

public function cek\_login() {

$data = array('username' => $this->input->post('username', TRUE),

'password' => md5($this->input->post('password', TRUE))

);

$this->load->model('mPengguna'); // load model mPengguna

$hasil = $this->mPengguna->cek\_user($data);

if ($hasil->num\_rows() == 1) {

foreach ($hasil->result() as $sess) {

$sess\_data['logged\_in'] = 'Sudah Loggin';

$sess\_data['username'] = $sess->username;

$sess\_data['password'] = $sess->password;

$sess\_data['hakakses'] = $sess->hakakses;

$this->session->set\_userdata($sess\_data);

}

if ($this->session->userdata('hakakses')=='1') {

redirect('cWelcomeAdmin');

}

elseif ($this->session->userdata('hakakses')=='0') {

redirect('cWelcomeUser');

}

} else {

echo "<script>alert('Gagal login: Cek username, password!');history.go(-1);</script>";

}

}

public function logout() {

$this->session->unset\_userdata('username');

$this->session->unset\_userdata('hakakses');

session\_destroy();

redirect('welcome');

}

**HAK AKSES ADMIN**

->beranda



<?php

if ($this->session->userdata('hakakses')==="1") {

?>

<!-- Navigation -->

<nav class="navbar navbar-inverse" role="navigation">

<div class="container-fluid">

<!-- Brand and toggle get grouped for better mobile display -->

<div class="navbar-header">

<button type="button" class="navbar-toggle" data-toggle="collapse" data-target="#navbar1">

<span class="sr-only">Toggle navigation</span>

<span class="icon-bar"></span>

<span class="icon-bar"></span>

<span class="icon-bar"></span>

</button>

<p class="navbar-brand">Penjadwalan Shift</a>

</div>

<!-- Top Menu Items -->

<div class="collapse navbar-collapse" id="navbar1">

<ul class="nav navbar-nav">

<li class="dropdown"><a href="http://wisata-sengkaling.com/home">Sengkaling food festival</a></li>

<li class="dropdown">

<a href="#" class="dropdown-toggle" data-toggle="dropdown"><i class="fa fa-user"></i> Jadwal <b class="caret"></b></a>

<ul class="dropdown-menu message-dropdown">

<li><a href="<?php echo site\_url('cWelcomeAdmin/index') ?>">Semua Pegawai</a></li>

<li><a href="<?php echo site\_url('cWelcomeAdmin/indexHarianTetap') ?>">Harian Tetap</a></li>

<li><a href="<?php echo site\_url('cWelcomeAdmin/indexHarianKontrak') ?>">Harian Kontrak</a></li>

<li class="divider"></li>

<li><a href="<?php echo site\_url('cWelcomeAdmin/indexHarianLepas') ?>">Harian Lepas</a></li>

</ul>

</li>

<li class="dropdown">

<a href="#" class="dropdown-toggle" data-toggle="dropdown"><i class="fa fa-user"></i> System <b class="caret"></b></a>

<ul class="dropdown-menu alert-dropdown">

<li><a href="<?php echo site\_url('cPegawai/index') ?>">Pegawai</a></li>

<li><a href="<?php echo site\_url('cJam/index') ?>">Jam</a></li>

<li><a href="<?php echo site\_url('cHari/index') ?>">Hari</a></li>

<li class="divider"></li>

<li><a href="<?php echo site\_url('cjadwal/index') ?>">Penjadwalan<span class="sr-only">(current)</span></a></li>

</ul>

</li>

<li class="dropdown">

<a href="#" class="dropdown-toggle" data-toggle="dropdown"><i class="fa fa-user"></i>

<?php echo "ADMIN"; ?>

<b class="caret"></b></a>

<ul class="dropdown-menu">

<li><a href="<?php echo site\_url('welcome/logout') ?>">Log Out<span class="sr-only">(current)</span></a></li>

</ul>

</li>

</ul>

</div>

</div>

</nav>

<?php

} else {

?>

<!-- Navigation -->

<nav class="navbar navbar-inverse navbar-fixed-top" role="navigation">

<!-- Brand and toggle get grouped for better mobile display -->

<div class="navbar-header">

<button type="button" class="navbar-toggle" data-toggle="collapse" data-target=".navbar-ex1-collapse">

<span class="sr-only">Toggle navigation</span>

<span class="icon-bar"></span>

<span class="icon-bar"></span>

<span class="icon-bar"></span>

</button>

</div>

<!-- Top Menu Items -->

<ul class="nav navbar-right top-nav">

<li class="dropdown"><a href="http://wisata-sengkaling.com/home">Sengkaling food festival</a></li>

<?php

if ($this->session->userdata('hakakses')==="0") {

?>

<li class="dropdown"><a href="<?php echo site\_url('cWelcomeUser/index') ?>">Jadwal Shift</a></li>

<li class="dropdown">

<a href="#" class="dropdown-toggle" data-toggle="dropdown"><i class="fa fa-user"></i> System <b class="caret"></b></a>

<ul class="dropdown-menu alert-dropdown">

<li><a href="<?php echo site\_url('cPegawai/index') ?>">Edit Profile</a></li>

</ul>

</li>

<li class="dropdown">

<a href="#" class="dropdown-toggle" data-toggle="dropdown"><i class="fa fa-user"></i>

<?php echo $sal; ?>

<b class="caret"></b></a>

<ul class="dropdown-menu">

<li><a href="<?php echo site\_url('welcome/logout') ?>">Log Out<span class="sr-only">(current)</span></a></li>

</ul>

</li>

<?php

}

?> <?php

if ($this->session->userdata('hakakses')==="") {

?>

<li class="dropdown">

<a href="#" class="dropdown-toggle" data-toggle="dropdown"><i class="fa fa-user"></i> System <b class="caret"></b></a>

<ul class="dropdown-menu alert-dropdown">

<li><a href="<?php echo site\_url('cPegawai/index') ?>">Edit Profile</a></li>

</ul>

</li>

<li class="dropdown">

<a href="#" class="dropdown-toggle" data-toggle="dropdown"><i class="fa fa-user"></i>

<?php echo $sal; ?>

<b class="caret"></b></a>

<ul class="dropdown-menu">

<li><a href="<?php echo site\_url('welcome/logout') ?>">Log Out<span class="sr-only">(current)</span></a></li>

