 / $criteria2),
                $cr3 += $row->kriteria_3 / $criteria3 * log($row-
```

```
       >kriteria_3 / $criteria3),
 96.                $cr4 += $row->kriteria_4 / $criteria4 * log($row-
       >kriteria_4 / $criteria4),
 97.             );
 98.         }
 99.         $nilaitotal_ej = ((1 - ($N * $cr1)) + (1 -
       ($N * $cr2)) + (1 - ($N * $cr3)) + (1 - ($N * $cr4)));
100.
101.             $w_c1 = ((1 - ($N * $cr1)) / $nilaitotal_ej);
102.             $w_c2 = ((1 - ($N * $cr2)) / $nilaitotal_ej);
103.             $w_c3 = ((1 - ($N * $cr3)) / $nilaitotal_ej);
104.             $w_c4 = ((1 - ($N * $cr4)) / $nilaitotal_ej);
105.             $total = (($w_c1) + ($w_c2) + ($w_c3) + ($w_c4));
106.             // print_r($total);
107.             $data = array(
108.                 'c1' => $w_c1,
109.                 'c2' => $w_c2,
110.                 'c3' => $w_c3,
111.                 'c4' => $w_c4,
112.                 'total' => $total,
113.                 'tipe' => $this->input->post('parameter'),
114.                 'id_user' => $this->session-
       >userdata('user_id'),
115.                 '_view' => 'entropy/hasil'
116.             );
117.             $this->load->view('layouts/main', $data);
118.         }
119.     }
```

Model (Entropy_model.php)

```
 1.  <?php
 2.  class Entropy_model extends CI_Model
 3.  {
 4.      public function get_criteria($where)
 5.      {
 6.          $this->db->select('*');
 7.          $query = $this->db-
     >get_where('tbl_alternatif', array('id_user' => $where));
 8.          return $query->result();
 9.      }
10.
11.      public function sumdata($where)
12.      {
13.          $this->db->select_sum('kriteria_1', 'c1');
14.          $this->db->select_sum('kriteria_2', 'c2');
15.          $this->db->select_sum('kriteria_3', 'c3');
16.          $this->db->select_sum('kriteria_4', 'c4');
17.          $query = $this->db-
     >get_where('tbl_alternatif', array('id_user' => $where));
18.          return $query;
19.      }
```

```
20. }
```

View (index.php)

```html
1.  <div class="content-header">
2.      <div class="container-fluid">
3.          <div class="row mb-2">
4.              <div class="col-sm-6">
5.                  <h1 class="m-0 text-dark">Proses Entropy</h1>
6.              </div><!-- /.col -->
7.          </div><!-- /.row -->
8.      </div><!-- /.container-fluid -->
9.  </div>
10.
11. <section class="content">
12.     <div class="container-fluid">
13.         <div class="card card-primary">
14.             <div class="card-header">
15.                 <h3 class="card-title"></h3>
16.             </div>
17.             <!-- /.card-header -->
18.             <!-- form start -->
19.             <?php echo form_open('proses_entropy/proses'); ?>
20.             <div class="card-body">
21.                 <label for="parameter" class="control-
    label"><span class="text-danger">*</span>Masukan ID User</label>
22.                 <div class="form-group">
23.                     <input type="text" name="parameter" value="<?ph
    p echo $this->input->post('parameter'); ?>" class="form-
    control" id="parameter" required />
24.                     <span class="text-
    danger"><?php echo form_error('parameter'); ?></span>
25.                 </div>
26.             </div>
27.
28.             <div class="card-footer">
29.                 <button type="submit" class="btn btn-
    primary">Kirim</button>
30.             </div>
31.             <?php echo form_close(); ?>
32.         </div>
33.     </div><!-- /.container-fluid -->
34. </section>
```

View (Hasil.php)

