RBAC Authorization on an yii2-framework based system

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Overview

- Purpose of this document: Introduce about RBAC on yii2 framework, with some usage example.
- Prerequisite:
  - Audience should have basic experience of using yii2 framework.
  - Read about Authorization on yii2

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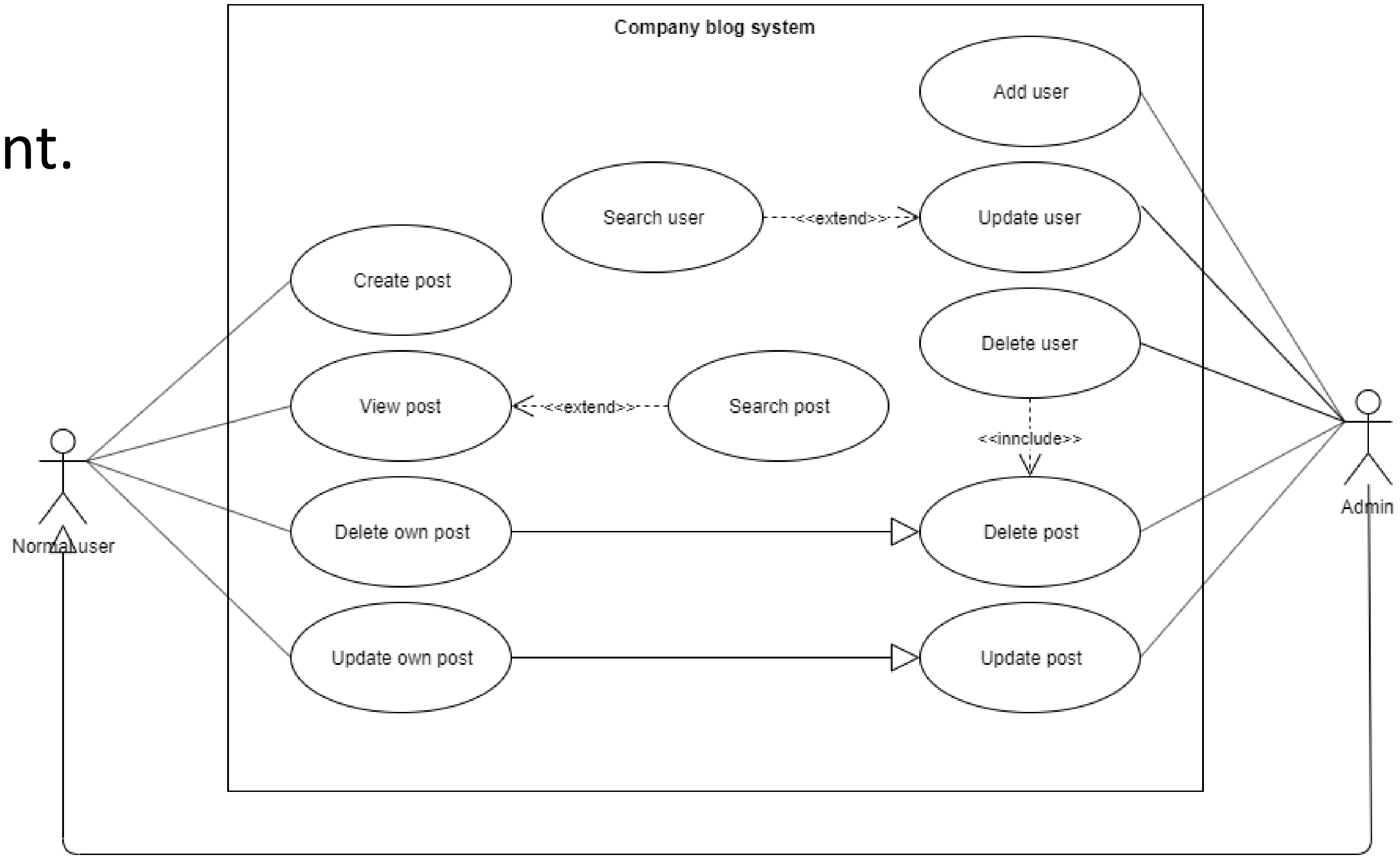
Sample project: Company blog system

- A simple system to post and view content.