</ul>

</li>

<?php

}

?>

</ul>

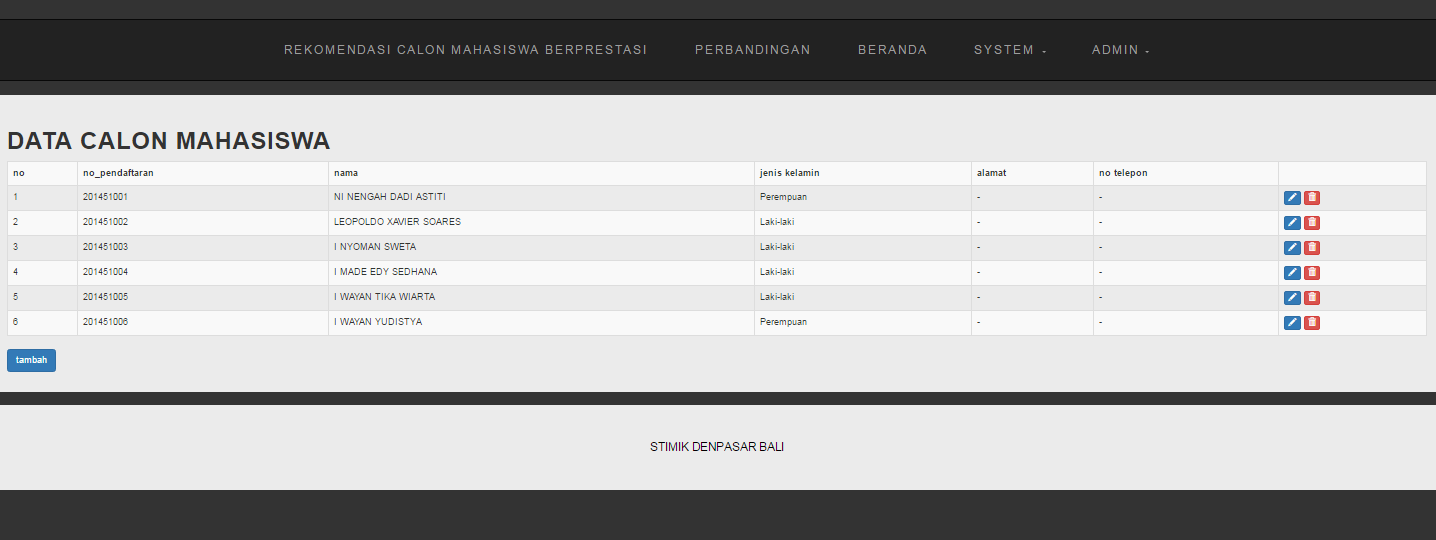
</nav>

<?php

}

?>

->System->data calon



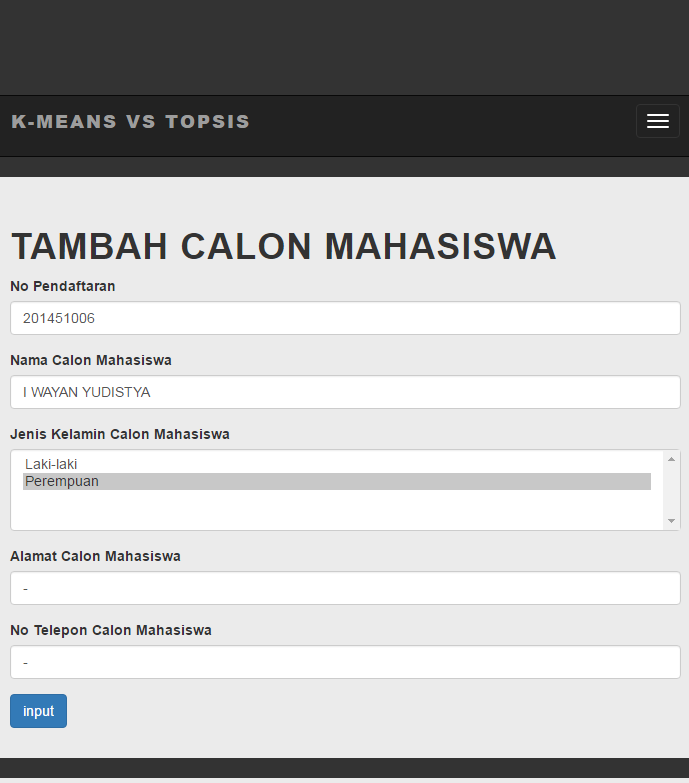
function mCalonMahasiswaLihat(){

$lihat = $this->db->get('calon\_mahasiswa');

return $lihat->result();

}

->System->data calon->tambahbutton



<?php

class mCalonMahasiswa extends CI\_Controller{

function \_\_construct(){

parent::\_\_construct();

$this->load->database();

}

function mCalonMahasiswaLihat(){

$lihat = $this->db->get('calon\_mahasiswa');

return $lihat->result();

}

function mCalonMahasiswaTambahAct() {

$no\_pendaftaran = $this->input->post('no\_pendaftaran');

$nama\_calon\_mahasiswa = $this->input->post('nama\_calon\_mahasiswa');

$alamat\_calon\_mahasiswa = $this->input->post('alamat\_calon\_mahasiswa');

$no\_telepon\_calon\_mahasiswa = $this->input->post('no\_telepon\_calon\_mahasiswa');

$jenis\_kelamin\_calon\_mahasiswa = $this->input->post('jenis\_kelamin\_calon\_mahasiswa');

$data = array (

'no\_pendaftaran'=> $no\_pendaftaran,

'nama\_calon\_mahasiswa'=> $nama\_calon\_mahasiswa,

'alamat\_calon\_mahasiswa'=> $alamat\_calon\_mahasiswa,

'no\_telepon\_calon\_mahasiswa'=> $no\_telepon\_calon\_mahasiswa,

'jenis\_kelamin\_calon\_mahasiswa'=> $jenis\_kelamin\_calon\_mahasiswa,

);

$this->db->insert('calon\_mahasiswa', $data);

$tambah = $this->db->get('calon\_mahasiswa');

return $tambah->result();

}

function mCalonMahasiswaEdit($data){

$this->db->where($data);

$edit = $this->db->get('calon\_mahasiswa');

return $edit->result();

}

function mCalonMahasiswaUpdateAct($data,$no\_pendaftaran){

$this->db->where('no\_pendaftaran', $no\_pendaftaran);

$this->db->update('calon\_mahasiswa',$data);

