

Yii2 Framework

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DIKLAT PEMROGRAMAN WEB, 1 – 15 JULI 2019

KEMENTRIAN KEUANGAN RI

Yii2 Framework

MODEL – VIEW - CONTROLLER

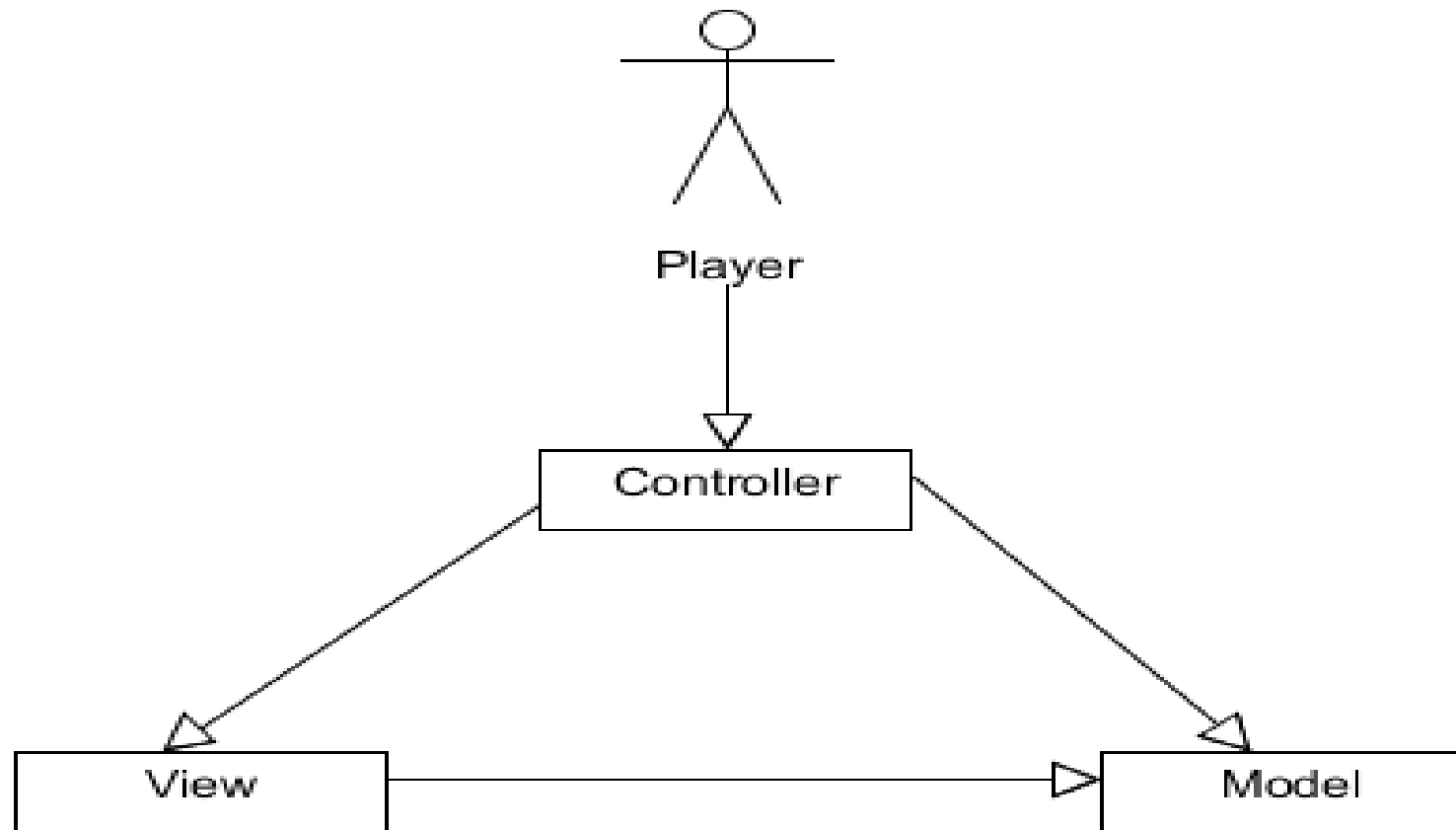
Yii2 Hello World

Untuk menampilkan teks "*hello word*" di Yii caranya cukup mudah. Caranya tambahkan fungsi bernama **actionHello()** pada **frontend\controllers\SiteController**, contohnya sebagai berikut.

```
public function actionHello()  
{  
    return "Hello World!";  
}
```

Buka browser anda, arahkan ke alamat :
<http://localhost/webdiklat/site/hello>

MVC - UML



Controller

1. Controller dibuat oleh aplikasi saat pengguna me-request-nya. Ketika berjalan, controller melakukan action yang di-request melalui URL.
2. Controller terdapat dalam direktori controller, dengan aturan penamaan seperti berikut ini: **SiteController** , **WelcomeController**, **AbsenPegawaiController**
3. URL <http://localhost/webdiklat/welcome> , akan mengakses file **WelcomeController.php**
4. Controller pada Yii2 adalah class turunan dari class [yii\base\Controller](#)

```
<?php
namespace frontend\controllers;
--
use yii\base\Controller;
class SiteController extends Controller {
```

Controller :: Routing

✓ buka file SiteController.php !!