Database design

- TBD

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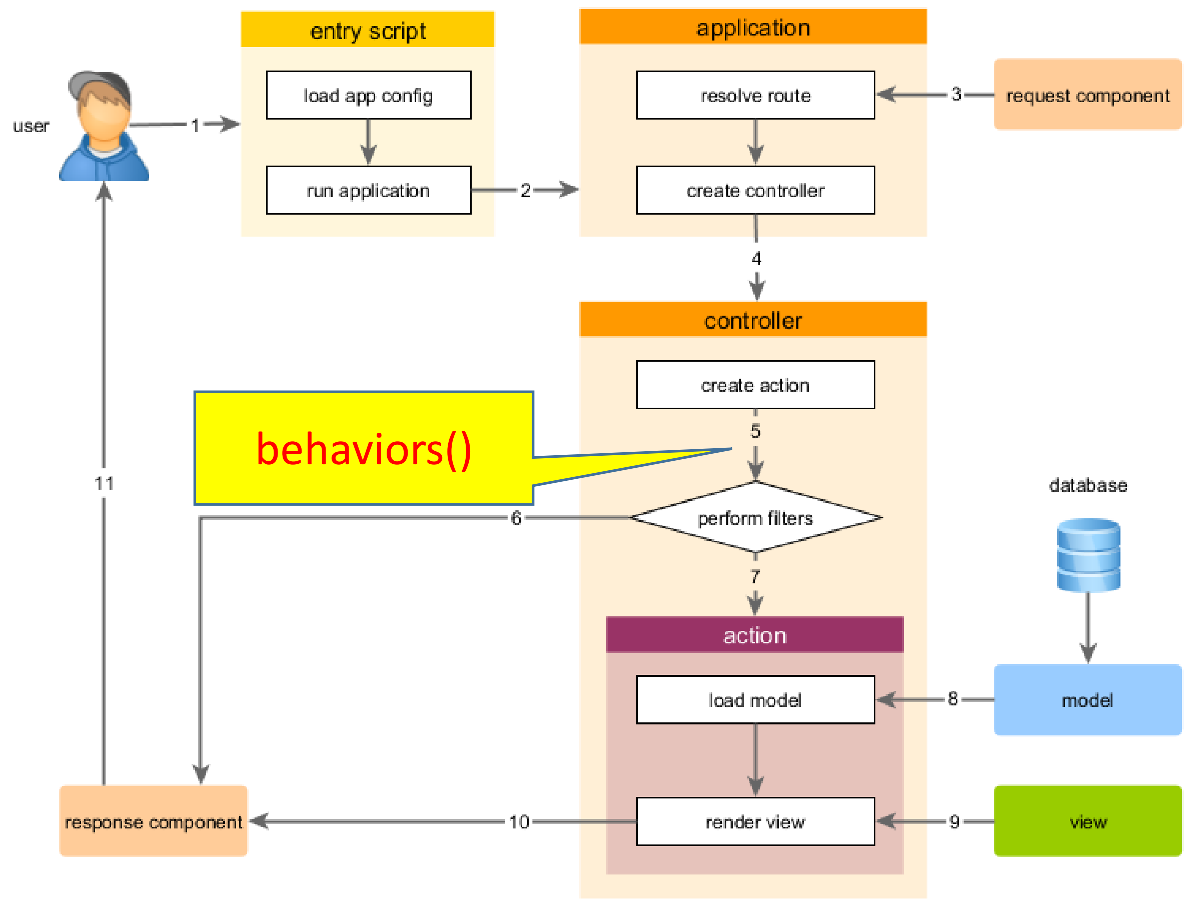
Access Control Filter

- Decide if current web user can access to a controller's action.
- Filter defined in controller's behaviors()
- Reference:
  - [Access Control Filter]()
  - [Request handling overview]()



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RBAC

- RBAC is a method to build access control.
- It builds a way to check if current user have permission to do something.
  - RBAC can be used as filter in ACF.
  - RBAC can be used in any part of code.
- 2 steps to use RBAC:
  1. Build RBAC data (define permission/role/rule and assign permission).
  2. Use RBAC in code.
- Reference: Role Based Access Control

RBAC used in ACF

Simple roles defined in ACF

```
public function behaviors()
{
    return [
        'access' => [
            'class' => AccessControl::className(),
            'only' => ['login', 'logout', 'signup'],
            'rules' => [
                [
                    'allow' => true,
                    'actions' => ['login', 'signup'],
                    'roles' => ['?'],
                ],
                [
                    'allow' => true,
                    'actions' => ['logout'],
                    'roles' => ['@'],
                ],
            ],
        ],
    ];
}
```

