TEST PROJECT

Module A

Submitted by:

Assessment Browser:
Google Chrome
Postman

介绍

随着移动设备的快速发展，手机已成为生活中拍照的主流方式。“EAPhoto”专门帮助用户打印手机拍摄的照片。根据不同的需求，用户可以选择纸张尺寸、画框，甚至未来的礼品包装。传统网站已无法满足“EAPhoto”快速增长的业务。您需要开发一个网站来扩大在线业务。

该模块分为两部分。在第一部分中，您需要根据需求完成后端API开发工作，在第二部分中，您将使用第一部分中开发的API制作前端应用程序功能。

First 3 hours – Api开发

该项目第一阶段的说明：第一个阶段的任务是创建一个restful API，前端程序可以使用它来进行数据通信。在没有特殊指令的情况下，请求所需字段为空的情况应返回422错误。

图片上传后应给出原图地址（original_url）、编辑后的地址（edited_url）与增加画框后的地址（framed _url），此处可以不制作对应功能，但是URL需要要有区分，且URL必须为http://开头并能够正常访问上传的图片。

数据库

您可以使用素材提供的数据库，或者由您根据所需功能自行创建。

数据库搭建完成后，需要提供SQL导出文件，将其存储在工作目录中，命名为database-dump.sql。

如果您选择自行创建数据库,请创建用户档案：

管理员用户：

Email：admin@ eaphoto. com

密码：admin

授权用户：

Email：user@ eaphoto. com

密码：user

REST API 身份认证

当平台用户登录时，API将返回用户的登录标识token。客户端将存储该token，并将其作为HTTP请求头(Headers)中的Authorization与每个请求一起发送到后端。后端将根据token判断登录状态。

如果用户注销，token将从数据库中删除。

您可以使用任何形式的token（例如UUID或任何机器在合理时间内无法猜到的东西）。

管理员API

1. 授权

a. Login (/admin/login)

描述: 管理员登录。

Request Method: POST

Request Parameters:

- email
- password

Response Result:

Data for success:

Status Code: 200

Body:

```
{
        “msg”: “success” ,
        “data”: {
                “id”: 1 ,
                “email”: “sample@email.com” ,
                “full_name”: “Sample User”
                “token”: “AUTHORIZATION_TOKEN” ,
                “create_time”: “2022-01-01 00:00”
        }
```

```
    }
```

Data for wrong data:

Status Code: 422

Body:

```
    {
        msg: “data cannot be processed”
    }
```

Data for wrong user credential:

Status Code: 401

Body:

```
    {
        msg: “user credentials are invalid”
    }
```

b. Logout (/admin/logout)

描述: 管理员登出。

Request Method: POST

Response Result:

Data for success:

Status Code: 200

Body:

```
    {
        msg: “success”
    }
```

Data for unauthorized:

Status Code: 401

Body:

```
    {
        msg: “unauthorized”
    }
```

Body Result Sample for Success:

```
    {
        “msg”: “success”
    }
```

2. Size

a. Get All Sizes (/admin/size)

描述:管理员获取所有的Size。

Request Method: GET

Response Result:

Data for success:

Status Code: 200

Body:

```
    {
        “msg”: “success” ,
        “data”: [
            {
                “id”: 1 ,
                “size”: “5 Inch” ,
                “width”: 5,
                “height”: 5,
                “price”: 1.2
            },...
        ]
    }
```

Data for unauthorized:

Status Code: 401

Body:

```
    {
        msg: “unauthorized”
    }
```

b. Update Size (/admin/size/{size_id})

描述: 管理员可以更新Size。

Request Parameters:

- price

Request Method: Patch

Response Result:

Data for success:

Status Code: 200

Body:

```
	{
		“msg”: “success” ,
		“data”: {
			“id”: 1 ,
			“size”: “5 Inch” ,
			“width”: 5,
			“height”: 5,
			“price”: 1.2
		}
	}
```

Data for size not found:

Status Code: 404

Body:

```
{
	msg: “not found”
}
```

Data for unauthorized:

Status Code: 401

Body:

```
	{
		msg: “unauthorized”
	}
```

3. Frame

a. Get All Frames (/admin/frame)

描述: 管理员获取所有的Frame。

Request Method: Get

Response Result:

Data for success:

Status Code: 200

Body:

```
	{
		“msg”: “success” ,
        “data”: [
            {
                “id”: 1 ,
                “url”: “http://IMAGE_URL” ,
                “price”: 1.2 ,
                “name”: “Frame”,
                “size”: “5 Inch”
            },...
        ]
    }
```

