

API接口文档

web端接口说明

企业端

1.进入注册的界面

GET /register/enterprise

2.企业端注册

说明：企业的主流注册方式其实还是线下注册，开辟企业网页端服务更多的是为了方便企业的人查看企业信息状态接口：

POST /regist/enterprise

需要注册的变量：

enterprisename	企业名称
businesslicence	营业执照号
publicaccounts	公司对公账号
depositbank	对公账号开户户
accountname	银行开户名
accountowner	注册人姓名（公司法人）
owneridentification	注册人证件号
ownernumber	注册人联系方式

返回值：

信息注册成功

```
{"msg": "信息注入成功", "state": "true"}
```

信息注册失败

```
{"msg": "注入信息失败", "state": "false"}
```

3.上传认证材料

说明：上传企业认证材料

接口：

POST /regist/upload

需要上传的变量

businesslicence	营业执照
ownernumber	所有者的手机号
file	单张图片，我没写多张图片的，名字就叫做file

返回值：

上传文件成功：

```
{"msg": "上传文件成功", "state": "true"}
```

上传文件失败：

```
{"msg": "上传文件失败", "state": "false"}
```

4.进入登录界面

GET /login/enterprise

5.登录账号

说明：在企业审核通过之后，我们会发送短信到注册时，登记的“ownernumber”注册人联系方式，告知他密码
短信内容如下：

【花贷】您好，您在花贷平台进行的信息已审核通过，您申请的账号密码为：1vIkFqAYZHRCqTC，请勿告诉他人。

密码是随机生成的。

接口：

POST /login/enterprise

需要的变量

businesslicence	营业执照
password	密码

成功登录:

```
{"businesslicence":41527845154134,"state":"true"}
```

businesslicence是运营执照, 不是固定的字符串

登录失败:

```
{"msg":"账号或密码错误","state":"false"}
```

6.进入首页

说明: 首页是必须登录才能进入的, 没有登录的话, 是不能进入的, 是根据businesslicence做出不同的反应

接口:

```
GET /index/enterprise
```

参数:

businesslicence	营业执照
-----------------	------

成功展示企业所需数据

```
{  "repay":[          //repay是交易记录
  {"businesslicence":"413669641984","loan_num":431785741,"money_amount":120000.0,"name":
  "一卡通","publicaccounts":"6217000780053911319","servicenum":1,"time":
  {"date":7,"day":3,"hours":11,"minutes":15,"month":7,"seconds":11,"time":1565147711000,"
  timezoneOffset":-480,"year":119}},          //loan_num是借贷号, 是一个企业在一种借贷服务上的唯
  一标识符, money_amount借贷钱数, 正是还给花贷, 负则为借钱走, name是企业名称, servicenum表示使用的借贷
  服务, 详细信息在下面的service中, date自然就是日期了

  {"businesslicence":"413669641984","loan_num":698213576,"money_amount":-47595.0,"name":
  "一卡通","publicaccounts":"6217000780053911319","servicenum":2,"time":
  {"date":16,"day":5,"hours":9,"minutes":15,"month":7,"seconds":20,"time":1565918120000,"
  timezoneOffset":-480,"year":119}},

  {"businesslicence":"413669641984","loan_num":431785741,"money_amount":-108945.0,"name":
  "一卡通","publicaccounts":"6217000780053911319","servicenum":1,"time":
  {"date":3,"day":1,"hours":9,"minutes":17,"month":5,"seconds":15,"time":1559524635000,"t
  imezoneOffset":-480,"year":119}}],

  "proportion":[0.745815,0.84623,0.76016],          //三个比例分别是, 正常贷款, 花贷福利低息贷款,
  总的, 已贷款额度/可贷款额度的比例
```

```

"service": [{"service_rate":4.75,"service_type":0,"servicename":"正常企业贷款行为", "servicenum":1}, {"service_rate":1.2,"service_type":0,"servicename":"花贷企业低息贷款", "servicenum":2}], "          //service存在的贷款服务有哪些, 以及他们的利率(我就分为正常贷款, 花贷给企业的低息福利贷款)

    "remain": [152511.0, 15377.0, 167888.0],          // 三种剩余可贷款的额度
    "record":          //历史记录, 每个月截止时, 借的钱和总额度
    [{"businesslicence": "413669641984", "loan_amount": 532112.0, "time": "2019:06", "total_amount": 700000.0},
    {"businesslicence": "413669641984", "loan_amount": 423167.0, "time": "2019:05", "total_amount": 640000.0},
    {"businesslicence": "413669641984", "loan_amount": 641537.0, "time": "2019:04", "total_amount": 620000.0},
    {"businesslicence": "413669641984", "loan_amount": 314412.0, "time": "2019:03", "total_amount": 600000.0},
    {"businesslicence": "413669641984", "loan_amount": 574131.0, "time": "2019:02", "total_amount": 600000.0},
    {"businesslicence": "413669641984", "loan_amount": 413696.0, "time": "2019:01", "total_amount": 580000.0},
    {"businesslicence": "413669641984", "loan_amount": 568941.0, "time": "2019:07", "total_amount": 700000.0},
    {"businesslicence": "413669641984", "loan_amount": 641346.0, "time": "2019:08", "total_amount": 700000.0},
    {"businesslicence": "413669641984", "loan_amount": 413575.0, "time": "2019:09", "total_amount": 700000.0}],

    "information":          //企业的概况
    [{"businesslicence": "413669641984", "loan_amount": 447489.0, "loan_number": 431785741, "servicenum": 0, "total_amount": 600000.0},
    {"businesslicence": "413669641984", "loan_amount": 84623.0, "loan_number": 698213576, "servicenum": 1, "total_amount": 100000.0}],          //数据的总体概括, loan_amount是借钱的数量, total_amount是总共可以借贷额度, servicenum指的是采用哪种贷款方式

    "operation": [120000.0, 47595.0]}          //本月总共还款、总共借款的数额