}

function mCalonMahasiswaHapus($data){

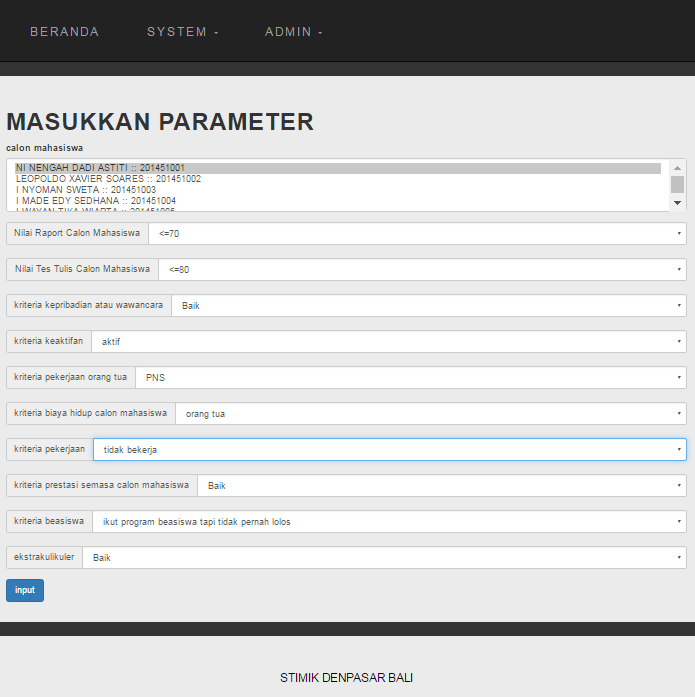
$this->db->delete('calon\_mahasiswa',$data);

}

}

?>

->System->data calon->input parameter->inputbutton



function mParameterTambahAct() {

$no\_pendaftaran = $this->input->post('no\_pendaftaran');

$nil\_raport = $this->input->post('nil\_raport');

$tes\_tulis = $this->input->post('tes\_tulis');

$kepribadian\_wawancara = $this->input->post('kepribadian\_wawancara');

$keaktifan = $this->input->post('keaktifan');

$pekerjaan\_orang\_tua = $this->input->post('pekerjaan\_orang\_tua');

$biaya\_hidup\_calon\_mahasiswa = $this->input->post('biaya\_hidup\_calon\_mahasiswa');

$pekerjaan = $this->input->post('pekerjaan');

$prestasi\_semasa\_calon\_mahasiswa = $this->input->post('prestasi\_semasa\_calon\_mahasiswa');

$beasiswa = $this->input->post('beasiswa');

$ekstrakulikuler = $this->input->post('ekstrakulikuler');

$data = array (

'no\_pendaftaran' => $no\_pendaftaran,

'nil\_raport'=> $nil\_raport,

'tes\_tulis'=> $tes\_tulis,

'kepribadian\_wawancara' => $kepribadian\_wawancara,

'keaktifan' => $keaktifan,

'pekerjaan\_orang\_tua' => $pekerjaan\_orang\_tua,

'biaya\_hidup\_calon\_mahasiswa' => $biaya\_hidup\_calon\_mahasiswa,

'pekerjaan' => $pekerjaan,

'prestasi\_semasa\_calon\_mahasiswa' => $prestasi\_semasa\_calon\_mahasiswa,

'beasiswa' => $beasiswa,

'ekstrakulikuler' => $ekstrakulikuler,

);

$this->db->insert('cluster', $data);

$tambah = $this->db->get('cluster');

return $tambah->result();

}

->System->data calon->input parameter->



function mParameterLihat(){

$this->db->select('\*');

$this->db->from('cluster');

$this->db->join('calon\_mahasiswa', 'cluster.no\_pendaftaran = calon\_mahasiswa.no\_pendaftaran' );

$this->db->order\_by('cluster.id\_cluster', 'asc');

$lihat = $this->db->get();

return $lihat->result();

}

->System->data calon->kriteria bobot



<?php

class mKriteria extends CI\_Controller{

function \_\_construct(){

parent::\_\_construct();

$this->load->database();

}

function mKriteriaLihat(){

$lihat = $this->db->get('kriteria');

return $lihat->result();

}

function mKriteriaEdit($data){

$this->db->where($data);

$edit = $this->db->get('kriteria');

return $edit->result();

}

function mKriteriaUpdateAct($data,$keterangan){

$this->db->where('keterangan', $keterangan);

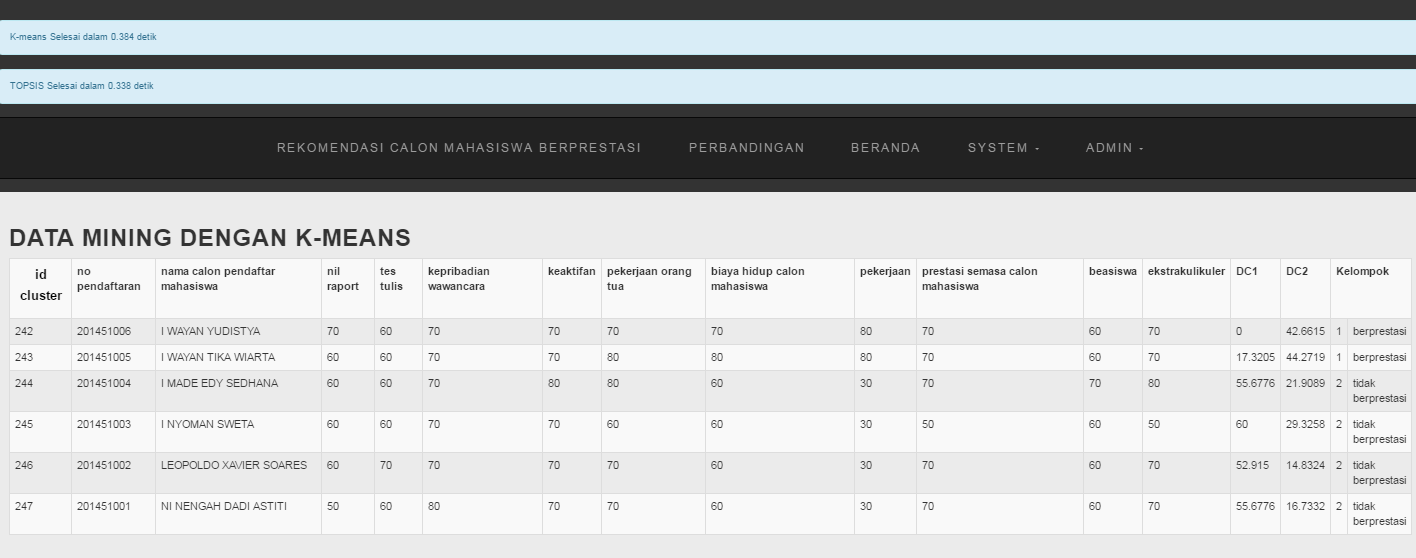
$this->db->update('kriteria',$data);

}

}

?>

->rekomendasi calon



function kMeans() {

//cek jml calon mahasiswa

$queryz = $this->db->query("SELECT COUNT(\*) FROM cluster") or 0;

$jmlcalon = $queryz->result();

if ($jmlcalon >= 1) {

if ($jmlcalon >= 2) {

//hitung(1, 1);

$id = 1;

$versi = 1;

if ($jmlcalon >= 3) {

//$hasil = hitung(1, 2);

$id = 1;