- Routing adalah pemetaan antara URL dengan konten, Berfungsi mengatur jalan / rute pada aplikasi berbasis web
- *Routing* di Yii otomatis terbentuk sesuai dengan *controller* dan fungsi *action*-nya. Antara *controller* dan fungsi *action* dipisahkan dengan tanda slash /
- Nama fungsi pada *controller* yang akan menjadi *routing* diawali dengan kata **action** misal : **actionCreate** , **actionUpdate**



Controller

Fungsi:
action

<http://localhost/webdiklat/site/about>

Controller :: Routing

- *Routing* di Yii sifatnya *case sensitive* atau membedakan huruf besar dan huruf kecil
- Jika nama *controller* lebih dari satu kata, misal **AbsenPegawaiController**, maka *routing* menggunakan *separator dash* (-) untuk memisahkan dua kata tersebut URL nya menjadi **/absen-pegawai**
- Demikian juga untuk nama *action* , jika lebih dari satu kata, missal **actionIzinPulang** maka *routing* nya menggunakan *separator dash* (-) menjadi **/controller/izin-pulang**

Nama Controller	Nama Fungsi Action	URL
SiteController	actionIndex()	http://localhost/site/
SiteController	actionSalam()	http://localhost/site/salam
SiteController	actionSalamKenal()	http://localhost/site/salam-kenal
AbsenPegawaiController	actionIndex()	http://localhost/absen-pegawai
AbsenPegawaiController	actionIzinPulang()	http://localhost/absen-pegawai/izin-pulang

View

- File view terdapat dalam direktori views/nama_controller
- File view akan di tampilkan ke user dengan terlebih dahulu dipanggil lewat controller atau view itu sendiri.
- Skrip berikut me-render sebuah file view (frontend\views\site\index.php) dari controller SiteController pada fungsi actionIndex

```
<?php
namespace frontend\controllers;
--
use yii\base\Controller;
class SiteController extends Controller {
    public function actionIndex() {
        return $this->render('index');
    }
    ...
}
```

✓ buka file SiteController.php !!

Controller – View : kirim data

- Controller akan mengirim data ke view untuk di proses atau ditampilkan
- Gunakan method `$this->render('nama_file_view',[])` pada controller

Controller: SiteController.php

```
public function actionSalam(){  
    $sekolah = 'SMA 28';  
    $objns = new NilaiSiswa("andi",89);  
    return $this->render('salam' [   
        'namasekolah'=>$sekolah,  
        'model'=>$objns,  
        'judul'=>'selamat belajar'  
    ]  
);  
}
```

View: view/site/salam.php

```
echo 'Nama Sekolah : ' . $namasekolah;  
echo '<br/>Nama Siswa : ' . $model->nama;  
echo '<br/>Nilai : ' . $model->nilai;  
echo '<h3>' . $judul . '</h3>';
```