```

7.进入企业中心

说明: 虽然无需参数, 但是必须要事先登录, 否则无法进入这个界面

接口:

```
GET      /personalcenter/enterprise
```

参数:

```
businesslicence
```

返回值:

```
{"enterprise":          //注册时候填写的信息
{"accountname":"李通","accountowner":"","avatar":"/default.png",    //avatar是头像
"businesslicence":"413669641984","certification":"/image","depositbank":"花旗银行",
"enterprisename":"一卡通","owneridentification":"312141268668914",
"ownernumber":"312141268668914","password":"zh1gNZsHfcKhpw4","publicaccounts":"621700
0780053911319"}}}
```

8.更改头像

接口:

GET /personalcenter/update_avatar

参数:

```
businesslicence
file           //头像图片
```

返回值:

更改头像成功

```
{"msg":"更改头像成功","state":"true"}
```

更改头像失败:

```
{"msg":"上传文件失败","state":"false"}
```

9.更改登录密码

接口:

POST /personalcenter/update_password

参数:

```
businesslicence
old_password     //旧密码
new_password     //新密码
```

返回值:

密码修改成功:

```
{"msg":"密码修改成功","state":"true"}
```

旧密码错误:

```
{"msg": "旧密码错误", "state": "false"}
```

异常修改失败:

```
{"msg": "密码修改失败", "state": "false"}
```

10.进入报销界面

接口:

```
GET      /reimburse
```

参数:

businesslicence
state //要查看所有记录, 可以不传输, 但是要查看未审核的记录, 则设置为0, 查看审核通过记录设置为1, 查看所有拒绝的报销, 则设置为-1

