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管理员

摘要

本文作为耐兮产品1,2,3服务端接口实现规范，用于客户端/服务端编码人员对接，目前只是初稿，接口参数在客户端/服务端代码对接时可能会有变动

- 知识点 - topic

按学科选出的两级知识点目录

- 源题 - exercise

有专门物理地址的HTML包，源题关联到相应知识点

分类

- 真题：来源于各地区历年真题
- 其他：自编辑习题

- 试卷 - paper

按照规则(真题、题纲、...)将源题组织成试卷，供用户(学生)选做

分类

- 真题卷：试题来源于完整的历年真题试卷
- 模拟卷：由系统或者教师构建

- 测试(答题) - examination

分类

- 个人强弱分析测试：根据系统特定规则选题
- 个人强弱训练：根据用户自定义选题
- 真题测试：根据试卷选题
- 知识点测试：根据知识点选题

开始测试以后，系统保存此次测试的源题集、以及测试结果数据(得分、做题进度、完成时间、...)

学科

```
{  
  "M": "数学",  
  "P": "物理",  
  "C": "化学",  
  "B": "生物"  
}
```

测试(答题)分类

```
{  
  "1": "强弱分析",  
  "2": "真题试卷",  
  "3": "知识点专题",  
  "4": "专项能力训练",  
  "5": "总体能力训练",  
  "6": "真题试卷选知识点"  
}
```

源题题型分类

```
{  
  "1": "选择题",  
  "2": "填空题",  
  "3": "解答题"  
}
```

能力值

```
{  
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  "3": "一般",  
  "4": "好",  
  "5": "强"  
}
```

知识点

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}
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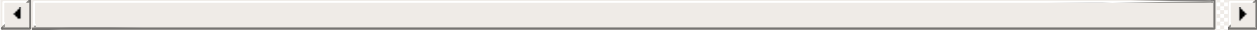
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"number": "33.0303", "name": "平面与圆锥面的截线"  
]  
}
```



- Header

```
X-Requested-With: XMLHttpRequest
Content-Type: application/x-www-form-urlencoded; charset=UTF-8
Accept: application/json; charset=UTF-8
X-CSRF-TOKEN: window.laravel.token
```

对于需要登录认证的还需要

Authorization: Bearer eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.e
yJpc3MiOiJodHRwOi8vbngubG8vYXBPbG93aW50eSIsImh0eCI6M
TUyMjMxMDEwMywiZXhwIjoxNTIyMzEzNzAzLCJuYmYiOiE1MjIzMTAxMDMsI
mp0aSI6InJMR2d0V00zZFhSaFY3STEiLCJzdWIiOiJEsInBydiI6Ijg3ZTBhZ
jFlZjlmZDE1ODEyZmRlYzkyMTUzYTE0ZTBiMDQ3NTQ2YWEifQ.tX2h8ky9H4
Kvq17c8EbY7dtpKPriUWVe3MPgLSav9Z8

语言切换

POST lang/switch

POST数据样例：

```
{  
  "lang": "en"  
}
```

成功返回结果：

```
{  
  "c": 200,  
  "m": "",  
  "d": {},  
  "r": ""  
}
```

注册&登录

POST api/client/register

POST数据样例：

```
{
  "name": "bamboo",
  "password": "111111",
  "password_confirmation": "111111",
  "email": "89391740@qq.com"
}
```

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {
    "name": "bamboo",
    "email": "89391740@qq.com",
    "token": "eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJpc3MiOiJodHRwOi8vbngubG8vYXBpL2NsawVudC9yZWdpc3RlciIsIm1hdCI6MTUyMjMxMDk1MiwiZXhwIjoxNTIyMzE0NTUyLCJuYmYiOiJlMjIzMTA5NTIsImp0aSI6ImVUQlFzb3JET1lkTG52b3kiLCJzdWIiOiJlInBydiI6Ijg3ZTBhZjFlZjlmZDE1ODEyZmRlYzlkM3MTUzYTE0ZTBiMDQ3NTQ2YWEifQ.1vave8m7nZND-NTib89p_cazInZZUm-PNyVaLaaAKa4"
  },
  "r": ""
}
```


登录

POST api/client/login

POST数据样例：

```
{
  "name": "bamboo",
  "password": "1"
}
```

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {
    "name": "chafang",
    "email": "chafang0131@163.com",
    "token": "eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJpc3MiOiJodHRwOi8vbngubG8vYXBpL2NsaWVudC9sb2dpbiIsIm1hdCI6MTUyMTYxMTU3OCwiZXBwIjoxNTIxNjE1MTc4LCJuYmYiOiJlMjE2MTE1NzgsImp0aSI6ImxZcGFCEHpKeKkN0YWt1TWUiLCJzdWIiOiJQsInBydiI6Ijg3ZTBhZjFlZjlmZDE1ODEyZmRlYzYk3MTUzYTE0ZTBiMDQ3NTQ2YWEifQ.J0RCImkeeC_8H0d9osh9RlWNT-qSlreUwXvDiyLNmmk"
  },
  "r": ""
}
```

安全登出

POST api/client/logout

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {},
  "r": ""
}
```


解锁

POST api/client/unlock

POST数据样例：

```
{
  "name": "bamboo",
  "password": "1"
}
```

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {
    "token": "eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJpc3MiOiJodHRwOi8vbngubG8vYXBpL2NsaWVudC91bmhvY2siLCJpYXQiOjE1MjMyNTI0ODgsImV4cCI6MTUyNTg0NDQ4OTcwibmJmIjoxNTIzMjUyNDg4LCJqdGkiOiJKdEZabmVHdFpDNkxiCDZlIiwic3ViIjoxLCJwcnYiOiI4N2UwYWYxZWY5ZmQxNTgxMmZkZWY5ZmQxNTg0NDQ4OTcwIn0.Hv_5obw8fXJ19TE1_HpC5Ep2-XP5PqHHGOno8G_BFDs"
  },
  "r": ""
}
```

知识点 - 学习

```
POST api/client/forgot-password
```

POST数据样例：

```
{  
  "email": "89391740@qq.com"  
}
```

成功返回结果：

```
{  
  "c": 200,  
  "m": "",  
  "d": {},  
  "r": ""  
}
```

回馈 - 看不懂题目

POST api/client/feedback/exercise

POST数据样例：

```
{
  "id": 1,
  "content": "this is a test"
}
```

id: 源题ID - integer

content: 内容 - text | max:150, min: 10

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": 1,
  "r": ""
}
```

回馈 - 看不懂答案

POST api/client/feedback/solution

POST数据样例：

```
{
  "id": 1,
  "content": "this is a test"
}
```

id: 源题ID - integer

content: 内容 - text | max:150, min: 10

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": 1,
  "r": ""
}
```

回馈 - 看不懂知识点

POST api/client/feedback/topic

POST数据样例：