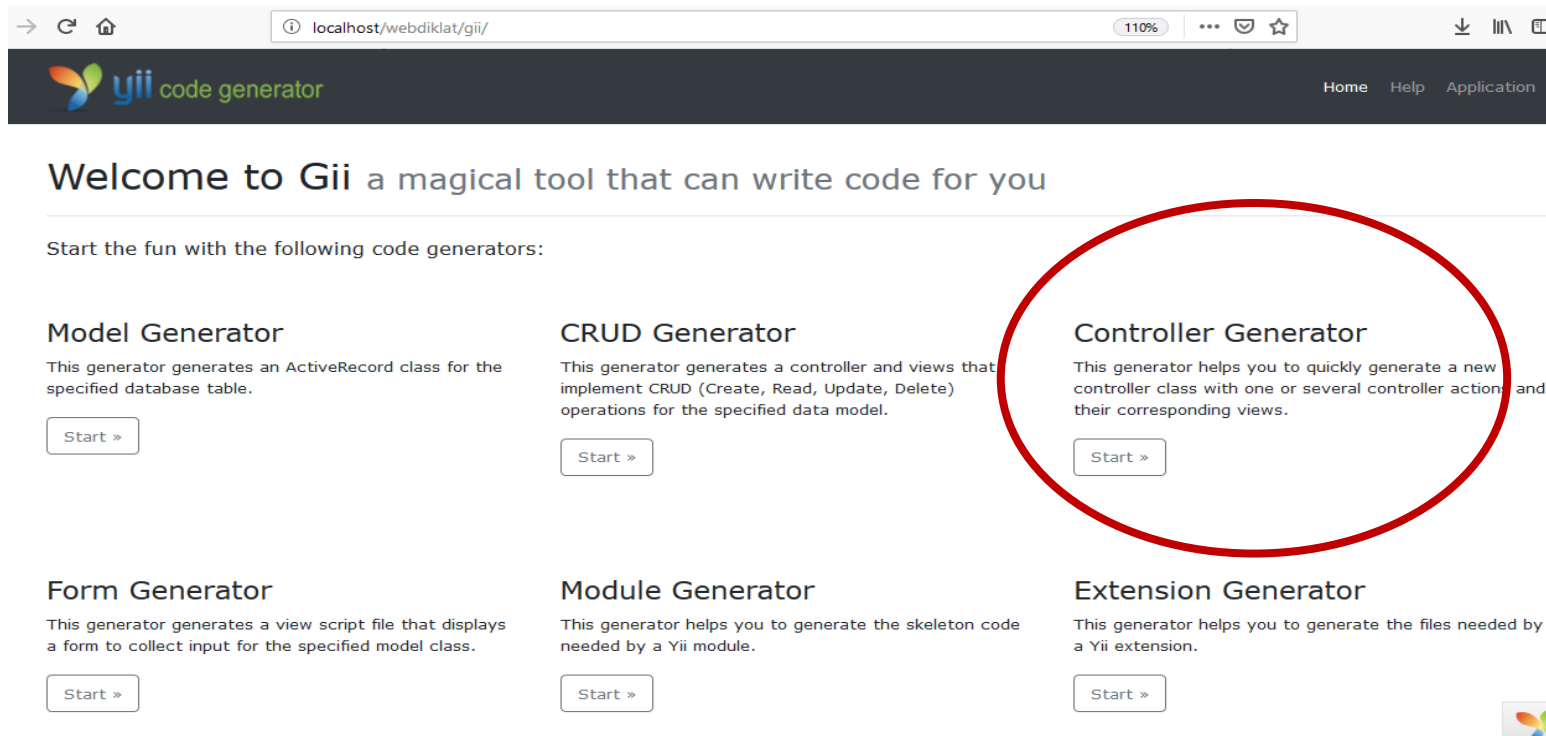
Latihan 1

1. Buat file controller : DashboardController
2. Buat actionIndex pada DashboardController yang akan mengakses file view index.php dalam direktori views/dashboard/index.php
3. Lakukan Kirim data dari view ke controller untuk ditampilkan , data yang dikirim

Tipe Data	Nama variable	Data
String	judul	'Pendapatan Penjualan TV 2019'
Number	profit	64.400.000
Array	produk	['Samsung'=>24, 'Sony'=>18, 'Sharp'=>15, 'LG'=>10]

Latihan 2: Controller Generator (1)

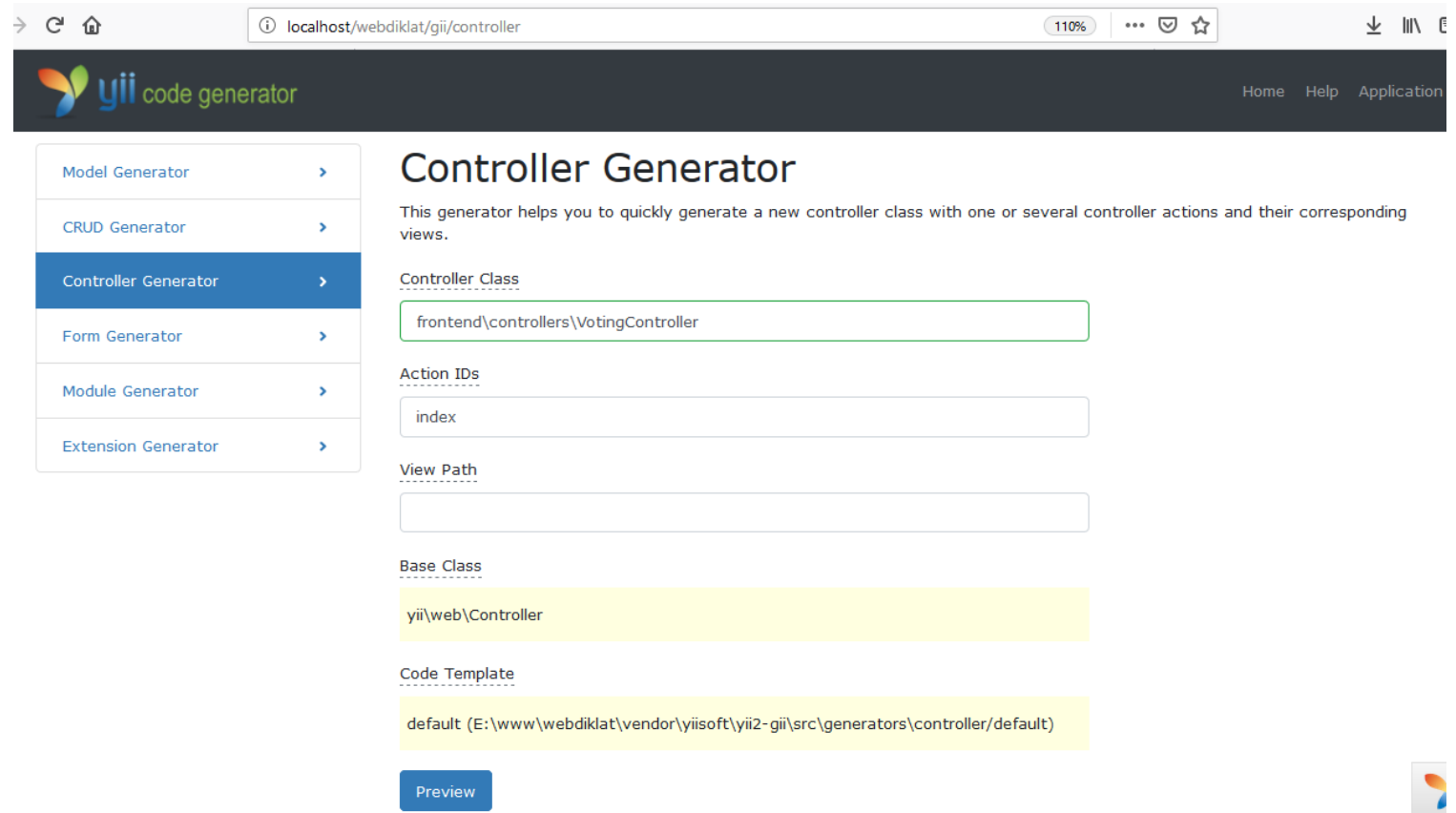
1. Yii2 memiliki Generator kode program yang akan memudahkan programmer dalam membuat aplikasi web berbasis MVC
2. Akses URL kode generator Yii2 pada <http://localhost/webdiklat/gii>