ACF using roles defined by RBAC

```
public function behaviors()
{
    return [
        'access' => [
            'class' => AccessControl::className(),
            'rules' => [
                [
                    'allow' => true,
                    'actions' => ['index'],
                    'roles' => ['managePost'],
                ],
                [
                    'allow' => true,
                    'actions' => ['view'],
                    'roles' => ['viewPost'],
                ],
                [
                    'allow' => true,
                    'actions' => ['create'],
                    'roles' => ['createPost'],
                ],
                [
                    'allow' => true,
                    'actions' => ['update'],
                    'roles' => ['updatePost'],
                ],
                [
                    'allow' => true,
                    'actions' => ['delete'],
                    'roles' => ['deletePost'],
                ],
            ],
        ],
    ];
}
```

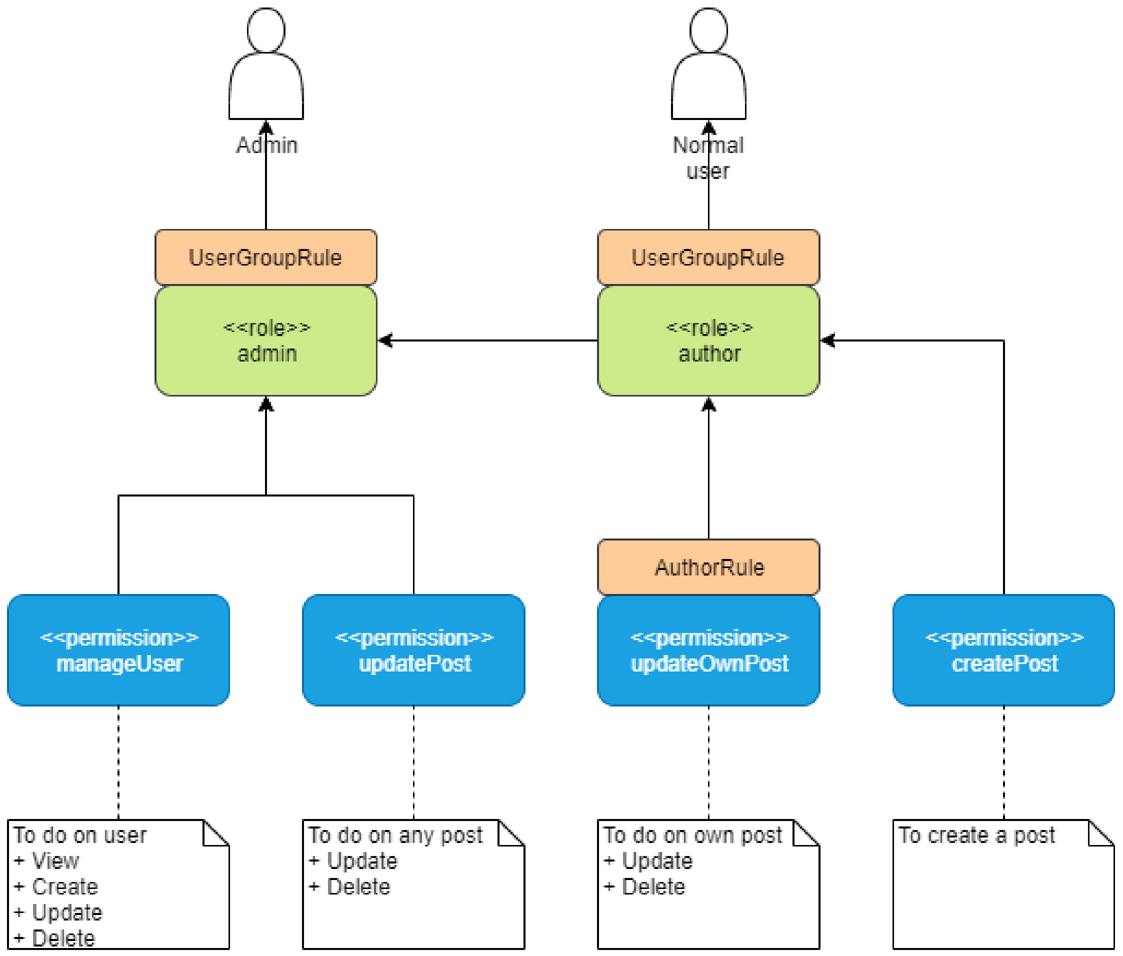
RBAC used in code

```
if (¥Yii::$app->user->can('createPost')) {
    // create post
}

if (¥Yii::$app->user->can('updatePost', ['post' => $post])) {
    // update post
}
```

RBAC data design

- RBAC data doesn't need relate to system function (it may be common mistake of access control design to create access permission same as user function)
- Any logged in user can view post, so it is unnecessary to define permission for viewing post (we have AFC definition for viewing post).



RBAC permission and role

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