```
{
  "id": 1,
  "content": "this is a test"
}
```

id: 知识点ID - integer

content: 内容 - text | max:150, min: 10

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": 1,
  "r": ""
}
```


个人强弱 - 答题

```
POST api/client/ability/act
```

POST数据样例：

```
{  
  "course": "M"  
}
```

course: string - 学科;

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {
    "id": 1,
    "category_id": 1,
    "active_number": 1,
    "correct": 0,
    "total": 42,
    "score": "210.00",
    "error": 0,
    "done": 0,
    "gain": null,
    "complete_at": null,
    "is_completed": 0,
    "paper": null,
    "exercise": {
      "id": 459,
      "type_id": 3,
      "score": "5.00",
      "url": "C/M/4/1/4/11/11/CMQ3310b0b0p040b0d2w"
    },
    "answer": {
      "number": 1,
      "exercise_id": 459,
      "score": "5.00",
      "answer": null,
      "gain": null,
      "answer_check": null
    },
    "topic": null,
    "ability": null
  },
  "r": ""
}
```


id: 当前测试id

active_number : 当前题号;

correct : 当前题号;

total : 当前测试题目总数;

score : 当前测试总分;

error : 当前测试做错误的题数;

done : 当前测试总共做的题数;

gain : 当前测试总得分;

complete_at : 当前测试完成时间;

is_completed : 当前测试是否确认完成;

exercise.id : 源题ID;

exercise.score : 源题分值;

exercise.url : 源题地址;

exercise.type_id : 源题类型;

个人强弱 - 提交答案

POST api/client/ability/answer

POST数据样例：

```
{  
  "id": "1",  
  "number": "1",  
  "answer": "B"  
}
```

id: int - 测试id;

number: int - 题号;

answer: int - 答案;

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {
    "id": 1,
    "category_id": 1,
    "active_number": 1,
    "correct": 0,
    "total": 42,
    "score": "210.00",
    "error": 1,
    "done": 1,
    "gain": "0.00",
    "complete_at": null,
    "is_completed": 0,
    "paper": null,
    "exercise": {
      "id": 459,
      "type_id": 3,
      "score": "5.00",
      "url": "C/M/4/1/4/11/11/CMQ3310b0b0p040b0d2w"
    },
    "answer": {
      "number": 1,
      "exercise_id": 459,
      "score": "5.00",
      "answer": "B",
      "gain": "0.00",
      "answer_check": 0
    },
    "topic": null,
    "ability": null
  },
  "r": ""
}
```

answer.exercise_id : 该答案的源题id;

answer.number : 该答案的题号;

answer.score : 该答案的分值;

answer.answer : 用户原始答案;

answer.gain : 得分;

answer.answer_check : 结果勘误(null: 未作答, 0-错误, 1-部分正确, 2-正确);

个人强弱 - 下一题

```
POST api/client/ability/next
```

POST数据样例：

```
{  
  "id": 1  
}
```

id: int - 测试id

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {
    "id": 1,
    "category_id": 1,
    "active_number": 2,
    "correct": 0,
    "total": 42,
    "score": "210.00",
    "error": 1,
    "done": 1,
    "gain": "0.00",
    "complete_at": null,
    "is_completed": 0,
    "paper": null,
    "exercise": {
      "id": 2,
      "type_id": 1,
      "score": "5.00",
      "url": "C/M/1/1/1/2/2/CMQ14102020201020101"
    },
    "answer": {
      "number": 2,
      "exercise_id": 452,
      "score": "5.00",
      "answer": null,
      "gain": null,
      "answer_check": null
    },
    "topic": null,
    "ability": null
  },
  "r": ""
}
```

个人强弱答题 - 完成

POST api/client/ability/complete

POST数据样例：

```
{  
  "id": 1  
}
```

id: int - 测试id

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {
    "id": 1,
    "category_id": 1,
    "active_number": 2,
    "correct": 0,
    "total": 42,
    "score": "210.00",
    "error": 1,
    "done": 1,
    "gain": "0.00",
    "complete_at": null,
    "is_completed": 1,
    "paper": null,
    "exercise": {
      "id": 2,
      "type_id": 1,
      "score": "5.00",
      "url": "C/M/1/1/1/2/2/CMQ14102020201020101"
    },
    "answer": {
      "number": 2,
      "exercise_id": 452,
      "score": "5.00",
      "answer": null,
      "gain": null,
      "answer_check": null
    },
    "topic": null,
    "ability": null
  },
  "r": ""
}
```


个人强弱 - 分析

```
GET api/client/ability/analysis
```

GET 数据样例：

```
{  
  "course": "M"  
}
```

course: string - 学科;

成功返回结果：

```
{  
  "c": 200,  
  "m": "",  
  "d": [  
    {  
      "id": 1,  
      "number": "01",  
      "name": "集合",  
      "level": null,  
      "pass2": 0,  
      "pass3": 0,  
      "pass4": 0,  
      "pass5": 0  
    },  
    {  
      "id": 15,  
      "number": "02",  
      "name": "函数的概念",  
      "level": null,  
      "pass2": 0,  
      "pass3": 0,  
      "pass4": 0,  
      "pass5": 0  
    }  
  ]  
}
```

```
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 29,
        "number": "03",
        "name": "二次函数",
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 33,
        "number": "04",
        "name": "指数函数",
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 43,
        "number": "05",
        "name": "对数函数",
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 49,
        "number": "06",
        "name": "幂函数",
```

```
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 52,
        "number": "07",
        "name": "函数的应用",
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 59,
        "number": "08",
        "name": "空间几何体",
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 75,
        "number": "09",
        "name": "点直线平面之间的位置关系",
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 96,
        "number": "10",
        "name": "直线与方程",
```

```
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 113,
        "number": "11",
        "name": "圆与方程",
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 125,
        "number": "12",
        "name": "算法初步",
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 132,
        "number": "13",
        "name": "统计",
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 143,
        "number": "14",
        "name": "概率",
```

```
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 153,
        "number": "15",
        "name": "三角函数",
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 178,
        "number": "16",
        "name": "平面向量",
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 197,
        "number": "17",
        "name": "三角恒等变换",
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 206,
        "number": "18",
        "name": "解三角形",
```

```
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 213,
        "number": "19",
        "name": "数列",
        "level": 3,
        "pass2": 0,
        "pass3": 2,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 228,
        "number": "20",
        "name": "不等式",
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 237,
        "number": "21",
        "name": "常用逻辑用语",
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 249,
        "number": "22",
        "name": "圆锥曲线与方程",
```

```
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 263,
        "number": "23",
        "name": "空间向量与立体几何",
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 274,
        "number": "24",
        "name": "导数及其应用",
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 301,
        "number": "25",
        "name": "推理与证明",
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 319,
        "number": "26",
        "name": "数系的扩充及复数的引入",
```

```
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 327,
        "number": "27",
        "name": "计数原理",
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 338,
        "number": "28",
        "name": "随机变量及其分布",
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 352,
        "number": "29",
        "name": "统计案例",
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 358,
        "number": "30",
        "name": "矩阵与变换",
```



```
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 369,
        "number": "31",
        "name": "坐标系与参数方程",
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 389,
        "number": "32",
        "name": "不等式选讲",
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    },
    {
        "id": 406,
        "number": "33",
        "name": "几何证明选讲",
        "level": null,
        "pass2": 0,
        "pass3": 0,
        "pass4": 0,
        "pass5": 0
    }
],
"r": ""
}
```