$versi = 2;

$urutan = 2;

while (($id == false) && ($versi == false) && ($urutan <= $jmlcalon)) {

$id = $urutan;

$versi = 2;

$urutan++;

}

}

}

}

$datano1 = 0;

$datano2 = 0;

$C1a = 0;

$C2a = 0;

$C1b = 0;

$C2b = 0;

$C1c = 0;

$C2c = 0;

$C1d = 0;

$C2d = 0;

$C1e = 0;

$C2e = 0;

$C1f = 0;

$C2f = 0;

$C1g = 0;

$C2g = 0;

$C1h = 0;

$C2h = 0;

$C1i = 0;

$C2i = 0;

$C1j = 0;

$C2j = 0;

$query1 = $this->db->query('SELECT \* FROM cluster');

$no = 1;

foreach ($query1->result() as $data1) {

if ($no == 1 || $no == $id) {

if ($no == 1) {

$datano1 = $data1->id\_cluster;

} else if ($no == $id) {

$datano2 = $data1->id\_cluster;

}

$C1a += $data1->nil\_raport;

$C1b += $data1->tes\_tulis;

$C1c += $data1->kepribadian\_wawancara;

$C1d += $data1->keaktifan;

$C1e += $data1->pekerjaan\_orang\_tua;

$C1f += $data1->biaya\_hidup\_calon\_mahasiswa;

$C1g += $data1->pekerjaan;

$C1h += $data1->prestasi\_semasa\_calon\_mahasiswa;

$C1i += $data1->beasiswa;

$C1j += $data1->ekstrakulikuler;

}

$no++;

}

if ($id > 1) {

$C1a = $C1a / 2;

$C1b = $C1b / 2;

$C1c = $C1c / 2;

$C1d = $C1d / 2;

$C1e = $C1e / 2;

$C1f = $C1f / 2;

$C1g = $C1g / 2;

$C1h = $C1h / 2;

$C1i = $C1i / 2;

$C1j = $C1j / 2;

}

if ($versi == 1) {

$queryjmldata2 = $this->db->query('SELECT \* FROM cluster LIMIT 1,1') or 0;

$result = $queryjmldata2->row\_array();

$jmldata2 = $result['COUNT(\*)'];

} else {

$queryjmldata2 = $this->db->query('SELECT COUNT(\*) FROM cluster WHERE id\_cluster!=' . $datano1 . ' AND id\_cluster!=' . $datano2) or 0;

$result = $queryjmldata2->row\_array();

$jmldata2 = $result['COUNT(\*)'];

}

if ($jmldata2 > 0) {

if ($versi == 1) {

$query2 = $this->db->query('SELECT \* FROM cluster LIMIT 1,1');

} else {

$query2 = $this->db->query('SELECT \* FROM cluster WHERE id\_cluster!=' . $datano1 . ' AND id\_cluster!=' . $datano2)or 0;

}

foreach ($query2->result() as $data2) {

$C2a += $data2->nil\_raport;

$C2b += $data2->tes\_tulis;

$C2c += $data2->kepribadian\_wawancara;

$C2d += $data2->keaktifan;

$C2e += $data2->pekerjaan\_orang\_tua;

$C2f += $data2->biaya\_hidup\_calon\_mahasiswa;

$C2g += $data2->pekerjaan;

$C2h += $data2->prestasi\_semasa\_calon\_mahasiswa;

$C2i += $data2->beasiswa;

$C2j += $data2->ekstrakulikuler;

}

$C2a = $C2a / $jmldata2;

$C2b = $C2b / $jmldata2;

$C2c = $C2c / $jmldata2;

$C2d = $C2d / $jmldata2;

$C2e = $C2e / $jmldata2;

$C2f = $C2f / $jmldata2;

$C2g = $C2g / $jmldata2;

$C2h = $C2h / $jmldata2;

$C2i = $C2i / $jmldata2;

$C2j = $C2j / $jmldata2;

}

//metode k-means

//hitung jarak data dengan centroid euclidean

$query = $this->db->query('SELECT \* FROM cluster');

foreach ($query->result() as $data) {

//jarak dengan cluster1

$Dc1 = sqrt(pow(($data->nil\_raport) - $C1a, 2) + pow(($data->tes\_tulis) - $C1b, 2) + pow(($data->kepribadian\_wawancara) - $C1c, 2) + pow(($data->keaktifan) - $C1d, 2) + pow(($data->pekerjaan\_orang\_tua) - $C1e, 2) + pow(($data->biaya\_hidup\_calon\_mahasiswa) - $C1f, 2) + pow(($data->pekerjaan) - $C1g, 2) + pow(($data->prestasi\_semasa\_calon\_mahasiswa) - $C1h, 2) + pow(($data->beasiswa) - $C1i, 2) + pow(($data->ekstrakulikuler) - $C1j, 2));

//jarak dengan cluster2

$Dc2 = sqrt(pow(($data->nil\_raport) - $C2a, 2) + pow(($data->tes\_tulis) - $C2b, 2) + pow(($data->kepribadian\_wawancara) - $C2c, 2) + pow(($data->keaktifan) - $C2d, 2) + pow(($data->pekerjaan\_orang\_tua) - $C2e, 2) + pow(($data->biaya\_hidup\_calon\_mahasiswa) - $C2f, 2) + pow(($data->pekerjaan) - $C2g, 2) + pow(($data->prestasi\_semasa\_calon\_mahasiswa) - $C2h, 2) + pow(($data->beasiswa) - $C2i, 2) + pow(($data->ekstrakulikuler) - $C2j, 2));

if ($Dc1 < $Dc2) {

$proseskelompok = $this->db->query('UPDATE cluster SET kelompok=1 WHERE id\_cluster=' . $data->id\_cluster);

} else {

$proseskelompok = $this->db->query('UPDATE cluster SET kelompok=2 WHERE id\_cluster=' . $data->id\_cluster);

}

$prosesupdate = $this->db->query('UPDATE cluster SET Dc1=' . $Dc1 . ', Dc2=' . $Dc2 . ' WHERE id\_cluster=' . $data->id\_cluster);

}

}



function ranking(){

$rank = $this->db->query("SELECT \* FROM kedekatan\_relatif ORDER BY dekat\_relatif DESC");

$posisi = 1;

foreach ($rank->result() as $peringkat){

$this->db->query("UPDATE rangking SET nilai = '$peringkat->dekat\_relatif',

ranking = '$posisi'

WHERE no\_pendaftaran = '$peringkat->no\_pendaftaran'");

$posisi++;

}

}



function kuadrat\_update() {

$data = $this->db->query("SELECT \* FROM cluster");

foreach ($data->result() as $matriks){

$nm1 = $matriks->nil\_raport \* $matriks->nil\_raport;