返回值:

```
[{"service_bussinesslicence": "415367853457413", "bussinesslicence": "247874135785433", "serviceProvider": "Apple", "label": "电脑、办公、文具", "num": 1, "order_num": 4532468, "state": 0, "time": 1566200541000, "serviceName": "MacBook", "value": 18000, "idenfication": "430482196811020012", "applicant": "username"}, {"service_bussinesslicence": "415367853457413", "bussinesslicence": "247874135785433", "serviceProvider": "Apple", "label": "电脑、办公、文具", "num": 1, "order_num": 4532468, "state": 0, "time": 1566200541000, "serviceName": "MacBook", "value": 18000, "idenfication": "430482196811020012", "applicant": "username"}]
```

service_bussinesslicence是供应商的营业执照, bussinesslicence员工公司的营业执照, serviceProvider供应商, label商品类别, order_num报销号, state报销状态, 0表示未处理, 1已报销, -1拒绝报销, time就是申请的时间, 这个数字可以后期调, 是个字符串, serviceName购买物品的名称, value总价格, idenfication买的人的身份证, applicant申请人的名字, num是购买的数量

11.确认报销

接口:

```
GET      /confirm_reimburse
```

参数:

order_num //报销号, 每个报销都有的唯一认证

返回值:

报销成功

```
{"msg": "报销成功", "state": "true"}
```

报销失败

```
{"msg": "报销失败", "state": "false"}
```

12.拒绝报销

接口:

```
GET /refuse_reimburse
```

参数:

order_num	//报销号
description	//拒绝的理由

返回值:

操作成功:

```
{"msg": "报销已拒绝", "state": "true"}
```

操作失败:

```
{"msg": "系统异常", "state": "false"}
```

web端和Android端

员工端

1.进入注册界面

接口:

```
GET /register/person
```

2.员工注册

说明：注册完成后，过一段时间，会发送短信“【花贷】您好，您在花贷平台登记的信息已审核通过,感谢您对本产品的支持！”到用户的手机上

接口：

```
POST      /regist/person
```

参数：

identification	//身份证
username	//用户名
password	//密码
phonenum	//手机号
enterprisename	//企业名称
card	//银行卡号
cardpassword	//绑定银行卡的密码

