

项目说明

使用 springmvc 作为 REST API 框架

使用 MySQL 作为后台存储

数据库配置在文件 `k2data/WEB-INF/db/db.properties`

项目 Docker 部署

用 Fig 部署

```
fig up -d
```

然后 `fig ps`

State	Name Ports	Command

dockersamplejavamysqldtomcatmaster_app_1		/bin/sh -e /usr/local/bin/run
Up	0.0.0.0:32772->8080/tcp	
dockersamplejavamysqldtomcatmaster_db_1		/usr/local/bin/run
Up	0.0.0.0:32771->3306/tcp	
dockersamplejavamysqldtomcatmaster_dbinit_1		/bin/bash -c sleep 4; mysq ...
Exit 0		

访问部署项目

```
http://<docker-host-ip>:<app-port>/k2data/courses
```

测试项目

- 查看项目 api

```
→ ~ curl -i -X GET http://10.42.0.1:32772/k2data/api
HTTP/1.1 200 OK
Server: Apache-Coyote/1.1
Content-Type: application/json
Transfer-Encoding: chunked
Date: Tue, 19 Apr 2016 17:05:34 GMT
```

```
[
  [
    {
      "name": "创建课程",
      "url": "http://10.42.0.1:32772/k2data/courses",
      "method": "POST",
      "example": "http://10.42.0.1:32772/k2data/courses",
      "param": {
        "name": "REST API Best Practices",
        "time": {
          "start": "2016-01-04",
          "end": "2016-01-06"
        },
        "estimatedTime": 24,
        "facilitator": "Awesome Developer"
      }
    },
    {
      "name": "查看课程列表",
      "url": "http://10.42.0.1:32772/k2data/courses",
      "method": "GET",
      "example": "http://10.42.0.1:32772/k2data/courses"
    },
    {
      "name": "查看课程",
      "url": "http://10.42.0.1:32772/k2data/courses/{id}",
      "method": "GET",
      "example": "http://10.42.0.1:32772/k2data/courses/1"
    },
    {
      "name": "删除课程",
      "url": "http://10.42.0.1:32772/k2data/courses/{id}",
      "method": "DELETE",
      "example": "http://10.42.0.1:32772/k2data/courses/1"
    }
  ]
]
```

- 查看课程列表

```
➔ ~ curl -i -X GET http://10.42.0.1:32772/k2data/courses
```

```
HTTP/1.1 200 OK
Server: Apache-Coyote/1.1
Content-Type: application/json;charset=UTF-8
Transfer-Encoding: chunked
Date: Tue, 19 Apr 2016 17:09:24 GMT
```

```
{
  "courses": [
    {
      "name": "java",
      "time": {
        "start": "2016-04-10",
        "end": "2016-04-22"
      },
      "estimatedTime": 20,
      "facilitator": "shaonian",
      "link": {
        "rel": "self",
        "href": "http://10.42.0.1:32772/k2data/courses/1"
      }
    }
  ],
  "info": {
    "status": "success",
    "code": "OK",
    "message": "查询课程列表成功"
  }
}
```

- 创建课程

```
➔ ~ curl -i -X POST -H "Content-Type:application/json" -d '{"name": "REST
API Best Practices", "time": {"start": "2016-01-04", "end": "2016-01-
06"},"estimatedTime": 24,"facilitator": "Awesome Developer"}'
http://10.42.0.1:32772/k2data/courses
```

```
HTTP/1.1 201 Created
Server: Apache-Coyote/1.1
Location: http://10.42.0.1:32772/k2data/courses/2
Content-Type: application/json
Transfer-Encoding: chunked
Date: Tue, 19 Apr 2016 17:18:14 GMT
```

```
{
  "status": "success",
  "code": "OK",
  "message": "创建课程成功",
  "link": {
    "rel": "self",
    "href": "http://10.42.0.1:32772/k2data/courses/2"
  }
}
```