id: topic id

number: topic number

level: 你的能力(参考字典==>能力值)

pass2: 容易(0: 空缺, 1-未达到, 2-达到)

pass3: 一般(0: 空缺, 1-未达到, 2-达到)

pass4: 困难(0: 空缺, 1-未达到, 2-达到)

pass5: 很难(0: 空缺, 1-未达到, 2-达到)

个人强弱专项训练 - 答题

```
POST api/client/special-training/act
```

POST数据样例：

```
{  
  "ability_id": 4  
}
```

ability_id: int - 个人能力项id

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {
    "id": 2,
    "category_id": 4,
    "active_number": 1,
    "correct": 0,
    "error": 0,
    "done": 0,
    "gain": null,
    "target_level": 3,
    "complete_at": null,
    "is_completed": 0,
    "paper": null,
    "exercise": {
      "id": 272,
      "type_id": 3,
      "score": "5.00",
      "url": "C/M/5/1/5/4/4/CMQ33104040o05040a1s"
    },
    "answer": null,
    "topic": {
      "id": 33,
      "number": "04",
      "name": "指数函数"
    },
    "ability": {
      "id": 4,
      "level": null
    }
  },
  "r": ""
}
```

target_level : 目标级别;

topic.id : 专攻知识点id;

topic.number : 专攻知识点编号;

topic.name : 专攻知识点名称;

ability.id : 当前专攻能力id;

ability.level : 当前专攻能力级别(为空说明用户还没有做过该能力级别的题目,可做2处理);

个人强弱专项训练 - 提交答案

POST api/client/special-training/answer

POST数据样例：

```
{  
  "id": 2,  
  "answer": "C"  
}
```

id: int - 测试id;

answer: string - 答案;

成功返回结果：

```
{  
  "c": 200,  
  "m": "",  
  "d": {  
    "id": 2,  
    "category_id": 4,  
    "active_number": 1,  
    "correct": 0,  
    "error": 1,  
    "done": 1,  
    "gain": "0.00",  
    "target_level": 3,  
    "complete_at": null,  
    "is_completed": 0,  
    "paper": null,  
  }  
}
```

```
    "exercise": {
      "id": 272,
      "type_id": 3,
      "score": "5.00",
      "url": "C/M/5/1/5/4/4/CMQ33104040o05040a1s"
    },
    "answer": {
      "number": 1,
      "exercise_id": 272,
      "score": "5.00",
      "answer": "C",
      "gain": "0.00",
      "answer_check": 0
    },
    "topic": {
      "id": 33,
      "number": "04",
      "name": "指数函数"
    },
    "ability": {
      "id": 4,
      "level": null
    }
  },
  "r": ""
}
```

个人强弱专项训练 - 下一题

```
POST api/client/special-training/next
```

POST数据样例：

```
{  
  "id": 2  
}
```

id: int - 测试id;

成功返回结果：


```
{
  "c": 200,
  "m": "",
  "d": {
    "id": 2,
    "category_id": 4,
    "active_number": 2,
    "correct": 0,
    "error": 1,
    "done": 1,
    "gain": "0.00",
    "target_level": 3,
    "complete_at": null,
    "is_completed": 0,
    "paper": null,
    "exercise": {
      "id": 344,
      "type_id": 3,
      "score": "5.00",
      "url": "C/M/5/1/5/3/11/CMQ331030b0o050b0b1N"
    },
    "answer": null,
    "topic": {
      "id": 33,
      "number": "04",
      "name": "指数函数"
    },
    "ability": {
      "id": 4,
      "level": null
    }
  },
  "r": ""
}
```

个人强弱总体训练 - 答题

```
POST api/client/general-training/act
```

POST数据样例：

```
{  
  "course": "M",  
  "target": 3  
}
```

course: string - 学科;

target: int - 目标级别;

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {
    "id": 3,
    "category_id": 5,
    "active_number": 1,
    "correct": 0,
    "error": 0,
    "done": 0,
    "gain": null,
    "target_level": 3,
    "complete_at": null,
    "is_completed": 0,
    "paper": null,
    "exercise": {
      "id": 352,
      "type_id": 3,
      "score": "5.00",
      "url": "C/M/5/1/5/1/12/CMQ331010c01050c0b1T"
    },
    "answer": null,
    "topic": {
      "id": 1,
      "number": "01",
      "name": "集合"
    },
    "ability": {
      "id": 1,
      "level": null
    }
  },
  "r": ""
}
```

个人强弱总体训练 - 提交答案

POST api/client/general-training/answer

POST数据样例：

```
{
  "id": 3,
  "answer": "D"
}
```

id: int - 测试id;

answer: string - 答案;

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {
    "id": 3,
    "category_id": 5,
    "active_number": 1,
    "correct": 1,
    "error": 0,
    "done": 1,
    "gain": "5.00",
    "target_level": 3,
    "complete_at": null,
    "is_completed": 0,
    "paper": null,
  }
}
```

```
    "exercise": {
      "id": 352,
      "type_id": 3,
      "score": "5.00",
      "url": "C/M/5/1/5/1/12/CMQ331010c01050c0b1T"
    },
    "answer": {
      "number": 1,
      "exercise_id": 352,
      "score": "5.00",
      "answer": "D",
      "gain": "5.00",
      "answer_check": 2
    },
    "topic": {
      "id": 1,
      "number": "01",
      "name": "集合"
    },
    "ability": {
      "id": 1,
      "level": null
    }
  },
  "r": ""
}
```

个人强弱总体训练 - 下一题

```
POST api/client/general-training/next
```

POST数据样例：

```
{  
  "id": 3  
}
```

id: int - 测试id;

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {
    "id": 3,
    "category_id": 5,
    "active_number": 2,
    "correct": 1,
    "error": 0,
    "done": 1,
    "gain": "5.00",
    "target_level": 3,
    "complete_at": null,
    "is_completed": 0,
    "paper": null,
    "exercise": {
      "id": 352,
      "type_id": 3,
      "score": "5.00",
      "url": "C/M/5/1/5/1/12/CMQ331010c01050c0b1T"
    },
    "answer": null,
    "topic": {
      "id": 1,
      "number": "01",
      "name": "集合"
    },
    "ability": {
      "id": 1,
      "level": null
    }
  },
  "r": ""
}
```