$nm2 = $matriks->tes\_tulis \* $matriks->tes\_tulis;

$nm3 = $matriks->kepribadian\_wawancara \* $matriks->kepribadian\_wawancara;

$nm4 = $matriks->keaktifan \* $matriks->keaktifan;

$nm5 = $matriks->pekerjaan\_orang\_tua \* $matriks->pekerjaan\_orang\_tua;

$nm6 = $matriks->biaya\_hidup\_calon\_mahasiswa \* $matriks->biaya\_hidup\_calon\_mahasiswa;

$nm7 = $matriks->pekerjaan \* $matriks->pekerjaan;

$nm8 = $matriks->prestasi\_semasa\_calon\_mahasiswa \* $matriks->prestasi\_semasa\_calon\_mahasiswa;

$nm9 = $matriks->beasiswa \* $matriks->beasiswa;

$nm10 = $matriks->ekstrakulikuler \* $matriks->ekstrakulikuler;

$query = $this->db->query("UPDATE kuadrat SET nil\_raport = '$nm1',

tes\_tulis = '$nm2',

kepribadian\_wawancara = '$nm3',

keaktifan = '$nm4',

pekerjaan\_orang\_tua = '$nm5',

biaya\_hidup\_calon\_mahasiswa = '$nm6',

pekerjaan = '$nm7',

prestasi\_semasa\_calon\_mahasiswa = '$nm8',

beasiswa = '$nm9',

ekstrakulikuler = '$nm10'

WHERE no\_pendaftaran = '$matriks->no\_pendaftaran'");

}

}



function akar\_kuadrat(){

$sum1 = $this->db->query("SELECT SUM(nil\_raport) sum FROM kuadrat");

$sum1a = $sum1->row\_array();

$sum2 = $this->db->query("SELECT SUM(tes\_tulis) sum FROM kuadrat");

$sum2a = $sum2->row\_array();

$sum3 = $this->db->query("SELECT SUM(kepribadian\_wawancara) sum FROM kuadrat");

$sum3a = $sum3->row\_array();

$sum4 = $this->db->query("SELECT SUM(keaktifan) sum FROM kuadrat");

$sum4a = $sum4->row\_array();

$sum5 = $this->db->query("SELECT SUM(pekerjaan\_orang\_tua) sum FROM kuadrat");

$sum5a = $sum5->row\_array();

$sum6 = $this->db->query("SELECT SUM(biaya\_hidup\_calon\_mahasiswa) sum FROM kuadrat");

$sum6a = $sum6->row\_array();

$sum7 = $this->db->query("SELECT SUM(pekerjaan) sum FROM kuadrat");

$sum7a = $sum7->row\_array();

$sum8 = $this->db->query("SELECT SUM(prestasi\_semasa\_calon\_mahasiswa) sum FROM kuadrat");

$sum8a = $sum8->row\_array();

$sum9 = $this->db->query("SELECT SUM(beasiswa) sum FROM kuadrat");

$sum9a = $sum9->row\_array();

$sum10 = $this->db->query("SELECT SUM(ekstrakulikuler) sum FROM kuadrat");

$sum10a = $sum10->row\_array();

$akar1 = sqrt($sum1a['sum']);

$akar2 = sqrt($sum2a['sum']);

$akar3 = sqrt($sum3a['sum']);

$akar4 = sqrt($sum4a['sum']);

$akar5 = sqrt($sum5a['sum']);

$akar6 = sqrt($sum6a['sum']);

$akar7 = sqrt($sum7a['sum']);

$akar8 = sqrt($sum8a['sum']);

$akar9 = sqrt($sum9a['sum']);

$akar10= sqrt($sum10a['sum']);

$this->db->query("UPDATE jumlah\_kuadrat SET nil\_raport = '$sum1a[sum]',

tes\_tulis = '$sum2a[sum]',

kepribadian\_wawancara = '$sum3a[sum]',

keaktifan = '$sum4a[sum]',

pekerjaan\_orang\_tua = '$sum5a[sum]',

biaya\_hidup\_calon\_mahasiswa = '$sum6a[sum]',

pekerjaan = '$sum7a[sum]',

prestasi\_semasa\_calon\_mahasiswa = '$sum8a[sum]',

beasiswa = '$sum9a[sum]',

ekstrakulikuler = '$sum10a[sum]'

WHERE jenis\_nilai = 'JUMLAH KUADRAT'");

$this->db->query("UPDATE jumlah\_kuadrat SET nil\_raport = '$akar1',

tes\_tulis = '$akar2',

kepribadian\_wawancara = '$akar3',

keaktifan = '$akar4',

pekerjaan\_orang\_tua = '$akar5',

biaya\_hidup\_calon\_mahasiswa = '$akar6',

pekerjaan = '$akar7',

prestasi\_semasa\_calon\_mahasiswa = '$akar8',

beasiswa = '$akar9',

ekstrakulikuler = '$akar10'

WHERE jenis\_nilai = 'AKAR KUADRAT'");

}



function normalisasi\_matriks\_update(){

$nilaiaka = $this->db->query("SELECT \* FROM jumlah\_kuadrat WHERE jenis\_nilai = 'AKAR KUADRAT'");

$nilaiakar = $nilaiaka->row\_array();

$data = $this->db->query("SELECT \* FROM cluster");

foreach ($data->result() as $matriks){

$nm1 = $matriks->nil\_raport / $nilaiakar['nil\_raport'];

$nm2 = $matriks->tes\_tulis / $nilaiakar['tes\_tulis'];

$nm3 = $matriks->kepribadian\_wawancara / $nilaiakar['kepribadian\_wawancara'];

$nm4 = $matriks->keaktifan / $nilaiakar['keaktifan'];

$nm5 = $matriks->pekerjaan\_orang\_tua / $nilaiakar['pekerjaan\_orang\_tua'];

$nm6 = $matriks->biaya\_hidup\_calon\_mahasiswa / $nilaiakar['biaya\_hidup\_calon\_mahasiswa'];

$nm7 = $matriks->pekerjaan / $nilaiakar['pekerjaan'];

$nm8 = $matriks->prestasi\_semasa\_calon\_mahasiswa / $nilaiakar['prestasi\_semasa\_calon\_mahasiswa'];

$nm9 = $matriks->beasiswa / $nilaiakar['beasiswa'];

$nm10 = $matriks->ekstrakulikuler / $nilaiakar['ekstrakulikuler'];

$query = $this->db->query("UPDATE normalisasi\_matriks SET nil\_raport = '$nm1',

tes\_tulis = '$nm2',

kepribadian\_wawancara = '$nm3',

keaktifan = '$nm4',

pekerjaan\_orang\_tua = '$nm5',

biaya\_hidup\_calon\_mahasiswa = '$nm6',

pekerjaan = '$nm7',

prestasi\_semasa\_calon\_mahasiswa = '$nm8',

beasiswa = '$nm9',

ekstrakulikuler = '$nm10'