返回值：

信息注册成功

```
{"msg": "请等待信息审核结果", "state": "true"}
```

信息注册失败

```
{"msg": "注入信息失败", "state": "false"}
```

3.进入登录界面

```
GET      /login/person
```

4.进行登录操作

接口：

```
POST      /login/person
```

参数：

identification	//身份证
password	//密码

返回值：

成功登录：


```
{"identification":43031689461396,"state":"true"}
```

identification是身份证，不是固定的字符串

登录失败：

```
{"msg":"账号或密码错误","state":"false"}
```

5.进入首页

接口：

```
GET /index/person
```

参数：

```
identification
```

返回值：

```
{"list_information":          //概况，消费贷和现金贷各花费了多少
  [{"identification":"430482196811020012","loan_amount":37296.0,"servicenum":4,"total_amount":160000.0},
  {"identification":"430482196811020012","loan_amount":1560.0,"servicenum":3,"total_amount":40000.0}],
  "list_card":
    // 银行卡
    [{"card":"6217000780053911416","cardpassword":"123456","identification":"430482196811020012"},
    {"card":"6217000780024100229","cardpassword":"123456","identification":"430482196811020012"}],
    "proportion":0.19428,      // 花费了的与总贷款额度比例
    "list_record":             //根据时间得到的每个月的开销总结
    [{"identification":"430482196811020012","loan_amount":200000.0,"time":"2019:09","total_amount":38856.0},
    {"identification":"430482196811020012","loan_amount":200000.0,"time":"2019:08","total_amount":128856.0},
    {"identification":"430482196811020012","loan_amount":200000.0,"time":"2019:07","total_amount":59345.0},
    {"identification":"430482196811020012","loan_amount":200000.0,"time":"2019:06","total_amount":132865.0},
    {"identification":"430482196811020012","loan_amount":200000.0,"time":"2019:05","total_amount":41356.0}],
    "mini_repay":14320.149099999999,          // 最小还款额度
    //贷款套餐
    "list_service":[{"service_rate":0.85,"service_type":1,"servicename":"用户商品贷","servicenum":4},
    {"service_rate":0.85,"service_type":1,"servicename":"用户消费贷","servicenum":3}],
    "list_remain":[122704.0,38440.0,161144.0],
    // 分期付款的套餐
```

```

"list_separate":
[{"identity": "430482196811020012", "last_num": 18000.0, "last_stage": 6, "name": "MacBook", "separate_num": 415745, "time": {"date": 19, "day": 1, "hours": 15, "minutes": 42, "month": 7, "seconds": 21, "time": 1566200541000, "timezoneOffset": -480, "year": 119}, "total_num": 18000.0, "total_stage": 6}, {"identity": "430482196811020012", "last_num": 11000.0, "last_stage": 4, "name": "HD 820森还塞尔耳机", "separate_num": 416366, "time": {"date": 10, "day": 1, "hours": 15, "minutes": 41, "month": 5, "seconds": 43, "time": 1560152503000, "timezoneOffset": -480, "year": 119}, "total_num": 16500.0, "total_stage": 6}, {"identity": "430482196811020012", "last_num": 8296.0, "last_stage": 1, "name": "巴黎假日七日游", "separate_num": 574168, "time": {"date": 4, "day": 5, "hours": 15, "minutes": 40, "month": 0, "seconds": 17, "time": 1546587617000, "timezoneOffset": -480, "year": 119}, "total_num": 74664.0, "total_stage": 9}],
// 还款记录
"list_repay":
[{"card": "6217000780053911416", "identification": "430482196811020012", "money_amount": 90000.0, "servicenum": 4, "time": {"date": 3, "day": 2, "hours": 2, "minutes": 48, "month": 8, "seconds": 41, "time": 1567450121000, "timezoneOffset": -480, "year": 119}, "username": "username"}, {"card": "6217000780024100229", "identification": "430482196811020012", "money_amount": 10489.0, "servicenum": 3, "time": {"date": 27, "day": 2, "hours": 2, "minutes": 48, "month": 7, "seconds": 49, "time": 1566845329000, "timezoneOffset": -480, "year": 119}, "username": "username"}, {"card": "6217000780053911416", "identification": "430482196811020012", "money_amount": 80000.0, "servicenum": 4, "time": {"date": 9, "day": 5, "hours": 2, "minutes": 48, "month": 7, "seconds": 53, "time": 1565290133000, "timezoneOffset": -480, "year": 119}, "username": "username"}],
//本月还款总数，贷款总数
"list_operation": [90000.0, 0.0],
"card": //用户所拥有的银行卡
[{"card": "6217000780053911416", "cardpassword": "123456", "identification": "430482196811020012"}, {"card": "6217000780024100229", "cardpassword": "123456", "identification": "430482196811020012"}]

```

6.进入个人中心

接口:

GET /personalcenter/person

参数:

identification

返回值:

```
{"cardList":          // 银行卡信息
  [{"card":"6217000780053911416","cardpassword":"123456","identification":"430482196811020012"},
  {"card":"6217000780024100229","cardpassword":"123456","identification":"430482196811020012"}],
  // 个人信息, 企业, 身份证, 密码, 手机, 用户名
  "person":{"businesslicence":"247874135785","enterprisename":"拼多多","identification":"430482196811020012","password":"password","phonenum":"13847951241","username":"username"}}
```

7.更改基本信息

接口:

```
POST    /personalcenter/update_information
```

参数:

```
identification
old_password          //最好等用户先输入密码再输入其他信息, 登录密码

//后面的这些东西可以不用全部传过来, 没有可以不填写, 我这边接收到的是null
username              //用户名
new_password          //密码
phonenum              //手机号
```

返回值:

更改成功

```
{"msg":"更改成功","state":"true"}
```

更改失败

```
{"msg":"更改失败","state":"false"}
```

8.进入商城

接口:

```
GET      /mall/index
```

返回值:

```
[{"image":"/1.jpeg","commodity_id":"1","bussinesslicence":"655744655704358","name":"希尔顿酒店","description":"中高端连锁酒店","label":1,"value":1200},
{"image":"/10.png","commodity_id":"10","bussinesslicence":"657575645334222","name":"双立人1731多用刀","description":"双立人多用刀","label":4,"value":1388},
{"image":"/11.jpeg","commodity_id":"11","bussinesslicence":"464335324353242","name":"爱达或爱欲","description":"纳博科夫小说","label":5,"value":58},
{"image":"/12.jpeg","commodity_id":"12","bussinesslicence":"563452325464639","name":"Kindle","description":"亚马逊出品电子书","label":5,"value":499},
{"image":"/13.png","commodity_id":"13","bussinesslicence":"938365932654052","name":"美赞臣蓝臻","description":"美赞臣婴幼儿奶粉","label":6,"value":816},
{"image":"/14.png","commodity_id":"14","bussinesslicence":"546346233421415","name":"乐高航天飞机积木","description":"乐高太空卫星任务玩具","label":6,"value":299},
{"image":"/15.jpeg","commodity_id":"15","bussinesslicence":"247874135785433","name":"MacBook","description":"办公利器","label":7,"value":18000},
{"image":"/2.jpeg","commodity_id":"2","bussinesslicence":"765621309875357","name":"迈巴赫s450","description":"奔驰旗下中高端车型","label":1,"value":1390000},
{"image":"/3.jpeg","commodity_id":"3","bussinesslicence":"897654009000811","name":"Leoflower连衣裙","description":"阿玛尼服装","label":2,"value":8000},
{"image":"/4.jpg","commodity_id":"4","bussinesslicence":"897654009000811","name":"Crossbody Bag","description":"阿玛尼皮包","label":2,"value":16000},
{"image":"/5.jpeg","commodity_id":"5","bussinesslicence":"431743785423680","name":"HD 820森海塞尔耳机","description":"森海塞尔高端耳机","label":10,"value":16499},
{"image":"/6.jpeg","commodity_id":"6","bussinesslicence":"330092873632748","name":"小米运动手环","description":"小米出品运动手环","label":10,"value":99},
{"image":"/7.jpeg","commodity_id":"7","bussinesslicence":"235556454332346","name":"迪奥永恒的爱","description":"迪奥经典香水","label":3,"value":810},
{"image":"/8.jpg","commodity_id":"8","bussinesslicence":"563478654356645","name":"香奈儿LE LIFT","description":"香奈儿紧肤乳霜","label":3,"value":1350},
{"image":"/9.png","commodity_id":"9","bussinesslicence":"657575645334222","name":"双立人煎炒锅24cm","description":"双立人平底煎锅","label":4,"value":1880}]
```

image是商品图片，commodity_id是商品号，bussinesslicence供应商号，name名称，description商品描述，label类别标签，value价格

9.选择购买物品的数量

说明：这个界面后面，记得有“支付”和“报销”两个按钮

GET /mall/buy_num

参数：

```
identification
num                //购买数量
value              //单价
```

返回值：

```
{"cardList":          //用户的银行卡
  [{"card":"6217000780053911416","cardpassword":"123456","identification":"430482196811020012"},
  {"card":"6217000780024100229","cardpassword":"123456","identification":"430482196811020012"}],          //后面这些数字分别是直接支付，一期支付，三期，六期，九期，十二期，二十四期后的价格
  //这个地方在前面让他们选择下支付方式吧，银行卡还是花贷，是花贷的话，再显示分期，不然感觉会把客户吓走
  "doubleList":["14856.00","14982.28","5036.18","2549.66","1720.92","1307.33","684.86"]}]}
```

10.进行支付

接口：

POST /mall/pay

参数：

```
identification
card
password          //银行卡密码
commodity_id      //商品的id
num               //购买数量
stage             //分期次数，如果是直接支付就直接回复0
order_num         //如果是用户的报销被拒绝后，进行支付的话，则填写这一项，否则不填写
```

返回值：

付款成功：

```
{"msg":"付款成功","state":"true","td_code":
{"codenum":0,"commodity_id":"rt3746324655","identification":"41347678231","num":4,"value":4134324.0,"state":0,"time":"2019-8-28"}}          //td_code适用于生成二维码的信息，web端不用管，
```