真题 - 选择试卷

```
GET api/client/reality-paper
```

GET 数据样例：

```
{  
  "course": "M"  
}
```

course: string - 学科;

成功返回结果：

```
{  
  "c": 200,  
  "m": "",  
  "d": [  
    {  
      "id": 1,  
      "period": "2015",  
      "title": "江苏卷",  
      "total": 6,  
      "topics": [  
        {  
          "id": 33,  
          "name": "指数函数",  
          "number": "04",  
          "total": 2,  
          "score": 10  
        },  
        {  

```

```

        "id": 197,
        "name": "三角恒等变换",
        "number": "17",
        "total": 2,
        "score": 5
    },
    {
        "id": 206,
        "name": "解三角形",
        "number": "18",
        "total": 1,
        "score": 5
    },
    {
        "id": 213,
        "name": "数列",
        "number": "19",
        "total": 1,
        "score": 5
    },
    {
        "id": 249,
        "name": "圆锥曲线与方程",
        "number": "22",
        "total": 1,
        "score": 0
    },
    {
        "id": 358,
        "name": "矩阵与变换",
        "number": "30",
        "total": 1,
        "score": 0
    }
]
},
{
    "id": 2,
    "period": "2016",
    "title": "江苏卷",

```

```
"total": 10,  
"topics": [  
  {  
    "id": 15,  
    "name": "函数的概念",  
    "number": "02",  
    "total": 1,  
    "score": 5  
  },  
  {  
    "id": 43,  
    "name": "对数函数",  
    "number": "05",  
    "total": 1,  
    "score": 0  
  },  
  {  
    "id": 113,  
    "name": "圆与方程",  
    "number": "11",  
    "total": 1,  
    "score": 5  
  },  
  {  
    "id": 125,  
    "name": "算法初步",  
    "number": "12",  
    "total": 1,  
    "score": 5  
  },  
  {  
    "id": 132,  
    "name": "统计",  
    "number": "13",  
    "total": 1,  
    "score": 5  
  },  
  {  
    "id": 153,  
    "name": "三角函数",
```

```

        "number": "15",
        "total": 1,
        "score": 5
    },
    {
        "id": 197,
        "name": "三角恒等变换",
        "number": "17",
        "total": 2,
        "score": 5
    },
    {
        "id": 213,
        "name": "数列",
        "number": "19",
        "total": 2,
        "score": 5
    },
    {
        "id": 249,
        "name": "圆锥曲线与方程",
        "number": "22",
        "total": 1,
        "score": 0
    },
    {
        "id": 358,
        "name": "矩阵与变换",
        "number": "30",
        "total": 1,
        "score": 0
    }
]
},
"r": ""
}

```


真题答题

```
POST api/client/reality/act
```

POST数据样例：

```
{  
  "paper_id": 39  
}
```

| paper_id : int - 试卷id;

成功返回结果：

```
{  
  "c": 200,  
  "m": "",  
  "d": {  
    "id": 4,  
    "category_id": 2,  
    "active_number": 5,  
    "correct": 0,  
    "error": 0,  
    "done": 0,  
    "gain": null,  
    "complete_at": null,  
    "is_completed": 0,  
    "paper": {  
      "id": 39,  
      "name": "2017 全国卷3",  
      "total": 10,  
      "score": 35  
    }  
  }  
}
```

```

    },
    "exercise": [
      {
        "id": 238,
        "number": "5",
        "score": "5.00",
        "type_id": 3,
        "url": "C/M/4/1/4/11/9/CMQ3410b090o0409091m",
        "topics": [
          {
            "id": 233,
            "name": "一元二次不等式的解法"
          },
          {
            "id": 236,
            "name": "线性规划的实际应用问题"
          },
          {
            "id": 237,
            "name": "常用逻辑用语"
          }
        ]
      }
    ],
    "answer": null,
    "topic": null,
    "ability": null
  },
  "r": ""
}

```

`paper.id`: 真题试卷id;

`paper.name`: 真题试卷名称;

`paper.total`: 真题试卷总题数;

`paper.score`: 真题试卷总分;

`exercise[]`: 真题卷中的习题可能有选做的情况, 如果`exercise`数组的长度大于1, 可判断该题是选做题, 选做题的列表就是`exercise`数组;

`exercise[].topics`: 用户在做真题习题答题的时候, 可以看该题的知识点, 该项列出真题的知识点列表;

真题答题 - 提交答案

```
POST api/client/reality/answer
```

POST数据样例：

```
{
  "id": 4,
  "number": 5,
  "answer": 1,
  "exercise_id": 1,
}
```

id: int - 测试id;

number: int - 题号;

answer: string - 答案;

exercise_id: 对于真题试卷中的选做题，提交答案的时候需要传选做的源题Id

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {
    "id": 4,
    "category_id": 2,
    "active_number": 8,
    "correct": 0,
    "error": 1,
    "done": 1,
  }
}
```

```

    "gain": "0.00",
    "complete_at": null,
    "is_completed": 0,
    "paper": {
      "id": 39,
      "name": "2017 全国卷3",
      "total": 10,
      "score": 35
    },
    "exercise": [
      {
        "id": 201,
        "number": "8",
        "score": "5.00",
        "type_id": 3,
        "url": "C/M/4/1/4/11/9/CMQ3410b090p0409081a",
        "topics": [
          {
            "id": 65,
            "name": "圆台的结构特征"
          },
          {
            "id": 66,
            "name": "球的结构特征"
          }
        ]
      }
    ],
    "answer": null,
    "topic": null,
    "ability": null
  },
  "r": ""
}

```

真题答题 - 下一题

```
POST api/client/reality/next
```

POST数据样例：

```
{  
  "id": 4  
}
```

id: int - 测试id;

成功返回结果：

```
{  
  "c": 200,  
  "m": "",  
  "d": {  
    "id": 4,  
    "category_id": 2,  
    "active_number": 10,  
    "correct": 0,  
    "error": 1,  
    "done": 1,  
    "gain": "0.00",  
    "complete_at": null,  
    "is_completed": 0,  
    "paper": {  
      "id": 39,  
      "name": "2017 全国卷3",  
      "total": 10,  
      "score": 35  
    }  
  }  
}
```