- [查看课程](#)

```
➔ ~ curl -i -X GET http://10.42.0.1:32772/k2data/courses/2
HTTP/1.1 200 OK
Server: Apache-Coyote/1.1
Content-Type: application/json
Transfer-Encoding: chunked
Date: Tue, 19 Apr 2016 17:24:52 GMT

{
  "course": {
    "name": "REST API Best Practices",
    "time": {
      "start": "2016-01-04",
      "end": "2016-01-06"
    },
    "estimatedTime": 24,
    "facilitator": "Awesome Developer",
    "link": {
      "rel": "self",
      "href": "http://10.42.0.1:32772/k2data/courses/2"
    }
  },
  "info": {
    "status": "success",
    "code": "OK",
    "message": "查询课程成功"
  }
}
```

- 删除课程

```
➔ ~ curl -i -X DELETE http://10.42.0.1:32772/k2data/courses/2
HTTP/1.1 200 OK
Server: Apache-Coyote/1.1
Content-Type: application/json; charset=UTF-8
Transfer-Encoding: chunked
Date: Tue, 19 Apr 2016 17:36:35 GMT

{
  "status": "success",
  "code": "OK",
  "message": "课程删除成功",
  "link": {
    "rel": "self",
    "href": "http://10.42.0.1:32772/k2data/courses/2"
  }
}
```

- 异常处理

若提交 课程名字, 课程时间为空。

```
→ ~ curl -i -X POST -H "Content-Type:application/json" -d '{"time":
{},"estimatedTime": 24,"facilitator": "Awesome Developer"}'
http://10.42.0.1:32772/k2data/courses
```

```
HTTP/1.1 422 Unprocessable Entity
Server: Apache-Coyote/1.1
Content-Type: application/json
Transfer-Encoding: chunked
Date: Wed, 20 Apr 2016 01:29:01 GMT
```

```
{
  "code": "InvalidRequest",
  "message": "Validation failed for argument at index 1 in method: public
org.springframework.http.ResponseEntity
cn.gx.controller.CoursesController.createCourse(org.springframework.web.util
.UriComponentsBuilder,cn.gx.entity.CourseView), with 5 error(s): [Field
error in object 'courseView' on field 'name': rejected value [null]; codes
[notnull.courseView.name,notnull.name,notnull.java.lang.String,notnull];
arguments []; default message [name 不能为空]] [Field error in object
'courseView' on field 'time.start': rejected value [null]; codes [not
null.courseView.time.start,not null.time.start,not null.start,not
null.java.util.Date,not null]; arguments []; default message [start 不能为空]]
[Field error in object 'courseView' on field 'time.end': rejected value
[null]; codes [not null.courseView.time.end,not null.time.end,not
null.end,not null.java.util.Date,not null]; arguments []; default message
[end 不能为空]] [Field error in object 'courseView' on field 'time.start':
rejected value [null]; codes [start 不能晚于 end.courseView.time.start,start
不能晚于 end.time.start,start 不能晚于 end.start,start 不能晚于
end.java.util.Date,start 不能晚于 end]; arguments []; default message [null]]
[Field error in object 'courseView' on field 'time.end': rejected value
[null]; codes [ end 不能早于 start.courseView.time.end, end 不能早于
start.time.end, end 不能早于 start.end, end 不能早于 start.java.util.Date, end
不能早于 start]; arguments []; default message [null]] ",
  "fieldErrors": [
    {
      "resource": "courseView",
      "field": "name",
      "code": "notnull",
      "message": "name 不能为空"
    },
    {
      "resource": "courseView",
      "field": "time.start",
      "code": "not null",
      "message": "start 不能为空"
    }
  ],
}
```

```

    {
      "resource": "courseView",
      "field": "time.end",
      "code": "not null",
      "message": "end 不能为空"
    },
    {
      "resource": "courseView",
      "field": "time.start",
      "code": "start 不能晚于 end"
    },
    {
      "resource": "courseView",
      "field": "time.end",
      "code": "end 不能早于 start"
    }
  ]
}

```

- 若提交无法映射的请求

```

curl -i -X GET http://10.42.0.1:32772/k2data/courses/2/shaonian

HTTP/1.1 404 Not Found
Server: Apache-Coyote/1.1
Content-Type: application/json;charset=UTF-8
Transfer-Encoding: chunked
Date: Wed, 20 Apr 2016 01:35:44 GMT

{
  "status": "error",
  "code": "NOT_FOUND",
  "message": "No handler found for GET /courses/2/shaonian",
  "link": {
    "rel": "self",
    "href": " http://10.42.0.1:32772/k2data/courses/2/shaonian"
  }
}

```