WHERE no\_pendaftaran = '$matriks->no\_pendaftaran'");

}

}



function weighted\_normalized\_decision\_matrix() {

$bobot = $this->db->query("SELECT \* FROM kriteria");

$kriteria = $bobot->row\_array();

$data1 = $this->db->query("SELECT \* FROM normalisasi\_matriks");

foreach ($data1->result() as $wndm){

$wn1 = $wndm->nil\_raport \* $kriteria['nil\_raport'];

$wn2 = $wndm->tes\_tulis \* $kriteria['tes\_tulis'];

$wn3 = $wndm->kepribadian\_wawancara \* $kriteria['kepribadian\_wawancara'];

$wn4 = $wndm->keaktifan \* $kriteria['keaktifan'];

$wn5 = $wndm->pekerjaan\_orang\_tua \* $kriteria['pekerjaan\_orang\_tua'];

$wn6 = $wndm->biaya\_hidup\_calon\_mahasiswa \* $kriteria['biaya\_hidup\_calon\_mahasiswa'];

$wn7 = $wndm->pekerjaan \* $kriteria['pekerjaan'];

$wn8 = $wndm->prestasi\_semasa\_calon\_mahasiswa \* $kriteria['prestasi\_semasa\_calon\_mahasiswa'];

$wn9 = $wndm->beasiswa \* $kriteria['beasiswa'];

$wn10 = $wndm->ekstrakulikuler \* $kriteria['ekstrakulikuler'];

$query1 = $this->db->query("UPDATE weighted\_normalized\_decision\_matrix SET nil\_raport = '$wn1',

tes\_tulis = '$wn2',

kepribadian\_wawancara = '$wn3',

keaktifan = '$wn4',

pekerjaan\_orang\_tua = '$wn5',

biaya\_hidup\_calon\_mahasiswa = '$wn6',

pekerjaan = '$wn7',

prestasi\_semasa\_calon\_mahasiswa = '$wn8',

beasiswa = '$wn9',

ekstrakulikuler = '$wn10'

WHERE no\_pendaftaran = '$wndm->no\_pendaftaran'");

}

}



function positif\_negatif(){

//pencarian nilai positif

$plus1 = $this->db->query("SELECT MAX(nil\_raport) max FROM weighted\_normalized\_decision\_matrix");

$Positif1a = $plus1->row\_array();

$plus2 = $this->db->query("SELECT MAX(tes\_tulis) max FROM weighted\_normalized\_decision\_matrix");

$Positif2a = $plus2->row\_array();

$plus3 = $this->db->query("SELECT MAX(kepribadian\_wawancara) max FROM weighted\_normalized\_decision\_matrix");

$Positif3a = $plus3->row\_array();

$plus4 = $this->db->query("SELECT MAX(keaktifan) max FROM weighted\_normalized\_decision\_matrix");

$Positif4a = $plus4->row\_array();

$plus5 = $this->db->query("SELECT MAX(pekerjaan\_orang\_tua) max FROM weighted\_normalized\_decision\_matrix");

$Positif5a = $plus5->row\_array();

$plus6 = $this->db->query("SELECT MAX(biaya\_hidup\_calon\_mahasiswa) max FROM weighted\_normalized\_decision\_matrix");

$Positif6a = $plus6->row\_array();

$plus7 = $this->db->query("SELECT MAX(pekerjaan) max FROM weighted\_normalized\_decision\_matrix");

$Positif7a = $plus7->row\_array();

$plus8 = $this->db->query("SELECT MAX(prestasi\_semasa\_calon\_mahasiswa) max FROM weighted\_normalized\_decision\_matrix");

$Positif8a = $plus8->row\_array();

$plus9 = $this->db->query("SELECT MAX(beasiswa) max FROM weighted\_normalized\_decision\_matrix");

$Positif9a = $plus9->row\_array();

$plus10 = $this->db->query("SELECT MAX(ekstrakulikuler) max FROM weighted\_normalized\_decision\_matrix");

$Positif10a = $plus10->row\_array();

//pencarian nilai negatif

$min1 = $this->db->query("SELECT MIN(nil\_raport) min FROM weighted\_normalized\_decision\_matrix");

$negatif1a = $min1->row\_array();

$min2 = $this->db->query("SELECT MIN(tes\_tulis) min FROM weighted\_normalized\_decision\_matrix");

$negatif2a = $min2->row\_array();

$min3 = $this->db->query("SELECT MIN(kepribadian\_wawancara) min FROM weighted\_normalized\_decision\_matrix");

$negatif3a = $min3->row\_array();

$min4 = $this->db->query("SELECT MIN(keaktifan) min FROM weighted\_normalized\_decision\_matrix");

$negatif4a = $min4->row\_array();

$min5 = $this->db->query("SELECT MIN(pekerjaan\_orang\_tua) min FROM weighted\_normalized\_decision\_matrix");

$negatif5a = $min5->row\_array();

$min6 = $this->db->query("SELECT MIN(biaya\_hidup\_calon\_mahasiswa) min FROM weighted\_normalized\_decision\_matrix");

$negatif6a = $min6->row\_array();

$min7 = $this->db->query("SELECT MIN(pekerjaan) min FROM weighted\_normalized\_decision\_matrix");

$negatif7a = $min7->row\_array();

$min8 = $this->db->query("SELECT MIN(prestasi\_semasa\_calon\_mahasiswa) min FROM weighted\_normalized\_decision\_matrix");

$negatif8a = $min8->row\_array();

$min9 = $this->db->query("SELECT MIN(beasiswa) min FROM weighted\_normalized\_decision\_matrix");

$negatif9a = $min9->row\_array();

$min10 = $this->db->query("SELECT MIN(ekstrakulikuler) min FROM weighted\_normalized\_decision\_matrix");

$negatif10a = $min10->row\_array();

$this->db->query("UPDATE positif\_negatif SET nil\_raport = '$Positif1a[max]',

tes\_tulis = '$Positif2a[max]',

kepribadian\_wawancara = '$Positif3a[max]',

keaktifan = '$Positif4a[max]',

pekerjaan\_orang\_tua = '$Positif5a[max]',

biaya\_hidup\_calon\_mahasiswa = '$Positif6a[max]',

pekerjaan = '$Positif7a[max]',

prestasi\_semasa\_calon\_mahasiswa = '$Positif8a[max]',

beasiswa = '$Positif9a[max]',

ekstrakulikuler = '$Positif10a[max]'

WHERE jenis\_nilai = 'MAX POSITIF'");