Data for unauthorized:

Status Code: 401

Body:

```
    {
        msg: “unauthorized”
    }
```

b. Update Frame (/admin/frame/{frame_id})

描述: 管理员可以更新Frame。

Request Parameters:

- frame_name (nullable)
- size_id (nullable)
- price (nullable)

Request Method: Patch

Response Result:

Data for success:

Status Code: 200

Body:

```
    {
        “msg”: “success” ,
        “data”: {
            “id”: 1 ,
            “url”: “http://IMAGE_URL” ,
            “price”: 1.2 ,
            “name”: “Frame”,
            “size”: “5 Inch”
        }
    }
```

Data for unauthorized:

Status Code: 401

Body:

```
    {
        msg: “unauthorized”
    }
```

4. Order

a. Get All Orders(/admin/order)

描述: 管理员获取所有的Order。

Request Method: Get

Response Result:

Data for success:

Status Code: 200

Body:

msg: ”success”

data:

```
    {
        “msg”: “success” ,
        “data”: [
            {
                “id”: 1 ,
                “full_name”: “Matthew” ,
                “phone_number”: “10001000”,
                “shipping_address”: “Where”,
                “card_number”: “3223222222”,
                “name_on_card: “Matthew XXX”,
                “exp_date”: “2024-02-20”,
                “cvv”: “246”,
                “total”: 10,
                “urder_placed”: “2022-02-02 00:00”,
                “status”: “Valid”
                “photos”: [
                    {
                        “id”: 1,
                        “edited_url”: “http://IMAGE_URL”,
                        “original_url”: “http://IMAGE_URL”,
                        “framed_url”: “http://IMAGE_URL”,
                        “frame_name”: “Frame”,
                        “size”: “5 Inch”,
                        “print_price”: 1.2,
                        “frame_price”: 1.2
                    },...
                ]
            },...
        ]
    }
```

Data for unauthorized:

Status Code: 401

Body:

```
    {
        msg: “unauthorized”
    }
```

b. Cancel Order(/admin/order/cancel/{order_id})

描述: 管理员可以取消一个Order，Order的状态变更为"Invalid"。

Request Method: Post

Response Result:

Data for success:

Status Code: 200

Body:

```
    {
        “msg”: “success” ,
    }
```

Data for order not found:

Status Code: 404

Body:

```
    {
        msg: “not found”
    }
```

Data for unauthorized:

Status Code: 401

Body:

```
{
        msg: “unauthorized”
}
```

c. Complete Order(/admin/order/complete/{order_id})

描述: 管理员可以完成一个Order，Order的状态变更为"Completed"。

Request Method: Post

Response Result:

Data for success:

Status Code: 200

Body:

```
{
        “msg”: “success” ,
}
```

Data for order not found:

Status Code: 404

Body:

```
{
        msg: “not found”
}
```

Data for unauthorized:

Status Code: 401

Body:

```
{
        msg: “unauthorized”
}
```

5. User

a. Get All Users(/admin/user)

描述: 管理员获取所有的User。

Request Method: Get

Response Result:

Data for success:

Status Code: 200

Body:

```
    {
        “msg”: “success” ,
        “data”: [
            {
                “id”: 1,
                “email”: “sampleuser@eap.mail”,
                “username”: “sample_user”,
                “create_time”: “2022-01-01 00:00”,
                “cart_total”: 300
            },...
        ]
    }
```

Data for unauthorized:

Status Code: 401

Body:

```
    {
        msg: “unauthorized”
    }
```

b. Reset User Password (/admin/user/reset/{user_id})

描述: 管理员可以重置一个用户的密码，将密码重置为8位随机数。

Request Method: Post

Response Result:

Data for success:

Status Code: 200

Body:

```
    {
        “msg”: “success” ,
        "data": {
            "id": 1,
            "password": "PASSWORD"
        }
    }
```

Data for account not found:

Status Code: 404

Body:

```
    {
        msg: "not found"
    }
```

Data for unauthorized:

Status Code: 401

Body:

```
    {
        msg: "unauthorized"
    }
```

c. Delete a User(/admin/user/{user_id})

描述: 管理员可以删除User。

Request Method: Delete

Response Result:

Data for success:

Status Code: 200

Body:

```
    {
        "msg": "success" ,
    }
```

Data for account not found:

Status Code: 404

Body:

```
    {
        msg: "not found"
    }
```

Data for unauthorized:

Status Code: 401

Body:

```
    {
            msg: “unauthorized”
    }
```

d. Reset a User`s Cart(/admin/cart/reset/{user_id})

描述: 管理员可以清除某个用户的购物车。

Request Method: POST

Response Result:

Data for success:

Status Code: 200

Body:

```
    {
            “msg”: “success” ,
    }
```

Data for account not found:

Status Code: 404

Body:

```
    {
            msg: “not found”
    }
```

Data for unauthorized:

Status Code: 401

Body:

```
    {
            msg: “unauthorized”
    }
```

6. Admin

a. Get All Admins(/admin/admin)

描述: 管理员获取所有的Admin。

Request Method: Get

Response Result:

Data for success:

Status Code: 200

Body:

```
{
    “msg”: “success” ,
    “data”: [
        {
            “id”: 1,
            “email”: “sampleadmin@eap.mail”
            “full_name”: “Admin Name”,
            “create_time”: “2022-01-01 00:00”
        },...
    ]
}
```

Data for unauthorized:

Status Code: 401

Body:

```
{
    msg: “unauthorized”
}
```

b. Create Admin(/admin/admin)

描述: 管理员能够创建新的管理员，Email不能与别的管理员重复。

Request Parameters:

- email
- full_name
- password
- repeat_password

Request Method: Post

Response Result:

Data for success:

Status Code: 200

Body:

```
{
    “msg”: “success” ,
        “data”: {
                “id”: 1,
                “email”: “sampleadmin@eap.mail”
                “full_name”: “Admin Name”,
                “create_time”: “2022-01-01 00:00”
        }
}
```

Data for wrong data:

Status Code: 422

Body:

```
{
        msg: “data cannot be processed”
}
```

Data for duplicate email:

Status Code: 422

Body:

```
{
        msg: “email has already been used”
}
```

Data for unauthorized:

Status Code: 401

Body:

```
{
        msg: “unauthorized”
}
```

c. Reset Admin Password (/admin/admin/reset/{admin_id})

描述：管理员可以重置一个管理员的密码，将密码重置为8位随机数。

Request Method: Post

Response Result:

Data for success:

Status Code: 200

Body:

```
{
        “msg”: “success” ,
        “data”: {
            “id”: 1,
            “password”: “PASSWORD”
        }
    }
```

Data for account not found:

Status Code: 404

Body:

```
    {
        msg: “not found”
    }
```

Data for unauthorized:

Status Code: 401

Body:

```
    {
        msg: “unauthorized”
    }
```

d. Delete an Admin(/admin/admin/{admin_id})

描述: 管理员能够删除Admin。

Request Method: Delete

Response Result:

Data for success:

Status Code: 200

Body:

```
    {
        “msg”: “success” ,
    }
```

Data for account not found:

Status Code: 404

Body:

```
    {
        msg: “not found”
    }
```

Data for unauthorized:

Status Code: 401

Body:

```
{
    msg: “unauthorized”
}
```

授权用户API

1. Auth

a. Login (/client/login)

描述: 用户能够登陆。

Request Method: POST

Request Parameters:

- email
- password

Response Result:

Data for success:

Status Code: 200

Body:

```
{
    “msg”: “success” ,
    “data”: {
        “id”: 1 ,
        “email”: “sample@email.com” ,
        “username”: “sample_user”
        “token”: “AUTHORIZATION_TOKEN” ,
        “create_time”: “2022-01-01 00:00”
    }
}
```

Data for wrong data:

Status Code: 422

Body:

```
{
        msg: “data cannot be processed”
}
```

Data for wrong user credential:

Status Code: 401

Body:

```
{
        msg: “user credentials are invalid”
}
```

b. Register (/client/register)

描述: 游客可以注册为用户。Email不能与别的用户重复。

Request Method: POST

Request Parameters:

- email
- username
- password
- repeat_password

Response Result:

Data for success:

Status Code: 200

Body:

```
{
        “msg”: “success” ,
        “data”: {
                “id”: 1 ,
                “email”: “sample@email.com”,
                “username”: “sample_user”,
                “token”: “AUTHORIZATION_TOKEN” ,
                “create_time”: “2022-01-01 00:00”
        }
}
```

Data for wrong data:

Status Code: 422

Body:

```
{
        msg: “data cannot be processed”
```

```
    }
```

Data for duplicate email:

Status Code: 422

Body:

```
    {
            msg: “email has already been used”
    }
```

c. Logout (/client/logout)

描述:用户登出。

Request Method: POST

Response Result:

Data for success:

Status Code: 200

Body:

```
    {
            “msg”: “success”
    }
```

Data for unauthorized:

Status Code: 401

Body:

```
    {
            msg: “unauthorized”
    }
```

d. Reset Password (/client/user/reset)

描述:用户可以重新设置自己的密码。

Request Parameters:

- original_password
- new_password
- repeat_password (字段值必须与 “new_password”字段相同，否则返回422错误)

Request Method: POST

Response Result:

Data for success:

Status Code: 200

Body:

```
    {
        “msg”: “success” ,
        “data”: {
            “id”: 1 ,
            “email”: “sample@email.com” ,
            “username”: “sample_user”,
            “create_time”: “2022-01-01 00:00” ,
        }
    }
```

Data for wrong data:

Status Code: 422

Body:

```
    {
        msg: “data cannot be processed”
    }
```

Data for unauthorized:

Status Code: 401

Body:

```
    {
        msg: “unauthorized”
    }
```

2. Size

a. Get All Sizes (/client/size)

描述: 用户获取所有的Size。

Request Method: GET

Response Result:

Data for success:

Status Code: 200

Body:

```
{
    “msg”: “success” ,
    “data”:[
        {
            “id”: 1 ,
            “size”: “5 Inch” ,
            “width”: 5,
            “height”: 5 ,
            “price”: 1.2
        },...
    ]
}
```

3. Photo

a. Upload Photo (/client/photo)

描述: 用户可以上传图片

Request Parameters:

- image (上传文件类型限制为 “png”,“jpg”,“gif”)
- size_id

Request Method: Post

Response Result:

Data for success:

Status Code: 200

Body:

```
{
    “msg”: “success” ,
    “data”: {
        “id”: 1 ,
        “edited_url”: “http://IMAGE_URL”,
        “original_url”: “http://IMAGE_URL”,
        “framed_url”:  “http://IMAGE_URL”
    }
}
```

Data for size not found:

Status Code: 404

Body:

```
{
    msg: “not found”
    }
```

Data for wrong data:

Status Code: 422

Body:

```
    {
            msg: “data cannot be processed”
    }
```

b. Delete a Photo (/client/photo/{photo_id})

描述: 用户可以删除图片。

Request Method: Delete

Response Result:

Data for success:

Status Code: 200

Body:

```
    {
            “msg”: “success”
    }
```

Data for photo not found:

Status Code: 404

Body:

```
    {
            msg: “not found”
    }
```

c. Set Frame for Photo (/client/photo/frame/{photo_id}/{frame_id})

描述: 用户可以为图片选取相框。

Request Method: Post

Response Result:

Data for success:

Status Code: 200

Body:

```
    {
            “msg”: “success” ,
            “data”: {
                    “id”: 1,
                    “frame_url”: “https://IMAGE_URL”
            }
    }
```

Data for photo or frame not found:

Status Code: 404

Body:

```
{
        msg: “not found”
}
```

4. Frame

a. Get All Frames (/client/frame)

描述: 用户获取所有的Frame。

Request Method: Get

Response Result:

Data for success:

Status Code: 200

Body:

```
{
        “msg”: “success” ,
        “data”: [
                {
                        “id”: 1 ,
                        “url”: “http://IMAGE_URL” ,
                        “price”: 1.2 ,
                        “name”: “Frame”,
                        “size”: “5 Inch”
                },...
        ]
}
```

5. Cart

a. Get Cart(/client/cart)

描述: 获取用户的购物车。

Request Method: Get

Response Result:

Data for success:

Status Code: 200

Body:

```
{
        “msg”: “success” ,
        “data”: [
                {
                        “id”: 1 ,
                        “edited_url”: “http://IMAGE_URL” ,
                        “original_url”: “http://IMAGE_URL” ,
                        “framed_url”: “http://IMAGE_URL” ,
                        “frame_name”: “Frame”,
                        “size”: “5 Inch”,
                        “print_price”: 1.2,
                        “frame_price”: 1.2,
                },...
        ]
}
```

Data for unauthorized:

Status Code: 401

Body:

```
{
        msg: “unauthorized”
}
```

b. Add Photos to Cart(/client/cart)

描述: 用户为购物车添加图片。

Request Parameters:

- photo_id_list (array)

Request Method: Post

Response Result:

Data for success:

Status Code: 200

Body:

```
{
        "msg": "success"
}
```

Data for photo can not found:

Status Code: 404

Body:

```
{
        msg: "not found"
}
```

Data for wrong data:

Status Code: 422

Body:

```
{
        msg: "data cannot be processed"
}
```

Data for unauthorized:

Status Code: 401

Body:

```
{
        msg: "unauthorized"
}
```

c. Delete Photo From a User`s Cart(/client/cart/photo/{photo_id})

描述: 用户可以从购物车中删除图片

Request Method: DELETE

Response Result:

Data for success:

Status Code: 200

Body:

```
{
        “msg”: “success”
    }
```

Data for photo can not found:

Status Code: 404

Body:

```
    {
        msg: “not found”
    }
```

Data for unauthorized:

Status Code: 401

Body:

```
    {
        msg: “unauthorized”
    }
```

6. Order

a. Get My Orders(/client/order)

描述: 用户获取自己的订单。

Request Method: Get

Response Result:

Data for success:

Status Code: 200

Body:

```
    {
        “msg”: “success” ,
        “data”: [
            {
                “id”: 1 ,
                “full_name”: “Matthew” ,
                “phone_number”: “10001000”,
                “shipping_address”: “Where”,
                “card_number”: “3223222222”,
                “name_on_card: “Matthew XXX”,
                “exp_date”: “2024-02-20”,
                “cvv”: “246”,
                “total”: 10,
                “order_placed”: “2022-02-02 00:00”,
                “status”: “Valid”,
                “photos”: [
                    {
                        “id”: 1,
                        “edited_url”: “http://IMAGE_URL” ,
                        “original_url”: “http://IMAGE_URL” ,
                        “framed_url”: “http://IMAGE_URL” ,
                        “frame_name”: “Frame”,
                        “size”: “5 Inch”,
                        “print_price”: 1.2,
                        “frame_price”: 1.2
                    },...
                ]
            },...
        ]
    }
```

Data for unauthorized:

Status Code: 401

Body:

```
    {
        msg: “unauthorized”
    }
```

b. Create Order(/client/order)

描述: 用户可以创建订单

Request Parameters:

- full_name
- phone_number
- shipping_address
- card_number
- name_on_card
- exp_date (YYYY-MM-DD)
- cvv (The field value length must be equals 3.)
- photo_id_list (array)

Request Method: Post

Response Result:

Data for success:

Status Code: 200

Body:

```
    {
            “msg”: “success” ,
            “data”: {
                    “id”: 1 ,
                    “full_name”: “Matthew” ,
                    “phone_number”: “10001000”,
                    “shipping_address”: “Where”,
                    “card_number”: “3223222222”,
                    “name_on_card: “Matthew XXX”,
                    “exp_date”: “2024-02-20”,
                    “cvv”: “246”,
                    “total”: 10,
                    “order_placed”: “2022-02-02 00:00”,
                    “status”: “Valid”,
                    “photos”: [
                            {
                                    “id”: 1,
                                    “edited_url”: “http://IMAGE_URL” ,
                                    “original_url”: “http://IMAGE_URL” ,
                                    “framed_url”: “http://IMAGE_URL” ,
                                    “frame_name”: “Frame”,
                                    “size”: “5 Inch”,
                                    “print_price”: 1.2,
                                    “frame_price”: 1.2
                            },...
                    ]
            }
    }
```

Data for photo not found:

Status Code: 404

Body:

```
    {
            msg: “not found”
```

}

Data for wrong data:

Status Code: 422

Body:

{

msg: “data cannot be processed”

}

Data for unauthorized:

Status Code: 401

Body:

{

msg: “unauthorized”

}

c. Cancel Order(/client/order/cancel/{order_id})

描述: 用户可以取消订单，Order的状态变更为"Invalid"。

Request Method: Post

Response Result:

Data for success:

Status Code: 200

Body:

{

msg: ”success”

}

Data for order not found:

Status Code: 404

Body:

{

msg: “not found”

}

Data for unauthorized:

Status Code: 401

Body:

{

```
        msg: “unauthorized”
}
```

选手须知

- 在功能未完全开发完成的情况下，请优先保证裁判能够通过站点目录访问作品，裁判将通过路径/XX_Module_A/api/v1访问API服务。
- 您应该考虑代码的质量。
- 所有作品都是在服务器端评测，无本地评测过程。
- 作品完成后请保存至站点目录 /XX_Module_A 中，XX是您的工位号。