3. Pilih
Controller
Generator

Latihan 2: Controller Generator (2)

1. Isi form Controller Generator , Controller Class : frontend\controllers\VotingController
2. Tekan Preview → Generate
3. Akan menghasilkan:
 1. File VotingController.php
 2. Direktori views/voting
 3. File view/voting/index.php



The screenshot shows the Yii2 Controller Generator web interface in a browser. The browser address bar shows 'localhost/webdiklat/gii/controller'. The page has a dark header with the 'yii code generator' logo and navigation links for 'Home', 'Help', and 'Application'. On the left, a sidebar lists various generators: 'Model Generator', 'CRUD Generator', 'Controller Generator' (which is selected and highlighted in blue), 'Form Generator', 'Module Generator', and 'Extension Generator'. The main content area is titled 'Controller Generator' and includes a description: 'This generator helps you to quickly generate a new controller class with one or several controller actions and their corresponding views.' Below this, there are four input fields: 'Controller Class' containing 'frontend\controllers\VotingController', 'Action IDs' containing 'index', 'View Path' (empty), and 'Base Class' containing 'yii\web\Controller'. At the bottom, there is a 'Code Template' section showing the default path: 'default (E:\www\webdiklat\vendor\yiisoft\yii2-gii\src\generators\controller\default)'. A blue 'Preview' button is located at the bottom right of the form.

Latihan 2: Controller Generator (3)

1. Hasil controller generator bisa di akses di : <http://localhost/webdiklat/voting>



2. Ubah tampilan halaman view tampilkan text : “SELAMAT DATANG di Voting Kami !!”

Model

1. Model pada MVC bertugas sebagai DOMAIN Logic (penyimpanan data, bisnis proses data , dll)
2. Pada Yii2 model dibagi menjadi 2 kategori
 1. Base Model
 - Class model extend dari class `yii\base\Model`
 - Biasanya digunakan untuk logic form yang tidak secara langsung ke penyimpanan database
 - Contohnya : LoginForm (untuk menangkap data login user)
 2. ActiveRecord Model
 1. Class model extend dari class `yii\db\ActiveRecord`
 2. Terhubung ke table dalam sistem database atau tempat penyimpan persistence data lainnya
 3. Digunakan untuk proses CRUD Operation ke table

Yii Base Model

yii\base\Model

- + fieldname1
- + fieldname2
- ...
- +rules()
- +attributesLabels()
- +behaviours()
- ...

Contoh : buka file model: frontend\models\ContactForm.php

<https://www.yiiframework.com/doc/api/2.0/yii-base-model>

Latihan 3 : Model VotingForm

1. Buat class model dari Base Model untuk menampung inputan form voting, dengan inputan form sebagaimana dalam table berikut ini:

Nama Field	Rules	Rule Message	Atribut Label
nama	required	Wajib di isi	Nama Voter
pilihan	required , integer	Harus angka	1) PHP , 2) Java , 3) Python
kesan	required	Wajib di isi	Kesan / Pesan