```
1.   <div id="container-fluid">
2.       <h1>Entropy</h1>
3.       <div class="container-fluid">
4.           <div class="row">
5.               <div class="col-md-12">
6.                   <div class="card">
7.                       <!-- /.card-header -->
8.                       <div class="card-body">
9.                           <table class="table table-bordered">
10.                              <thead>
11.                                  <tr>
12.                                      <th style="width: 10px">#</th>

13.                                      <th>Nama Kriteria</th>
14.                                      <th>Nilai Bobot masing-
     masing kriteria</th>
15.                                  </tr>
16.                              </thead>
17.                              <?php echo form_open('tbl_bobot/add');
     ?>
18.                              <tbody>
19.                                  <tr>
20.                                      <td>1.</td>
21.                                      <td>Keriteria 1</td>
22.                                      <td>
23.                                          <div class="col-md-12">
24.                                              <div class="form-
     group">
25.                                                  <input type="text"
     name="bobot_keriteria1" value="<?= $c1 ?>" class="form-
     control" id="bobot_keriteria1" readonly />
26.                                                  <span class="text-
     danger"><?php echo form_error('bobot_keriteria1'); ?></span>
27.                                              </div>
28.                                          </div>
29.                                      </td>
30.                                  </tr>
31.                                  <tr>
32.                                      <td>2.</td>
33.                                      <td>Keriteria 2</td>
34.                                      <td>
35.                                          <div class="col-md-12">
36.                                              <div class="form-
     group">
37.                                                  <input type="text"
     name="bobot_keriteria2" value="<?= $c2 ?>" class="form-
     control" id="bobot_keriteria2" readonly />
38.                                                  <span class="text-
     danger"><?php echo form_error('bobot_keriteria2'); ?></span>
39.                                              </div>
40.                                          </div>
41.                                      </td>
```

```
42.                                </tr>
43.                                <tr>
44.                                    <td>3.</td>
45.                                    <td>Keriteria 3</td>
46.                                    <td>
47.                                        <div class="col-md-12">
48.                                            <div class="form-
    group">
49.                                                <input type="text"
    name="bobot_keriteria3" value="<?= $c3 ?>" class="form-
    control" id="bobot_keriteria3" readonly />
50.                                                <span class="text-
    danger"><?php echo form_error('bobot_keriteria3'); ?></span>
51.                                            </div>
52.                                        </div>
53.                                    </td>
54.                                </tr>
55.                                <tr>
56.                                    <td>4.</td>
57.                                    <td>Keriteria 4</td>
58.                                    <td>
59.                                        <div class="col-md-12">
60.                                            <div class="form-
    group">
61.                                                <input type="text"
    name="bobot_keriteria4" value="<?= $c4 ?>" class="form-
    control" id="bobot_keriteria4" readonly />
62.                                                <span class="text-
    danger"><?php echo form_error('bobot_keriteria4'); ?></span>
63.                                            </div>
64.                                        </div>
65.                                        <div class="col-md-12">
66.                                            <div class="form-
    group">
67.                                                <input type="text"
    name="id_user" value="<?= $id_user ?>" class="form-
    control" id="id_user" hidden />
68.                                                <span class="text-
    danger"><?php echo form_error('id_user'); ?></span>
69.                                            </div>
70.                                        </div>
71.                                        <div class="col-md-12">
72.                                            <div class="form-
    group">
73.                                                <input type="text"
    name="tipe" value="<?= $tipe ?>" class="form-
    control" id="tipe" hidden />
74.                                                <span class="text-
    danger"><?php echo form_error('tipe'); ?></span>
75.                                            </div>
76.                                        </div>
77.                                    </td>
78.                                </tr>
79.                                <tr>
80.                                    <td>4.</td>
```

```
81.                                    <th scope="col">Aksi</th>
82.                                    <th scope="col"><input type="su
    bmit" name="submit" value="Simpan Data Entropy" class="btn btn-
    success"></th>
83.                                </tr>
84.                            </tbody>
85.                        <?php echo form_close(); ?>
86.                    </table>
87.                </div>
88.            </div>
89.        </div>
90.     </div>
91.   </div>
92. </div>
```