```

    },
    "exercise": [
      {
        "id": 267,
        "number": "10",
        "score": "5.00",
        "type_id": 3,
        "url": "C/M/4/1/4/11/9/CMQ3410b090i04090914",
        "topics": [
          {
            "id": 232,
            "name": "一元二次不等式的概念"
          }
        ]
      }
    ],
    "answer": null,
    "topic": null,
    "ability": null
  },
  "r": ""
}

```

真题答题 - 看不懂题目

POST api/client/reality/skip

POST数据样例：

```
{
  "id": 4,
  "exercise_id": 201
}
```

id: int - 测试id;

exercise_id: int - 源题id;

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {
    "id": 4,
    "category_id": 2,
    "active_number": 10,
    "correct": 0,
    "error": 1,
    "done": 1,
    "gain": "0.00",
    "complete_at": null,
    "is_completed": 0,
    "paper": {
      "id": 39,

```

```

        "name": "2017 全国卷3",
        "total": 10,
        "score": 35
    },
    "exercise": [
        {
            "id": 267,
            "number": "10",
            "score": "5.00",
            "type_id": 3,
            "url": "C/M/4/1/4/11/9/CMQ3410b090i04090914",
            "topics": [
                {
                    "id": 232,
                    "name": "一元二次不等式的概念"
                }
            ]
        }
    ],
    "answer": null,
    "topic": null,
    "ability": null
},
"r": ""
}

```

真题答题 - 看知识点

同 知识点 - 看知识点

真题(选知识点) - 答题

```
POST api/client/reality-topic/act
```

POST数据样例：

```
{
  "paper_id": 1,
  "topic_id": 33
}
```

paper_id : int - 试卷id;

topic_id : int - 知识点;

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {
    "id": 5,
    "category_id": 6,
    "active_number": 1,
    "correct": 0,
    "error": 0,
    "done": 0,
    "gain": null,
    "complete_at": null,
    "is_completed": 0,
    "paper": {
      "id": 1,

```



```
        "name": "2015 江苏卷",
        "total": 6,
        "score": 15
    },
    "exercise": {
        "id": 271,
        "type_id": 1,
        "score": "5.00",
        "url": "C/M/5/1/5/1/1/CMQ12101010105010a1r",
        "topics": [
            {
                "id": 213,
                "name": "数列"
            },
            {
                "id": 35,
                "name": "分数指数幂及幂指数"
            }
        ]
    },
    "answer": null,
    "topic": {
        "id": 33,
        "name": "指数函数",
        "total": 2,
        "score": 10
    },
    "ability": null
},
"r": ""
}
```

topic.id : 当前所选知识点id;

topic.name : 当前所选知识点名称;

topic.total : 当前所选知识点总题数;

topic.score : 当前所选知识点总分值;

真题(选知识点) - 提交答案

POST api/client/reality-topic/answer

POST数据样例：

```
{
  "id": 5,
  "number": 1,
  "answer": 1
}
```

id: int - 测试id;

number: int - 题号;

answer: int - 答案;

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {
    "id": 5,
    "category_id": 6,
    "active_number": 1,
    "correct": 1,
    "error": 0,
    "done": 1,
    "gain": "5.00",
    "complete_at": null,
    "is_completed": 0,
  }
}
```

```
"paper": {
  "id": 1,
  "name": "2015 江苏卷",
  "total": 6,
  "score": 15
},
"exercise": {
  "id": 271,
  "type_id": 1,
  "score": "5.00",
  "url": "C/M/5/1/5/1/1/CMQ12101010105010a1r",
  "topics": [
    {
      "id": 213,
      "name": "数列"
    },
    {
      "id": 35,
      "name": "分数指数幂及幂指数"
    }
  ]
},
"answer": {
  "number": 1,
  "exercise_id": 271,
  "score": "5.00",
  "answer": "1",
  "gain": "5.00",
  "answer_check": 2
},
"topic": {
  "id": 33,
  "name": "指数函数",
  "total": 2,
  "score": 10
},
"ability": null
},
"r": ""
}
```

active_number : 当前题号;

exercise.source_id : 源题ID;

exercise.source_path : 源题地址;

exercise.source_type_id : 源题类型(1-选择题, 2-填空题, 3-解答题);

真题(选知识点) - 下一题

POST api/client/reality-topic/next

POST数据样例：

```
{  
  "id": 5  
}
```

id : int - 测试ID;

成功返回结果：

```
{  
  "c": 200,  
  "m": "",  
  "d": {  
    "id": 5,  
    "category_id": 6,  
    "active_number": 2,  
    "correct": 1,  
    "error": 0,  
    "done": 1,  
    "gain": "5.00",  
    "complete_at": null,  
    "is_completed": 0,  
    "paper": {  
      "id": 1,  
      "name": "2015 江苏卷",  
      "total": 6,  
      "score": 15  
    }  
  }  
}
```

```
    },
    "exercise": {
      "id": 331,
      "type_id": 1,
      "score": "5.00",
      "url": "C/M/5/1/5/1/1/CMQ15101010f05010b1K",
      "topics": [
        {
          "id": 35,
          "name": "分数指数幂及幂指数"
        },
        {
          "id": 42,
          "name": "指数函数图象的变换"
        }
      ]
    },
    "answer": null,
    "topic": {
      "id": 33,
      "name": "指数函数",
      "total": 2,
      "score": 10
    },
    "ability": null
  },
  "r": ""
}
```

active_number : 当前题号;

exercise.source_id : 源题ID;

exercise.source_path : 源题地址;

exercise.source_type_id : 源题类型(1-选择题, 2-填空题, 3-解答题);

真题(选知识点) - 看不懂题目

POST api/client/reality-topic/skip

POST数据样例：

```
{
  "id": 5,
  "exercise_id": 331
}
```

id: int - 测试id;

exercise_id: int - 源题id;

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {
    "id": 5,
    "category_id": 6,
    "active_number": 2,
    "correct": 1,
    "error": 0,
    "done": 1,
    "gain": "5.00",
    "complete_at": "2018-04-23 05:32:52",
    "is_completed": 0,
    "paper": {
      "id": 1,

```



```

        "name": "2015 江苏卷",
        "total": 6,
        "score": 15
    },
    "exercise": {
        "id": 331,
        "type_id": 1,
        "score": "5.00",
        "url": "C/M/5/1/5/1/1/CMQ15101010f05010b1K",
        "topics": [
            {
                "id": 35,
                "name": "分数指数幂及幂指数"
            },
            {
                "id": 42,
                "name": "指数函数图象的变换"
            }
        ]
    },
    "answer": null,
    "topic": {
        "id": 33,
        "name": "指数函数",
        "total": 2,
        "score": 10
    },
    "ability": null
},
"r": ""
}

```

真题答题 - 完成

POST api/client/reality/complete

POST数据样例：