$this->db->query("UPDATE positif\_negatif SET nil\_raport = '$negatif1a[min]',

tes\_tulis = '$negatif2a[min]',

kepribadian\_wawancara = '$negatif3a[min]',

keaktifan = '$negatif4a[min]',

pekerjaan\_orang\_tua = '$negatif5a[min]',

biaya\_hidup\_calon\_mahasiswa = '$negatif6a[min]',

pekerjaan = '$negatif7a[min]',

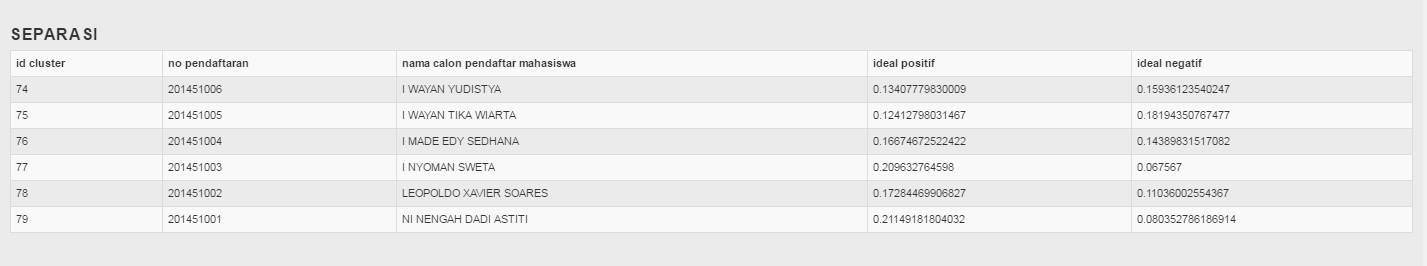
prestasi\_semasa\_calon\_mahasiswa = '$negatif8a[min]',

beasiswa = '$negatif9a[min]',

ekstrakulikuler = '$negatif10a[min]'

WHERE jenis\_nilai = 'MIN NEGATIF'");

}



function separasi(){

$pos = $this->db->query("SELECT \* FROM positif\_negatif WHERE jenis\_nilai = 'MAX POSITIF'");

$np = $pos->row\_array();

$neg = $this->db->query("SELECT \* FROM positif\_negatif WHERE jenis\_nilai = 'MIN NEGATIF'");

$nn = $neg->row\_array();

$sep = $this->db->get('weighted\_normalized\_decision\_matrix');

foreach ($sep->result() as $sp){

$spt1 = ($sp->nil\_raport - $np['nil\_raport']) \* ($sp->nil\_raport - $np['nil\_raport']);

$spt2 = ($sp->tes\_tulis - $np['tes\_tulis']) \* ($sp->tes\_tulis - $np['tes\_tulis']);

$spt3 = ($sp->kepribadian\_wawancara - $np['kepribadian\_wawancara']) \* ($sp->kepribadian\_wawancara - $np['kepribadian\_wawancara']);

$spt4 = ($sp->keaktifan - $np['keaktifan']) \* ($sp->keaktifan - $np['keaktifan']);

$spt5 = ($sp->pekerjaan\_orang\_tua - $np['pekerjaan\_orang\_tua']) \* ($sp->pekerjaan\_orang\_tua - $np['pekerjaan\_orang\_tua']);

$spt6 = ($sp->biaya\_hidup\_calon\_mahasiswa - $np['biaya\_hidup\_calon\_mahasiswa']) \* ($sp->biaya\_hidup\_calon\_mahasiswa - $np['biaya\_hidup\_calon\_mahasiswa']);

$spt7 = ($sp->pekerjaan - $np['pekerjaan']) \* ($sp->pekerjaan - $np['pekerjaan']);

$spt8 = ($sp->prestasi\_semasa\_calon\_mahasiswa - $np['prestasi\_semasa\_calon\_mahasiswa']) \* ($sp->prestasi\_semasa\_calon\_mahasiswa - $np['prestasi\_semasa\_calon\_mahasiswa']);

$spt9 = ($sp->beasiswa - $np['beasiswa']) \* ($sp->beasiswa - $np['beasiswa']);

$spt10 = ($sp->ekstrakulikuler - $np['ekstrakulikuler']) \* ($sp->ekstrakulikuler - $np['ekstrakulikuler']);

$spt = sqrt($spt1 + $spt2 + $spt3 + $spt4 + $spt5 + $spt6);

$sne1 = ($sp->nil\_raport - $nn['nil\_raport']) \* ($sp->nil\_raport - $nn['nil\_raport']);

$sne2 = ($sp->tes\_tulis - $nn['tes\_tulis']) \* ($sp->tes\_tulis - $nn['tes\_tulis']);

$sne3 = ($sp->kepribadian\_wawancara - $nn['kepribadian\_wawancara']) \* ($sp->kepribadian\_wawancara - $nn['kepribadian\_wawancara']);

$sne4 = ($sp->keaktifan - $nn['keaktifan']) \* ($sp->keaktifan - $nn['keaktifan']);

$sne5 = ($sp->pekerjaan\_orang\_tua - $nn['pekerjaan\_orang\_tua']) \* ($sp->pekerjaan\_orang\_tua - $nn['pekerjaan\_orang\_tua']);

$sne6 = ($sp->biaya\_hidup\_calon\_mahasiswa - $nn['biaya\_hidup\_calon\_mahasiswa']) \* ($sp->biaya\_hidup\_calon\_mahasiswa - $nn['biaya\_hidup\_calon\_mahasiswa']);

$sne7 = ($sp->pekerjaan - $nn['pekerjaan']) \* ($sp->pekerjaan - $nn['pekerjaan']);

$sne8 = ($sp->prestasi\_semasa\_calon\_mahasiswa - $nn['prestasi\_semasa\_calon\_mahasiswa']) \* ($sp->prestasi\_semasa\_calon\_mahasiswa - $nn['prestasi\_semasa\_calon\_mahasiswa']);

$sne9 = ($sp->beasiswa - $nn['beasiswa']) \* ($sp->beasiswa - $nn['beasiswa']);

$sne10 = ($sp->ekstrakulikuler - $nn['ekstrakulikuler']) \* ($sp->ekstrakulikuler - $nn['ekstrakulikuler']);

$sn = sqrt($sne1 + $sne2 + $sne3 + $sne4 + $sne5 + $sne6);

$this->db->query("UPDATE separasi SET ideal\_positif = '$spt',

ideal\_negatif = '$sn'

WHERE no\_pendaftaran = '$sp->no\_pendaftaran'");

}

}



function kedekatan\_relatif(){

$relatif = $this->db->query("SELECT \* FROM separasi");

foreach ($relatif->result() as $kedekatan){

$hasil = $kedekatan->ideal\_negatif / ($kedekatan->ideal\_positif + $kedekatan->ideal\_negatif);

