Authentication

Most web applications provide a way for users to log in or reset their forgotten passwords. In Yii2, we  
don’t have this opportunity by default. For a basic application template, Yii provides only two test users  
by default, which are statically described in the User model. So, we have to implement special code to be  
able to enable user login from the database.

Getting ready

1. Create a new application by using the Composer package manager, as described in the official  
   guide at [http://www. yiiframework. c om/doc-2.0/guide -start-installation .html](http://www.yiiframework.com/doc-2.0/guide-start-installation.html)**.**
2. In the component section of your config, add:

'user' => [

'identityClass' => 'app\models\User',

'enableAutoLogin' => true,

],

1. Create a User table. Create a migration by entering the following command:

./yii migrate/create create\_user\_table

1. Update the just created migration with the following code:

<?php

use yii\db\Schema;  
use yii\db\Migration;

class m150626\_112049\_create\_user\_table extends Migration  
{

public function up()

{

$tableOptions = null;

if ($this->db->driverName === 'mysql') {

$tableOptions = 'CHARACTER SET utf8 COLLATE utf8\_general\_ci  
ENGINE=InnoDB';

}

$this->createTable('{{%user}}', [

'id' => Schema::TYPE\_PK,

'username' => Schema::TYPE\_STRING . ' NOT NULL',

'auth\_key' => Schema::TYPE\_STRING . '(32) NOT NULL',

'password\_hash' => Schema::TYPE\_STRING . ' NOT NULL',

'password\_reset\_token' => Schema::TYPE\_STRING,

], $tableOptions);

}

public function down()

{

$this->dropTable('{{%user}}');

}

}

1. Update the existing models/User model with the following code:

<?php

namespace app\models;

use yii\db\ActiveRecord;

use yii\web\IdentityInterface;

use yii\base\NotSupportedException;

use Yii;

class User extends ActiveRecord implements IdentityInterface  
{

/\* \*

* @inheritdoc  
  \*/

public function rules()

{

return [

['username', 'required'],

['username', 'unique'],

['username', 'string', 'min' => 3],

['username', 'match', 'pattern' => '~A[A-Za-z][A-Za-z0-9]+$~', 'message'  
=> 'Username can contain only alphanumeric characters.'],

[['username', 'password\_hash', 'password\_reset\_token'],

'string', 'max' => 255

],

['auth\_key', 'string', 'max' => 32],

];

}

/\*\*

* @inheritdoc  
  \*/

public static function findIdentity($id)

{

return static::findOne($id);

}

public static function findIdentityByAccessToken($token, $type = null)

{

throw new NotSupportedException('"findIdentityByAccessToken" is not  
implemented .');

}

/\*\*

* Finds user by username

\*

* @param string $username
* @return User  
  \*/

public static function findByUsername($username)

{

return static::findOne(['username' => $username]);

}

/\*\*

* @inheritdoc  
  \*/

public function getId()

{

return $this->getPrimaryKey();

}

/\*\*

* @inheritdoc  
  \*/

public function getAuthKey()

{

return $this->auth\_key;

}

/\* \*

* @inheritdoc  
  \*/

public function validateAuthKey($authKey)

{

return $this->getAuthKey() === $authKey;

}

/\*\*

* Validates password

\*

* @param string $password password to validate
* @return boolean if password provided is valid for current user  
  \*/

public function validatePassword($password)

{

return Yii::$app->getSecurity()->validatePassword($password, $this-  
>password\_hash);

}

/\*\*

* Generates password hash from password and sets it to the model

\*

* @param string $password  
  \*/

public function setPassword($password)

{

$this->password\_hash = Yii::$app->getSecurity()-  
>generatePasswordHash($password);

}

/\*\*

* Generates "remember me" authentication key  
  \*/

public function generateAuthKey()

{

$this->auth\_key = Yii::$app->getSecurity()->generateRandomString();

}

/\*\*

* Generates new password reset token  
  \*/

public function generatePasswordResetToken()

{

$this->password\_reset\_token = Yii::$app->getSecurity()-  
>generateRandomString() . '\_' . time();

}

/\*\*

* Finds user by password reset token

\*

* @param string $token password reset token
* @return static|null  
  \*/

public static function findByPasswordResetToken($token)

{

$expire = Yii::$app->params['user.passwordResetTokenExpire'];

$parts = explode('\_', $token);

$timestamp = (int) end($parts);  
if ($timestamp + $expire < time()) {  
return null;

}

return static::findOne([

'password\_reset\_token' => $token

]);

}

}

1. Create a migration, which will add a test user. Use the following command:

./yii migrate/create create\_test\_user

1. Update the just created migration with the following code:

<?php

use yii\db\Migration;  
use app\models\User;

class m150626\_120355\_create\_test\_user extends Migration  
{

public function up()

{

$testUser = new User();

$testUser->username = 'admin';

$testUser->setPassword('admin');

$testUser->generateAuthKey();

$testUser->save();

}

public function down()

{

User: : findByUsername('turbulence')->delete();  
return false;