```
{  
  "id": 4  
}
```

id: int - 测试id

成功返回结果：

```
{  
  "c": 200,  
  "m": "",  
  "d": {  
    "id": 4,  
    "category_id": 2,  
    "active_number": 10,  
    "correct": 0,  
    "error": 1,  
    "done": 1,  
    "gain": "0.00",  
    "complete_at": null,  
    "is_completed": 1,  
    "paper": {  
      "id": 39,  
      "name": "2017 全国卷3",  
      "total": 10,  
      "score": 35  
    }  
  }  
}
```

```

    },
    "exercise": [
      {
        "id": 267,
        "number": "10",
        "score": "5.00",
        "type_id": 3,
        "url": "C/M/4/1/4/11/9/CMQ3410b090i04090914",
        "topics": [
          {
            "id": 232,
            "name": "一元二次不等式的概念"
          }
        ]
      }
    ],
    "answer": null,
    "topic": null,
    "ability": null
  },
  "r": ""
}

```

真题答题 - 完成

POST api/client/reality-topic/complete

POST数据样例：

```
{  
  "id": 5  
}
```

id: int - 测试id

成功返回结果：

```
{  
  "c": 200,  
  "m": "",  
  "d": {  
    "id": 5,  
    "category_id": 6,  
    "active_number": 2,  
    "correct": 1,  
    "error": 0,  
    "done": 1,  
    "gain": "5.00",  
    "complete_at": "2018-04-23 05:32:52",  
    "is_completed": 1,  
    "paper": {  
      "id": 1,  
      "name": "2015 江苏卷",  
      "total": 6,  
      "score": 15  
    }  
  }  
}
```

```
    },
    "exercise": {
      "id": 331,
      "type_id": 1,
      "score": "5.00",
      "url": "C/M/5/1/5/1/1/CMQ15101010f05010b1K",
      "topics": [
        {
          "id": 35,
          "name": "分数指数幂及幂指数"
        },
        {
          "id": 42,
          "name": "指数函数图象的变换"
        }
      ]
    },
    "answer": null,
    "topic": {
      "id": 33,
      "name": "指数函数",
      "total": 2,
      "score": 10
    },
    "ability": null
  },
  "r": ""
}
```

真题(选知识点) - 看知识点

同 知识点 - 看知识点

知识点 - 选择知识点

GET api/client/topic

GET 数据样例：

```
{  
  "course": "M"  
}
```

course: string - 学科;

成功返回结果：

```
{  
  "c": 200,  
  "m": "",  
  "d": [  
    {  
      "id": 1,  
      "name": "集合",  
      "number": "01",  
      "children": [  
        {  
          "id": 2,  
          "name": "集合与元素的含义",  
          "number": "01.0101"  
        },  
        {  
          "id": 3,  
          "name": "集合中元素的三个特征",  
          "number": "01.0102"  
        }  
      ]  
    }  
  ]  
}
```



```

    },
    {
      "id": 4,
      "name": "元素与集合的关系",
      "number": "01.0103"
    },
    {
      "id": 5,
      "name": "集合的表示方法",
      "number": "01.0104"
    },
    {
      "id": 6,
      "name": "子集的概念",
      "number": "01.0201"
    },
    {
      "id": 7,
      "name": "集合相等",
      "number": "01.0202"
    },
    {
      "id": 8,
      "name": "真子集",
      "number": "01.0203"
    },
    {
      "id": 9,
      "name": "空集",
      "number": "01.0204"
    },
    {
      "id": 10,
      "name": "Venn 图",
      "number": "01.0205"
    },
    {
      "id": 11,
      "name": "子集的性质",
      "number": "01.0206"
    }
  ]
}

```

```
    },
    {
      "id": 12,
      "name": "并集的定义与基本运算",
      "number": "01.0301"
    },
    {
      "id": 13,
      "name": "交集的定义与基本运算",
      "number": "01.0302"
    },
    {
      "id": 14,
      "name": "全集与补集",
      "number": "01.0303"
    }
  ]
},
{
  "id": 15,
  "name": "函数的概念",
  "number": "02",
  "children": [
    {
      "id": 16,
      "name": "函数的概念",
      "number": "02.0101"
    },
    {
      "id": 17,
      "name": "函数的三要素",
      "number": "02.0102"
    },
    {
      "id": 18,
      "name": "相同的函数",
      "number": "02.0103"
    },
    {
      "id": 19,
```

```

        "name": "函数的表示方法",
        "number": "02.0201"
    },
    {
        "id": 20,
        "name": "分段函数",
        "number": "02.0202"
    },
    {
        "id": 21,
        "name": "映射",
        "number": "02.0203"
    },
    {
        "id": 22,
        "name": "函数的图象",
        "number": "02.0204"
    },
    {
        "id": 23,
        "name": "函数的单调性",
        "number": "02.0301"
    },
    {
        "id": 24,
        "name": "函数的最大值与最小值",
        "number": "02.0302"
    },
    {
        "id": 25,
        "name": "函数奇偶性的定义",
        "number": "02.0401"
    },
    {
        "id": 26,
        "name": "函数奇偶性的运算性质",
        "number": "02.0402"
    },
    {
        "id": 27,

```

```
        "name": "奇，偶函数的图象",
        "number": "02.0403"
    },
    {
        "id": 28,
        "name": "奇，偶函数的性质",
        "number": "02.0404"
    }
]
},
"r": ""
}
```

知识点 - 看知识点

```
GET api/client/topic/{id}
```

id: int - 知识点id;

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {
    "id": 2,
    "course": "M",
    "name": "集合与元素的含义",
    "number": "01.0101",
    "code": "02",
    "author_name": "",
    "author_id": 0,
    "created_at": null,
    "updated_at": null,
    "level": 2,
    "parent_number": "01",
    "parent_id": 1,
    "parent_name": "集合"
  },
  "r": ""
}
```

知识点 - 学习

```
POST api/client/learn-topic/act
```

POST数据样例：

```
{  
  "id": 1  
}
```

id: int - 知识点id;

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {
    "topic": {
      "id": 1,
      "name": "集合",
      "number": "01",
      "parent_name": ""
    },
    "previous": null,
    "next": {
      "id": 2,
      "name": "集合与元素的含义",
      "number": "01.0101",
      "parent_name": "集合"
    }
  },
  "r": ""
}
```

知识点 - 下一个

```
POST api/client/learn-topic/next
```

POST数据样例：

```
{  
  "id": 1 // int  
}
```

id: int - 知识点id;

成功返回结果：


```
{
  "c": 200,
  "m": "",
  "d": {
    "topic": {
      "id": 2,
      "name": "集合与元素的含义",
      "number": "01.0101",
      "parent_name": "集合"
    },
    "previous": {
      "id": 1,
      "name": "集合",
      "number": "01",
      "parent_name": ""
    },
    "next": {
      "id": 3,
      "name": "集合中元素的三个特征",
      "number": "01.0102",
      "parent_name": "集合"
    }
  },
  "r": ""
}
```

知识点 - 上一个