付款失败：

```
{"msg":"付款失败","state":"false"}
```

11.报销

接口：

POST /mall/reimburse

参数：

```
identification
description      //报销的理由, 可以为空
commodity_id     //商品的id
num              //购买的数量
```

返回值:

操作成功:

```
{"msg": "成功发送申请, 请等待审核", "state": "true", "td_code":
{"codenum": 0, "commodity_id": "rt3746324655", "identification": "41347678231", "num": 4, "value": 4134324.0, "state": 0, "time": "2019-8-28"}}} //虽然这个去审核了, 但是员工就已经可以开始消费了, 所以有消费二维码凭借了
```

操作失败:

```
{"msg": "发送请求失败", "state": "false"}
```

12.还款

接口:

```
POST      /index/repay
```

参数:

```
identification
value          //还款的数额, 注意, 在申请首页的时候, 已经发送给你了最低还款, 这个数值不低于最低还款
```

返回值:

操作成功:

```
{"msg": "还款成功", "state": "true"}
```

还款金额异常:

```
{"msg": "还款金额异常", "state": "false"}
```

操作失败:

```
{"msg": "还款失败", "state": "false"}
```

13.延期还款

接口:

POST /index/delay

参数:

identification

返回值:

延期成功:

```
{"msg": "延期成功", "state": "true"}
```

延期失败:

```
{"msg": "延期失败", "state": "false"}
```

14.打开用户报销中心

说明: 如果企业拒绝了员工的报销, 那么则需要员工选择, 采取银行卡支付还是, 分期支付这种方式进行偿还。

这个真的不想写啊, 算了, 咱们还是得写的

接口:

/GET /reimburse_person

参数:

identification

返回值:

```
[{"service_bussinesslicence": "415367853457413", "num": 1, "bussinesslicence": "247874135785433", "order_num": 4532468, "state": -1, "time": 1566200541000, "value": 18000, "idenfication": "430482196811020012"}, {"service_bussinesslicence": "415367853457413", "num": 1, "bussinesslicence": "247874135785433", "order_num": 4532468, "state": -1, "time": 1566200541000, "value": 18000, "idenfication": "430482196811020012"}]
```

//如果state为-1, 则要求用户进行支付

先触发/mall/pay, 获得分期方式, 以及让用户选择支付方式, 随后触发 /mall/pay 进行支付, 记得带ordernum

15.显示二维码 (仅安卓)

说明：在完成支付和报销两个操作后，会得到td_code，所以就可以把td_code发送给我，然后用于生成二维码接口：

GET /qrcode

参数：

```
identification
td_code           //以下是要发送过来的内容
{"codenum":0,"commodity_id":"rt3746324655","identification":"41347678231","num":4,"value":4134324.0,"state":0,"time":"2019-8-28"}}
```

返回值：

这个链接将直接会以流的形式传回一张图片，因为我把他写进了io流里面，所以会以缓存的形式发给你们，即为：触发这个链接就是传给你的就是二维码。

16.进入二维码中心（仅安卓）

接口：

POST /codecenter

参数：

```
identification
password           //登录密码，这个设置为全局变量吧，别让用户再去输入了，但是又必须有密码，是因为如果没有密码，别人就可能会直接用identification获取用户的所有二维码信息进行盗用消费。
```

返回值：

申请成功：

```
{"td_codes":
[{"codenum":0,"commodity_id":"15","identification":"430482196811020012","num":1,"state":0,"time":
{"date":28,"day":3,"hours":9,"minutes":22,"month":7,"seconds":38,"time":1566955358000,"
timezoneOffset":-480,"year":119},"value":18000.0},

{"codenum":0,"commodity_id":"15","identification":"430482196811020012","num":1,"state":0,"time":
{"date":28,"day":3,"hours":9,"minutes":22,"month":7,"seconds":38,"time":1566955358000,"
timezoneOffset":-480,"year":119},"value":18000.0}]}    //这里面的日期我会改下，换成2019-07-28 17:32:07这种字符串
```

请求异常：

```
{"msg":"请求不安全","state":"false"}
```


