



Representational State Transfer (REST) II

Praktikum - Database

Buat database dengan nama “kontak”.

```
CREATE DATABASE kontak;
```

```
USE kontak;
```

```
CREATE TABLE IF NOT EXISTS `telepon` (  
  `id` int(11) NOT NULL AUTO_INCREMENT,  
  `nama` varchar(50) NOT NULL,  
  `nomor` varchar(13) NOT NULL,  
  PRIMARY KEY (`id`)  
) ENGINE=InnoDB DEFAULT CHARSET=latin1 AUTO_INCREMENT=8 ;
```

```
USE kontak;
```

```
INSERT INTO `telepon` (`id`, `nama`, `nomor`) VALUES  
(1, 'Orion', '08576666762'),  
(2, 'Mars', '08576666770'),  
(7, 'Alpha', '08576666765');
```

Praktikum – Install Library Restserver

<https://github.com/ardisaurus/ci-restserver>

- Download link diatas → extract → masukkan dalam folder htdocs → rename folder menjadi “rest_ci”
- Lakukan setting pada application/config/database.php
- Buat sebuah controller dengan nama Kontak.php pada rest_ci/application/controllers
- Download “Postman” pada Google Chrome menggunakan fitur “Extensions”, kemudian lakukan testing.

Praktikum - application/config/database.php

```
<?php
defined('BASEPATH') OR exit('No direct script access allowed');

$active_group = 'default';
$query_builder = TRUE;

$db['default'] = array(
    'dsn'          => "",
    'hostname'     => 'localhost',
    'username'     => 'root',
    'password'     => "",
    'database'     => 'kontak',
    'dbdriver'     => 'mysqli',
    'dbprefix'     => "",
    'pconnect'     => FALSE,
    'db_debug'     => (ENVIRONMENT !== 'production'),
    'cache_on'     => FALSE,
    'cachedir'     => "",
    'char_set'     => 'utf8',
    'dbcollat'     => 'utf8_general_ci',
    'swap_pre'     => "",
    'encrypt'      => FALSE,
    'compress'     => FALSE,
    'stricton'     => FALSE,
    'failover'     => array(),
    'save_queries' => TRUE
);
```


Praktikum – Kontak.php (Get)

```
<?php

defined('BASEPATH') OR exit('No direct script access allowed');

require APPPATH . '/libraries/REST_Controller.php';
use Restserver\Libraries\REST_Controller;

class Kontak extends REST_Controller {

    function __construct($config = 'rest') {
        parent::__construct($config);
        $this->load->database();
    }

    function index_get() {
        $id = $this->get('id');
        if ($id == "") {
            $kontak = $this->db->get('telepon')->result();
        } else {
            $this->db->where('id', $id);
            $kontak = $this->db->get('telepon')->result();
        }
        $this->response($kontak, 200);
    }
}
```

Praktikum – Kontak.php (post)

```
function index_post() {  
    $data = array(  
        'id'      => $this->post('id'),  
        'nama'    => $this->post('nama'),  
        'nomor'   => $this->post('nomor'));  
    $insert = $this->db->insert('telepon', $data);  
    if ($insert) {  
        $this->response($data, 200);  
    } else {  
        $this->response(array('status' => 'fail', 502));  
    }  
}
```

Praktikum – Kontak.php (Put)

```
function index_put() {  
    $id = $this->put('id');  
    $data = array(  
        'id'      => $this->put('id'),  
        'nama'   => $this->put('nama'),  
        'nomor'  => $this->put('nomor'));  
    $this->db->where('id', $id);  
    $update = $this->db->update('telepon', $data);  
    if ($update) {  
        $this->response($data, 200);  
    } else {  
        $this->response(array('status' => 'fail', 502));  
    }  
}
```

Praktikum – Kontak.php (Delete)

```
function index_delete() {  
    $id = $this->delete('id');  
    $this->db->where('id', $id);  
    $delete = $this->db->delete('telepon');  
    if ($delete) {  
        $this->response(array('status' => 'success'), 201);  
    } else {  
        $this->response(array('status' => 'fail', 502));  
    }  
}  
  
}  
?>
```


Praktikum – Testing dengan Postman

[get] http://127.0.0.1/rest_ci/index.php/kontak

[post] http://127.0.0.1/rest_ci/index.php/kontak

[put] http://127.0.0.1/rest_ci/index.php/kontak

[delete] http://127.0.0.1/rest_ci/index.php/kontak

Aplikasi web REST API Client

<https://www.codeigniter.com/download>

<https://github.com/ardisaurus/ci-curl>

- Download link pertama → extract → masukkan dalam folder htdocs → rename folder menjadi “rest_ci_client”
- Download link kedua → extract → masuk ke folder libraries dan copy file Curl.php lalu pindahkan ke direktori rest_ci_client/application/libraries.
- Buat sebuah controller dengan nama Kontak.php pada rest_ci_client/application/controllers
- Buat sebuah antarmuka pada web untuk para pengguna dengan membuat file list.php, create.php, dan edit.php pada folder baru yang ditempatkan pada direktori rest_ci_client/application/views dengan nama “kontak”.