2. Buat file VotingForm.php dan simpan dalam direktori frontend\models

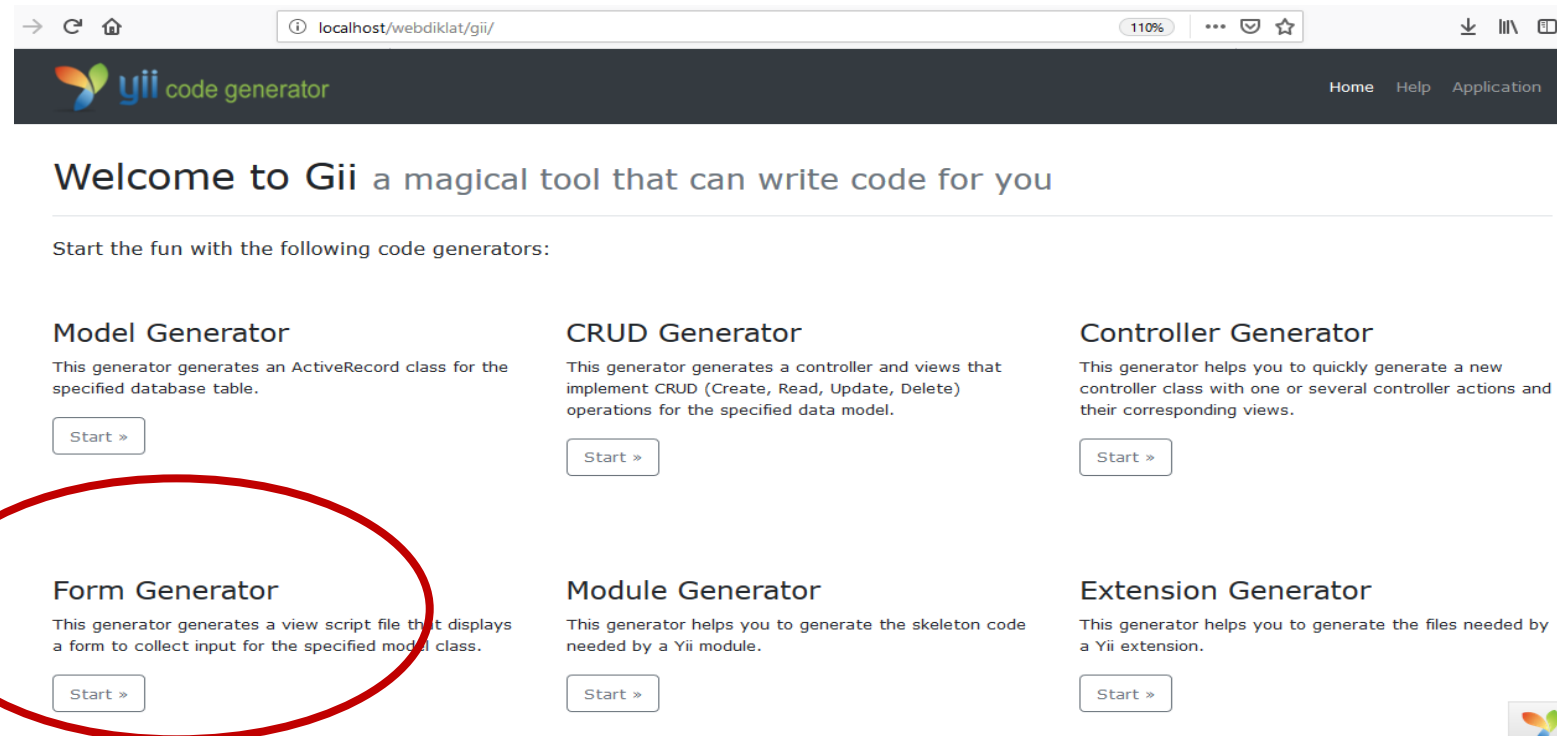
Latihan 3 : Model VotingForm (step 1)

```
1 <?php
2 namespace frontend\models;
3 use Yii;
4 use yii\base\Model;
5 class VotingForm extends Model
6 {
7     public $nama;
8     public $pilihan;
9     public $kesan;
10
11     public function rules()
12     {
13         return [
14             [['nama','pilihan','kesan'],'required','message'=>'{attribute} wajib di isi'],
15             [['pilihan'],'integer','message'=>'harus angka ya!!'],
16         ];
17     }
18
19     public function attributeLabels()
20     {
21         return [
22             'nama' => 'Nama Voter',
23             'pilihan'=>'Pilihan 1) PHP, 2) Java , 3) Python',
24             'kesan'=>'Kesan/Pesan',
25         ];
26     }
27 }
28 ?>
```

Latihan 3 :: Form Generator (step 2)

1. Yii2 memiliki Generator kode program untuk form berdasarkan Base Model yang akan memudahkan programmer dalam membuat form
2. Buka kembali halaman gii : <http://localhost/webdiklat/gii/>

3. Pilih Form Generator



Latihan 3 : Form Generator (step 3)

1. Isi form Generator:

View Name : **vote**

Model Class:

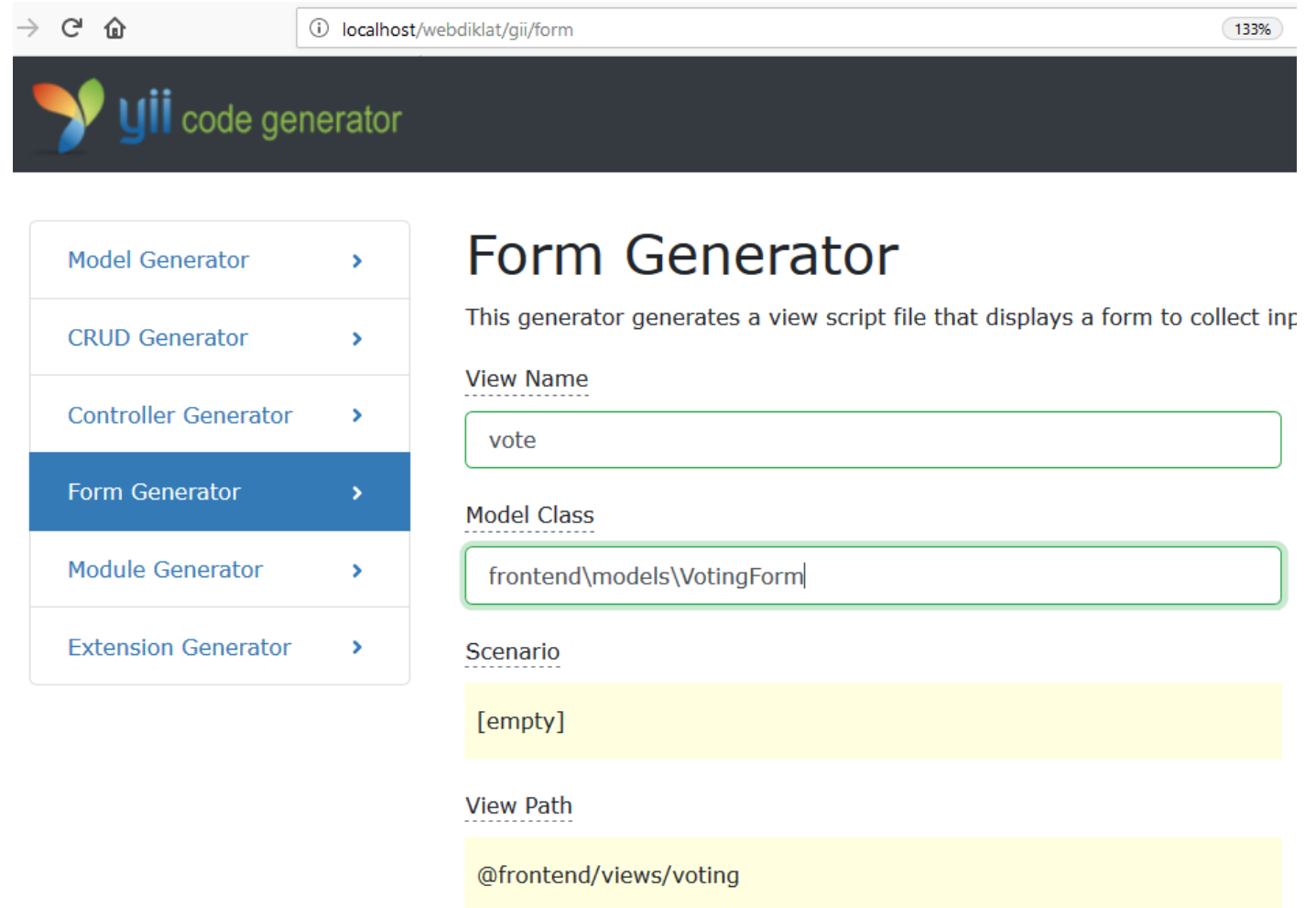
frontend\models\VotingForm

scenario : [empty]

view Path:

@frontend/views/voting

2. Tekan Preview



The screenshot shows the Yii2 Code Generator interface in a web browser. The address bar shows 'localhost/webdiklat/gii/form'. The page title is 'yii code generator'. On the left, a sidebar menu lists various generators: Model Generator, CRUD Generator, Controller Generator, Form Generator (which is highlighted in blue), Module Generator, and Extension Generator. The main content area is titled 'Form Generator' and contains a description: 'This generator generates a view script file that displays a form to collect input'. Below this, there are four input fields: 'View Name' with the value 'vote', 'Model Class' with the value 'frontend\models\VotingForm', 'Scenario' with the value '[empty]', and 'View Path' with the value '@frontend/views/voting'.

localhost/webdiklat/gii/form 133%

yii code generator

Model Generator >

CRUD Generator >

Controller Generator >

Form Generator >

Module Generator >

Extension Generator >

Form Generator

This generator generates a view script file that displays a form to collect input

View Name

vote

Model Class

frontend\models\VotingForm

Scenario

[empty]

View Path

@frontend/views/voting

Latihan 3 : Form Generator (step 4)

1. Tekan Generate

PreviewGenerate

Click on the above **Generate** button to generate the files selected below:

☒ Create ☒ Unchanged ☒ Overwrite

Code File	Action
views\voting\vote.php	unchanged

2. Akan menghasilkan: file views\voting\vote.php

Latihan 3 : Form Generator

✓ buka file views/voting/vote.php!!

```
1 <?php
2
3 use yii\helpers\Html;
4 use yii\widgets\ActiveForm;
5
6 /* @var $this yii\web\View */
7 /* @var $model frontend\models\VotingForm */
8 /* @var $form ActiveForm */
9 ?>
10 <div class="vote">
11
12     <?php $form = ActiveForm::begin(); ?>
13
14     <?= $form->field($model, 'nama') ?>
15     <?= $form->field($model, 'pilihan') ?>
16     <?= $form->field($model, 'kesan') ?>
17
18     <div class="form-group">
19         <?= Html::submitButton('Submit', ['class' => 'btn btn-primary']) ?>
20     </div>
21     <?php ActiveForm::end(); ?>
22
23 </div><!-- vote -->
24
```

Latihan 3 : Form Generator (step 5)

1. Copy kode program yang dihasilkan dari Form Generator ke file VotingController.php

Preview

The form has been generated successfully.