```
POST api/client/learn-topic/previous
```

POST数据样例：

```
{  
  "id": 4 // int  
}
```

id: int - 知识点id;

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {
    "topic": {
      "id": 3,
      "name": "集合中元素的三个特征",
      "number": "01.0102",
      "parent_name": "集合"
    },
    "previous": {
      "id": 2,
      "name": "集合与元素的含义",
      "number": "01.0101",
      "parent_name": "集合"
    },
    "next": {
      "id": 4,
      "name": "元素与集合的关系",
      "number": "01.0103",
      "parent_name": "集合"
    }
  },
  "r": ""
}
```

知识点 - 看不懂知识点

```
POST api/client/learn-topic/skip
```

POST数据样例：

```
{  
  "id": 3, // int  
}
```

id: int - 知识点id;

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {
    "topic": {
      "id": 4,
      "name": "元素与集合的关系",
      "number": "01.0103",
      "parent_name": "集合"
    },
    "previous": {
      "id": 3,
      "name": "集合中元素的三个特征",
      "number": "01.0102",
      "parent_name": "集合"
    },
    "next": {
      "id": 5,
      "name": "集合的表示方法",
      "number": "01.0104",
      "parent_name": "集合"
    }
  },
  "r": ""
}
```

知识点答题

```
POST api/client/topic/act
```

POST数据样例：

```
{  
  "topic_id": 11  
}
```

topic_id : int - 知识点;

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {
    "id": 6,
    "category_id": 3,
    "active_number": 1,
    "correct": 0,
    "error": 0,
    "done": 0,
    "gain": null,
    "complete_at": null,
    "is_completed": 0,
    "paper": null,
    "exercise": {
      "id": 102,
      "type_id": 3,
      "score": "5.00",
      "url": "C/M/2/1/2/11/7/CMQ3210b070q0207030o"
    },
    "answer": null,
    "topic": {
      "id": 11,
      "number": "01.0206",
      "name": "子集的性质",
      "total": 2,
      "score": 10,
      "parent_id": 1,
      "parent_number": "01",
      "parent_name": "集合"
    },
    "ability": null
  },
  "r": ""
}
```

topic.id: 知识点id;

topic.number: 知识点编号;

topic.name: 知识点名称;

topic.id: 该知识点总题数;

topic.id: 该知识点所有题目的分值;

topic.parent_id: 知识点上级知识点id;

topic.parent_number: 知识点上级知识点编号;

topic.parent_name: 知识点上级知识点名称;

知识点答题 - 下一题

```
POST api/client/topic/next
```

POST数据样例：

```
{  
  "id": 6  
}
```

id: int - 测试id;

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {
    "id": 6,
    "category_id": 3,
    "active_number": 2,
    "correct": 0,
    "error": 1,
    "done": 1,
    "gain": "0.00",
    "complete_at": null,
    "is_completed": 0,
    "paper": null,
    "exercise": {
      "id": 103,
      "type_id": 3,
      "score": "5.00",
      "url": "C/M/2/1/2/4/6/CMQ32104060q0206030p"
    },
    "answer": null,
    "topic": {
      "id": 11,
      "number": "01.0206",
      "name": "子集的性质",
      "total": 2,
      "score": 10,
      "parent_id": 1,
      "parent_number": "01",
      "parent_name": "集合"
    },
    "ability": null
  },
  "r": ""
}
```

知识点答题 - 提交答案

POST api/client/topic/answer

POST数据样例：

```
{  
  "id": 6,  
  "number": 1,  
  "answer": "B"  
}
```

id: int - 测试id;

number: int - 题号;

answer: int - 答案;

成功返回结果：

```
{  
  "c": 200,  
  "m": "",  
  "d": {  
    "id": 6,  
    "category_id": 3,  
    "active_number": 1,  
    "correct": 0,  
    "error": 1,  
    "done": 1,  
    "gain": "0.00",  
    "complete_at": null,  
    "is_completed": 0,  
  }  
}
```

```
    "paper": null,
    "exercise": {
      "id": 102,
      "type_id": 3,
      "score": "5.00",
      "url": "C/M/2/1/2/11/7/CMQ3210b070q0207030o"
    },
    "answer": {
      "number": 1,
      "exercise_id": 102,
      "score": "5.00",
      "answer": "B",
      "gain": "0.00",
      "answer_check": 0
    },
    "topic": {
      "id": 11,
      "number": "01.0206",
      "name": "子集的性质",
      "total": 2,
      "score": 10,
      "parent_id": 1,
      "parent_number": "01",
      "parent_name": "集合"
    },
    "ability": null
  },
  "r": ""
}
```

通过exercise.gain与exercise.score比对结果判断答案正误

知识点答题 - 看不懂题目

```
POST api/client/topic/skip
```

POST数据样例：

```
{  
  "id": 6,  
  "exercise_id": 103  
}
```

id: int - 测试id;

exercise_id: int - 源题id;

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {
    "id": 6,
    "category_id": 3,
    "active_number": 2,
    "correct": 0,
    "error": 1,
    "done": 1,
    "gain": "0.00",
    "complete_at": "2018-04-23 05:36:35",
    "is_completed": 0,
    "paper": null,
    "exercise": {
      "id": 103,
      "type_id": 3,
      "score": "5.00",
      "url": "C/M/2/1/2/4/6/CMQ32104060q0206030p"
    },
    "answer": null,
    "topic": {
      "id": 11,
      "number": "01.0206",
      "name": "子集的性质",
      "total": 2,
      "score": 10,
      "parent_id": 1,
      "parent_number": "01",
      "parent_name": "集合"
    },
    "ability": null
  },
  "r": ""
}
```

知识点答题 - 完成

POST api/client/topic/complete

POST数据样例：

```
{  
  "id": 6  
}
```

id: int - 测试id

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {
    "id": 6,
    "category_id": 3,
    "active_number": 2,
    "correct": 0,
    "error": 1,
    "done": 1,
    "gain": "0.00",
    "complete_at": "2018-04-23 05:36:35",
    "is_completed": 1,
    "paper": null,
    "exercise": {
      "id": 103,
      "type_id": 3,
      "score": "5.00",
      "url": "C/M/2/1/2/4/6/CMQ32104060q0206030p"
    },
    "answer": null,
    "topic": {
      "id": 11,
      "number": "01.0206",
      "name": "子集的性质",
      "total": 2,
      "score": 10,
      "parent_id": 1,
      "parent_number": "01",
      "parent_name": "集合"
    },
    "ability": null
  },
  "r": ""
}
```


我的首页 - 强弱点分析

| 同“个人强弱 - 分析”

我的首页 - 学习历史 - 知识点