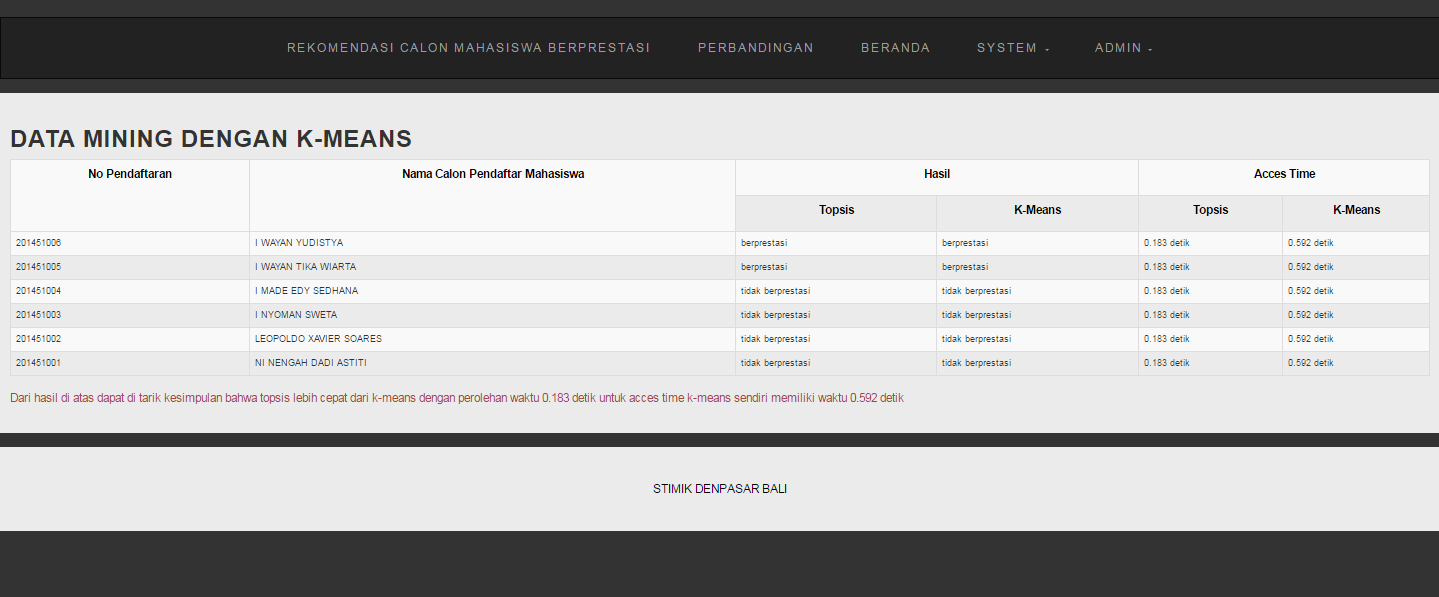
$this->db->query("UPDATE kedekatan\_relatif SET dekat\_relatif = '$hasil'

WHERE no\_pendaftaran = '$kedekatan->no\_pendaftaran'");

}

}

->perbandingan



function topsisKmeansAdmin() {

$this->db->select('\*');

$this->db->from('cluster');

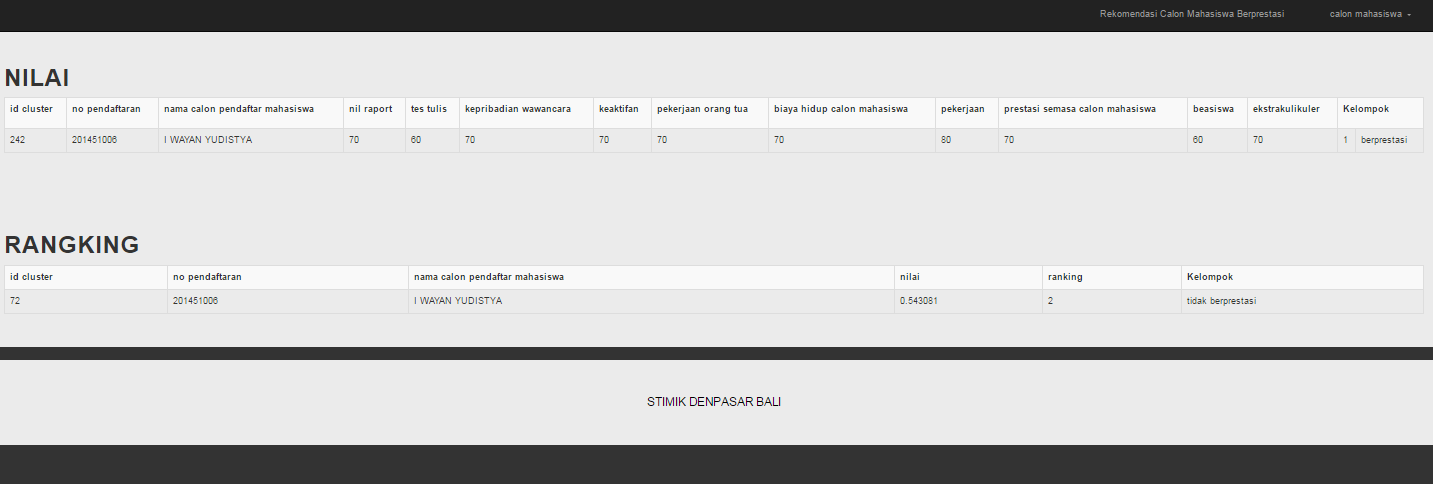
$this->db->join('calon\_mahasiswa', 'cluster.no\_pendaftaran = calon\_mahasiswa.no\_pendaftaran' );

$this->db->join('rangking', 'rangking.no\_pendaftaran = calon\_mahasiswa.no\_pendaftaran' );

$lihatTopsisKMeansUser = $this->db->get();

return $lihatTopsisKMeansUser->result();

}



function topsisUser($username) {

$this->db->select('\*');

$this->db->from('cluster');

$this->db->join('calon\_mahasiswa', 'cluster.no\_pendaftaran = calon\_mahasiswa.no\_pendaftaran' );

$this->db->where('cluster.no\_pendaftaran', $username);

$lihatTopsisUser = $this->db->get();

return $lihatTopsisUser->result();

}

function kMeansUser($username) {

$this->db->select('\*');

$this->db->from('rangking');

$this->db->join('calon\_mahasiswa', 'rangking.no\_pendaftaran = calon\_mahasiswa.no\_pendaftaran' );

$this->db->order\_by('rangking.ranking', 'asc');

$this->db->where('rangking.no\_pendaftaran', $username);

$lihatKMeansUser = $this->db->get();

return $lihatKMeansUser->result();

}