You may add the following code in an appropriate controller class to invoke the view:

```
<?php
```

```
public function actionVote()
{
    $model = new \frontend\models\VotingForm();

    if ($model->load(Yii::$app->request->post())) {
        if ($model->validate()) {
            // form inputs are valid, do something here
            return;
        }
    }

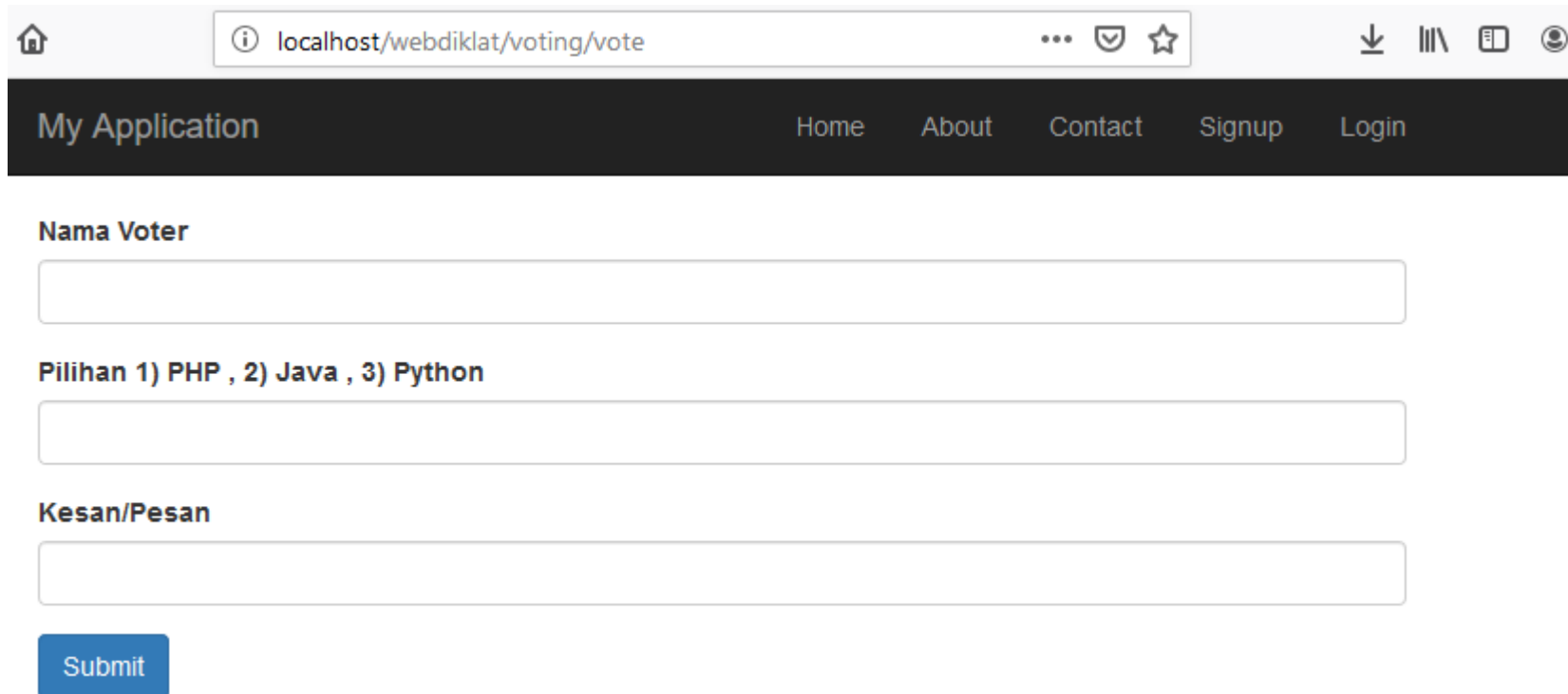
    return $this->render('vote', [
        'model' => $model,
    ]);
}
```



```
1 <?php
2 namespace frontend\controllers;
3 use Yii;
4 class VotingController extends \yii\web\Controller
5 {
6     public function actionIndex()
7     {
8         return $this->render('index');
9     }
10
11     public function actionVote() {
12         $model = new \frontend\models\VotingForm();
13
14         if ($model->load(Yii::$app->request->post())) {
15             if ($model->validate()) {
16                 // form inputs are valid, do something here
17                 return;
18             }
19         }
20         return $this->render('vote', [
21             'model' => $model,
22         ]);
23     }
24 }
```

Latihan 3 : Form Generator (step 6)

1. Akses actionVote di url : <http://localhost/webdiklat/voting/vote>
2. Form telah dibuat lengkap dengan validasinya (silakan di coba)



The screenshot shows a web browser window with the address bar displaying `localhost/webdiklat/voting/vote`. The page has a dark navigation bar with the text "My Application" and links for "Home", "About", "Contact", "Signup", and "Login". Below the navigation bar, the form consists of three input fields: "Nama Voter", "Pilihan 1) PHP , 2) Java , 3) Python", and "Kesan/Pesan". A blue "Submit" button is located at the bottom left of the form area.