```
GET api/client/user/history-learn-topic
```

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": [
    {
      "id": 1,
      "name": "集合",
      "number": "01",
      "total": 5,
      "answered": 0,
      "children": [
        {
          "id": 2,
          "name": "集合与元素的含义",
          "number": "01.0101",
          "total": 0,
          "answered": 0
        },
        {
          "id": 3,
          "name": "集合中元素的三个特征",
          "number": "01.0102",
          "total": 0,
          "answered": 0
        }
      ]
    },
    {
      "id": 4,
      "name": "元素与集合的关系",

```

```
    "number": "01.0103",
    "total": 0,
    "answered": 0
  },
  {
    "id": 5,
    "name": "集合的表示方法",
    "number": "01.0104",
    "total": 0,
    "answered": 0
  },
  {
    "id": 6,
    "name": "子集的概念",
    "number": "01.0201",
    "total": 0,
    "answered": 0
  },
  {
    "id": 7,
    "name": "集合相等",
    "number": "01.0202",
    "total": 0,
    "answered": 0
  },
  {
    "id": 8,
    "name": "真子集",
    "number": "01.0203",
    "total": 0,
    "answered": 0
  },
  {
    "id": 9,
    "name": "空集",
    "number": "01.0204",
    "total": 0,
    "answered": 0
  },
  {
```

```
        "id": 10,
        "name": "Venn 图",
        "number": "01.0205",
        "total": 0,
        "answered": 0
    },
    {
        "id": 11,
        "name": "子集的性质",
        "number": "01.0206",
        "total": 2,
        "answered": 0
    },
    {
        "id": 12,
        "name": "并集的定义与基本运算",
        "number": "01.0301",
        "total": 2,
        "answered": 0
    },
    {
        "id": 13,
        "name": "交集的定义与基本运算",
        "number": "01.0302",
        "total": 0,
        "answered": 0
    },
    {
        "id": 14,
        "name": "全集与补集",
        "number": "01.0303",
        "total": 1,
        "answered": 0
    }
]
},
{
    "id": 15,
    "name": "函数的概念",
    "number": "02",
```

```
"total": 44,  
"answered": 0,  
"children": [  
  {  
    "id": 16,  
    "name": "函数的概念",  
    "number": "02.0101",  
    "total": 0,  
    "answered": 0  
  },  
  {  
    "id": 17,  
    "name": "函数的三要素",  
    "number": "02.0102",  
    "total": 0,  
    "answered": 0  
  },  
  {  
    "id": 18,  
    "name": "相同的函数",  
    "number": "02.0103",  
    "total": 9,  
    "answered": 0  
  },  
  {  
    "id": 19,  
    "name": "函数的表示方法",  
    "number": "02.0201",  
    "total": 0,  
    "answered": 0  
  },  
  {  
    "id": 20,  
    "name": "分段函数",  
    "number": "02.0202",  
    "total": 10,  
    "answered": 0  
  },  
  {  
    "id": 21,
```

```
    "name": "映射",
    "number": "02.0203",
    "total": 2,
    "answered": 0
  },
  {
    "id": 22,
    "name": "函数的图象",
    "number": "02.0204",
    "total": 1,
    "answered": 0
  },
  {
    "id": 23,
    "name": "函数的单调性",
    "number": "02.0301",
    "total": 8,
    "answered": 0
  },
  {
    "id": 24,
    "name": "函数的最大值与最小值",
    "number": "02.0302",
    "total": 0,
    "answered": 0
  },
  {
    "id": 25,
    "name": "函数奇偶性的定义",
    "number": "02.0401",
    "total": 1,
    "answered": 0
  },
  {
    "id": 26,
    "name": "函数奇偶性的运算性质",
    "number": "02.0402",
    "total": 5,
    "answered": 0
  },
  },
```



```
        {
          "id": 27,
          "name": "奇，偶函数的图象",
          "number": "02.0403",
          "total": 0,
          "answered": 0
        },
        {
          "id": 28,
          "name": "奇，偶函数的性质",
          "number": "02.0404",
          "total": 8,
          "answered": 0
        }
      ]
    },
    "r": ""
  }
}
```

我的首页 - 学习历史 - 真题

```
GET api/client/user/history-learn-reality
```

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": [
    {
      "id": 51,
      "name": "2007 宁夏海南卷",
      "total": 9,
      "answered": 0
    },
    {
      "id": 50,
      "name": "2008 宁夏海南卷",
      "total": 15,
      "answered": 0
    }
  ],
  "r": ""
}
```

我的首页 - 个人资料

GET api/client/user

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {
    "first_name": "",
    "last_name": "",
    "sex": "",
    "mobile": "",
    "first_name": "",
    "addresses": {"id": 1, "province": "", "city": "", "area"
: ""},
    "school": "",
    "grade": "",
    "teachers": [
      {"first_name": "", "last_name": "", "mobile": ""},
      {"first_name": "", "last_name": "", "mobile": ""},
    ],
    "parents": [
      {"first_name": "", "last_name": "", "mobile": ""},
      {"first_name": "", "last_name": "", "mobile": ""},
    ],
  },
  "r": ""
}
```


我的首页 - 个人资料 - 保存

POST api/client/user

POST数据样例：

```
{
  "first_name": "",
  "last_name": "",
  "sex": "",
  "mobile": "",
  "first_name": "",
  "addresses": {"id": 1},
  "school": "",
  "grade": "",
  "teachers": [
    {"first_name": "", "last_name": "", "mobile": ""},
    {"first_name": "", "last_name": "", "mobile": ""},
  ],
  "parents": [
    {"first_name": "", "last_name": "", "mobile": ""},
    {"first_name": "", "last_name": "", "mobile": ""},
  ],
}
```

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {
    "first_name": "",
    "last_name": "",
    "sex": "",
    "mobile": "",
    "first_name": "",
    "addresses": {"id":1, "province": "", "city": "", "area"
: ""},
    "school": "",
    "grade": "",
    "teachers": [
      {"first_name": "", "last_name": "", "mobile": ""},
      {"first_name": "", "last_name": "", "mobile": ""},
    ],
    "parents": [
      {"first_name": "", "last_name": "", "mobile": ""},
      {"first_name": "", "last_name": "", "mobile": ""},
    ],
  },
  "r": ""
}
```

我的首页 - 继续学习

```
GET api/client/user/learn-record
```

成功返回结果：

```
{
  "c": 200,
  "m": "",
  "d": {
    "url": "http://nx.lo/api/client/ability/act",
    "parameters": {
      "course": "M"
    }
  },
  "r": ""
}
```

url: 路由地址;

parameters: 路由参数与;