Controller Kontak.php (Menampilkan)

```
<?php
Class Kontak extends CI_Controller{

    var $API ="";

    function __construct() {
        parent::__construct();
        $this->API="http://localhost/rest_ci/index.php";
        $this->load->library('session');
        $this->load->library('curl');
        $this->load->helper('form');
        $this->load->helper('url');
    }

    // menampilkan data kontak
    function index(){
        $data['datakontak'] = json_decode($this->curl->simple_get($this->API.'/kontak'));
        $this->load->view('kontak/list',$data);
    }
}
```

Controller Kontak.php (Create)

```
// insert data kontak
function create(){
    if(isset($_POST['submit'])){
        $data = array(
            'id'      => $this->input->post('id'),
            'nama'    => $this->input->post('nama'),
            'nomor' => $this->input->post('nomor'));
        $insert = $this->curl->simple_post($this->API.'/kontak', $data, array(CURLOPT_BUFFERSIZE => 10));
        if($insert)
        {
            $this->session->set_flashdata('hasil','Insert Data Berhasil');
        }else
        {
            $this->session->set_flashdata('hasil','Insert Data Gagal');
        }
        redirect('kontak');
    }else{
        $this->load->view('kontak/create');
    }
}
```

Controller Kontak.php (Edit)

```
// edit data kontak
function edit(){
    if(isset($_POST['submit'])){
        $data = array(
            'id'    => $this->input->post('id'),
            'nama'  => $this->input->post('nama'),
            'nomor' => $this->input->post('nomor'));
        $update = $this->curl->simple_put($this->API.'/kontak', $data, array(CURLOPT_BUFFERSIZE => 10));
        if($update)
        {
            $this->session->set_flashdata('hasil','Update Data Berhasil');
        }
        else
        {
            $this->session->set_flashdata('hasil','Update Data Gagal');
        }
        redirect('kontak');
    }
    else{
        $params = array('id'=> $this->uri->segment(3));
        $data['datakontak'] = json_decode($this->curl->simple_get($this->API.'/kontak',$params));
        $this->load->view('kontak/edit',$data);
    }
}
```

Controller Kontak.php (Delete)

```
// delete data kontak
function delete($id){
    if(empty($id)){
        redirect('kontak');
    }else{
        $delete = $this->curl->simple_delete($this->API.'/kontak', array('id'=>$id), array(CURLOPT_BUFFERSIZE => 10));
        if($delete)
        {
            $this->session->set_flashdata('hasil','Delete Data Berhasil');
        }else
        {
            $this->session->set_flashdata('hasil','Delete Data Gagal');
        }
        redirect('kontak');
    }
}
}
?>
```


Praktikum – list.php (Baca&Hapus Data)

```
<font color="orange">
<?php echo $this->session->flashdata('hasil'); ?>
</font>
<table border="1">
  <tr><th>ID</th><th>NAMA</th><th>NOMOR</th><th></th></tr>
  <?php
  foreach ($datakontak as $kontak){
    echo "<tr>
      <td>$kontak->id</td>
      <td>$kontak->nama</td>
      <td>$kontak->nomor</td>
      <td>".anchor('kontak/edit/'.$kontak->id,'Edit')."
        ".anchor('kontak/delete/'.$kontak->id,'Delete')."</td>
    </tr>";
  }
  ?>
</table>
<a href="http://localhost/rest_ci_client/index.php/kontak/create">+ Tambah data<a>
```

Praktikum – create.php (Tambah data)

```
<?php echo form_open_multipart('kontak/create');?>
<table>
  <tr><td>NAMA</td><td><?php echo form_input('nama');?></td></tr>
  <tr><td>NOMOR</td><td><?php echo form_input('nomor');?></td></tr>
  <tr><td colspan="2">
    <?php echo form_submit('submit','Simpan');?>
    <?php echo anchor('kontak','Kembali');?></td></tr>
</table>
<?php
echo form_close();
?>
```

Praktikum – edit.php (Edit data)

```
<?php echo form_open('kontak/edit');?>
<?php echo form_hidden('id',$datakontak[0]->id);?>

<table>
    <tr><td>ID</td><td><?php echo form_input("",$datakontak[0]->id,"disabled");?></td></tr>
    <tr><td>NAMA</td><td><?php echo form_input('nama',$datakontak[0]->nama);?></td></tr>
    <tr><td>NOMOR</td><td><?php echo form_input('nomor',$datakontak[0]->nomor);?></td></tr>
    <tr><td colspan="2">
        <?php echo form_submit('submit','Simpan');?>
        <?php echo anchor('kontak','Kembali');?></td></tr>
</table>
<?php
echo form_close();
?>
```

Tugas

- Buatlah aplikasi web REST yang berbeda dari contoh di atas



Terima kasih