Latihan 3 : Form Generator (step 7)

1. Edit kode program VotingController pada bagian actionVote menjadi seperti berikut ini:

Anda harus
buat file view
views/voting/
hasil.php

```
public function actionVote() {  
    $model = new \frontend\models\VotingForm();  
  
    if ($model->load(Yii::$app->request->post())) {  
        if ($model->validate()) {  
            // form inputs are valid, do something here  
            return $this->render('hasil', [  
                'model' => $model  
            ]);  
        }  
    }  
  
    return $this->render('vote', [  
        'model' => $model,  
    ]);  
}
```

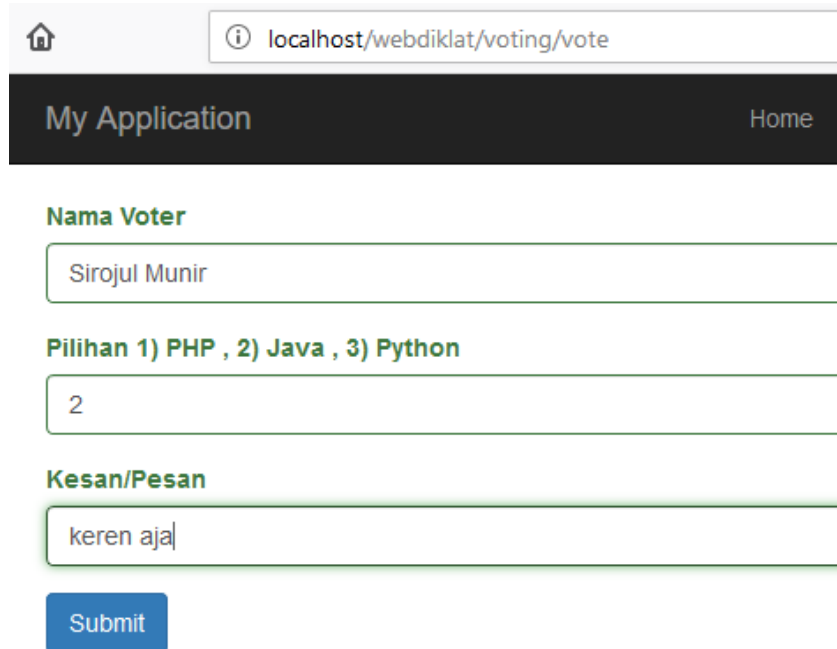
Edit bagian ini

Latihan 3 : Form Generator (step 8)

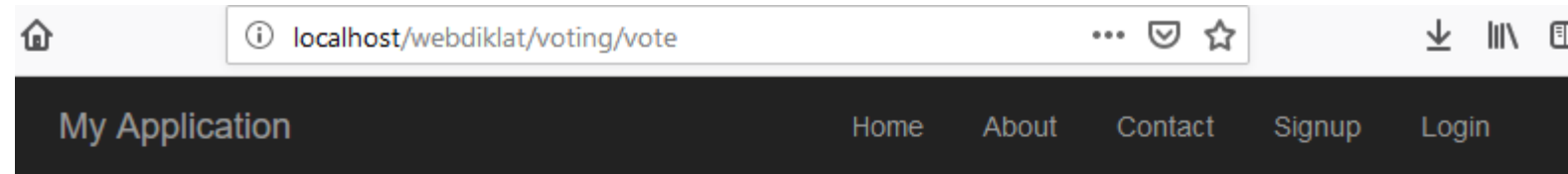
1. Buat file view : views/voting/hasil.php , untuk menampilkan data hasil submit form voting
2. Gunakan komponen widget DetailView untuk menampilkan data pada model

```
1 <?php
2 use yii\widgets\DetailView;
3 ?>
4
5 <h3>Data Inputan Voter : <?=$model->nama?></h3>
6
7 <?= DetailView::widget([
8     'model' => $model,
9     'attributes' => [
10         'nama',
11         'pilihan',
12         'kesan',
13     ],
14 ])
15 ?>
```

Latihan 3 : Form Generator (step 9)



A screenshot of a web browser showing a form titled "My Application". The browser's address bar displays "localhost/webdiklat/voting/vote". The form contains three input fields: "Nama Voter" with the value "Sirojul Munir", "Pilihan 1) PHP , 2) Java , 3) Python" with the value "2", and "Kesan/Pesan" with the value "keren aja". A blue "Submit" button is located at the bottom left of the form.



A screenshot of the same web browser after the form has been submitted. The address bar remains "localhost/webdiklat/voting/vote". The navigation bar now includes links for "Home", "About", "Contact", "Signup", and "Login". Below the navigation bar, the text "Data Inputan Voter : Sirojul Munir" is displayed above a table showing the submitted data.

Data Inputan Voter : Sirojul Munir

Nama Voter	Sirojul Munir
Pilihan 1) PHP , 2) Java , 3) Python	2
Kesan/Pesan	keren aja

Pertanyaan !!

Apakah anda sudah paham aliran data MVC di Yii2 Framework ?