}

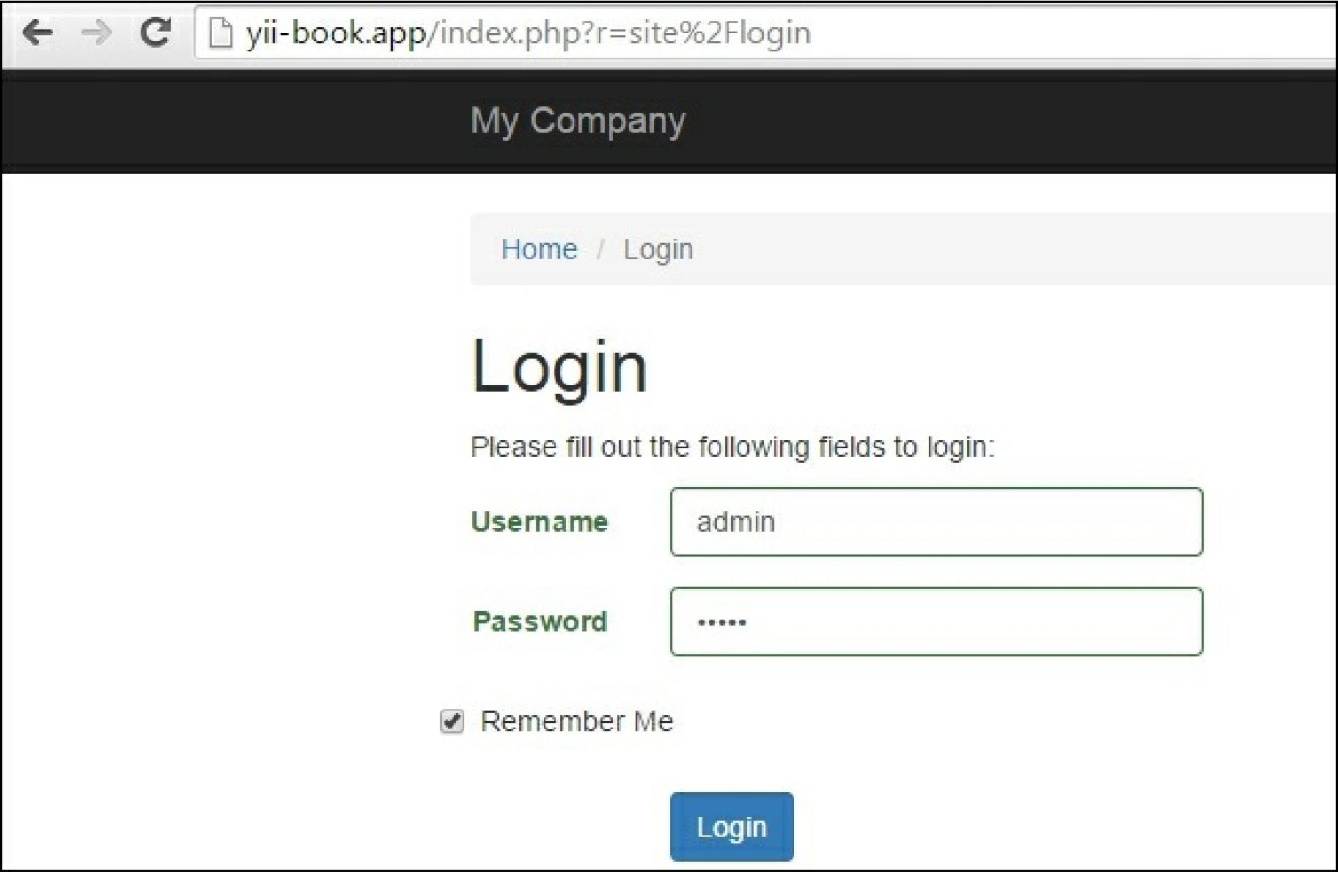
}

1. Install all migrations with the following command:

./yii migrate up

How to do it...

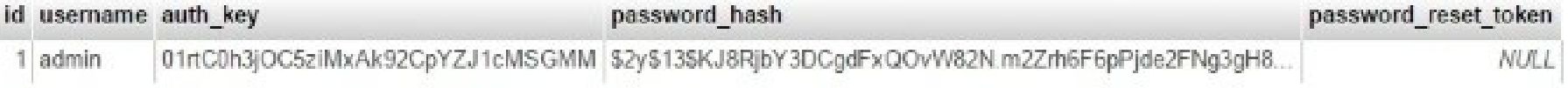
1. Now, follow the URL site/login action and enter admin/admin as your credentials:



2. Congratulations! If you have completed these steps, you should able to log in.

How it works...

1. First, we created a migration for the user table. Apart from our ID and username, our table  
   contains special fields such as **auth\_key** (the main use of this is to authenticate the user by cookie),  
   **password\_hash** (for security reasons we won’t store the password as it is and will store only the  
   password hash), and **password\_reset\_token** (used when we need to reset the user’s password).
2. The result after installation and **create\_test\_user** migration should look like the following  
   screenshot:



We’ve also added special methods to the User model and changed the inheritance to class User extends  
ActiveRecord implements Identityinterface because we need to be able to find users in the

database.

[You also can copy the User model from an advanced app at https://github.com/yiisoft/yii2-app-](https://github.com/yiisoft/yii2-app-advanced/blob/master/common/models/User.php) **advanced/blob/master/common/models/User.php**.

See also

For further information, refer to [http://www.yiiframework.com/doc-2.0/guide-security-authentiration.html](http://www.yiiframework.com/doc-2.0/guide-security-authentication.html)