Stripe Demo

##Team Name: MicroManiacs

Team Members

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URLs

1. **S3 frontend**: http://s3-us-west-2.amazonaws.com/stripe6998/index.html
2. **Elastic Beanstalk (API URL)**: http://stripedeploy.pmi6pbp3mg.us-west-2.elasticbeanstalk.com/api/

API endpoints

Note: Calls autheticated by the token in case of invalid / expired token return 403.

Auth service

POST api/api-token-auth/
Request parameters

```
{
```

```
    "username": "dummy@user.com",
    "password": "password"
}
```

Response: 200 Success

```
{"token":"JWT_TOKEN_HERE"}
```

Response: 400 Failure

```
{"detail":"authorization failure"}
```

SignUp service

POST api/signup/

Request parameters

```
      parameters = {
                  "first_name": "foo",
                  "last_name": "bar",
                  "email": "foobar@gmail.com",
                  "password": "password"
              };
```

Response: 201 Success

```
     {"success":true}
```

Response: 400 Failure

```
{
   "success": false,
   "error": "failure message here"
}
```


Fetch product catalog service

GET api/product/

Response: 200 Success


```
[
{
  "id": 1,
  "price": 100,
  "description": "Brooklyn Bridge",
  "url": "https://c1.staticflickr.com/1/728/31226388014_55
},
{
  "id": 2,
  "price": 150,
  "description": "Singapore Grand Prix",
  "url": "https://c1.staticflickr.com/6/5763/20977162524_c
}
]
```


Fetch orders of logged in user

GET api/order/

Response: 200 Success


```
[
  {
```

```
    "id": 14,
    "user": 5,
    "orderdate": "2017-02-11T02:40:24.333429Z",
    "paymentstatus": "PAID",
    "product": {
      "id": 1,
      "price": 100,
      "description": "Brooklyn Bridge",
      "url": "https://c1.staticflickr.com/1/728/31226388014_
    }
  },
  {
    "id": 15,
    "user": 5,
    "orderdate": "2017-02-11T02:40:56.373584Z",
    "paymentstatus": "PAID",
    "product": {
      "id": 2,
      "price": 150,
      "description": "Singapore Grand Prix",
      "url": "https://c1.staticflickr.com/6/5763/20977162524_
    }
  }
]
```


Submit order & stripe token to backend

POST api/order/

Request parameters

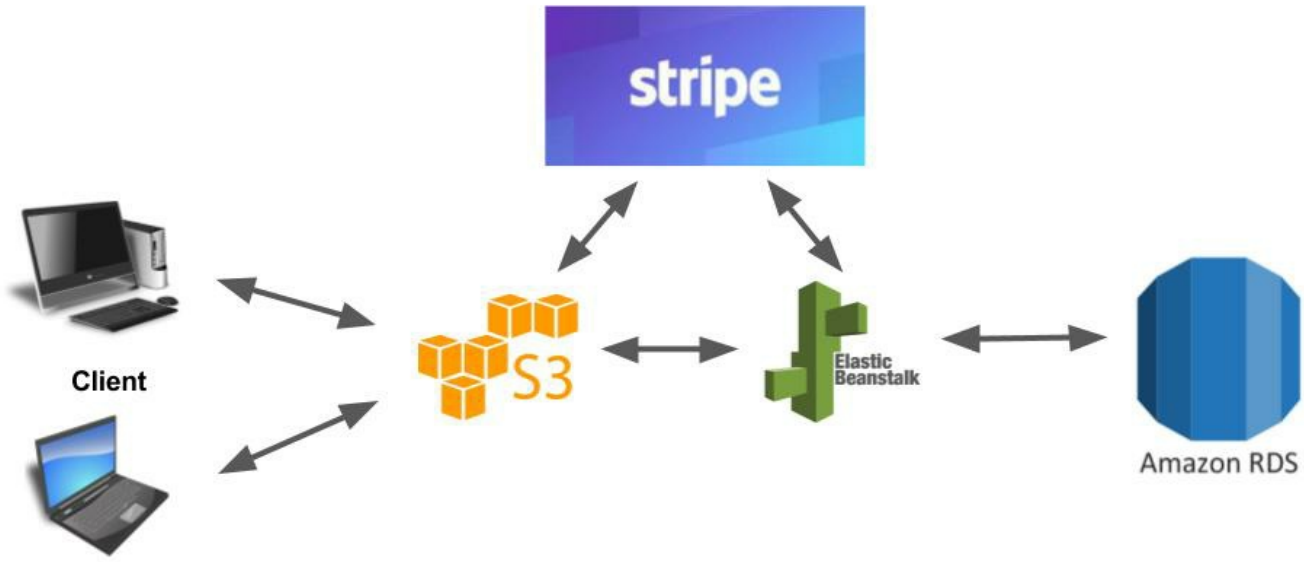

```
{
    "token": "STRIPE_CLIENT_TOKEN",
    "product": "PRODUCT_ID"
}
```

Response: 201 Success

```
{
  "success": true
}
```

Response: 400 Bad request: In case of missing parameters.

Architecture



Architecture - Stripe Demo

Tech Stack

1. Python (Django REST Framework)
2. HTML5, CSS, Javascript
3. jQuery, Bootstrap
4. MySQL

Deployment

1. Front end static files hosted on S3 bucket
2. Database hosted on Amazon RDS
3. Backend server hosted on Elastic Beanstalk (Load Balancer + EC2 instance)

Communication with the Stripe Service

Client Side

Stripe.js was used to integrate payment popup on client side'

Server Side

Server end uses the Charge API to communicate with the Stripe service and store the order **meta data** on Stripe and the order status in the database

```
charge = stripe.Charge.create(
            amount=int(product.price*100),
            currency="usd",
            metadata={"order_id": order_id},
            source=stripe_token);
```

Screenshots

FrameSeller - Buy Amazing Photos!

Buy amazing photos online!

Existing User?

Login

Email:

Password:

Login

New User?

SignUp

First Name:

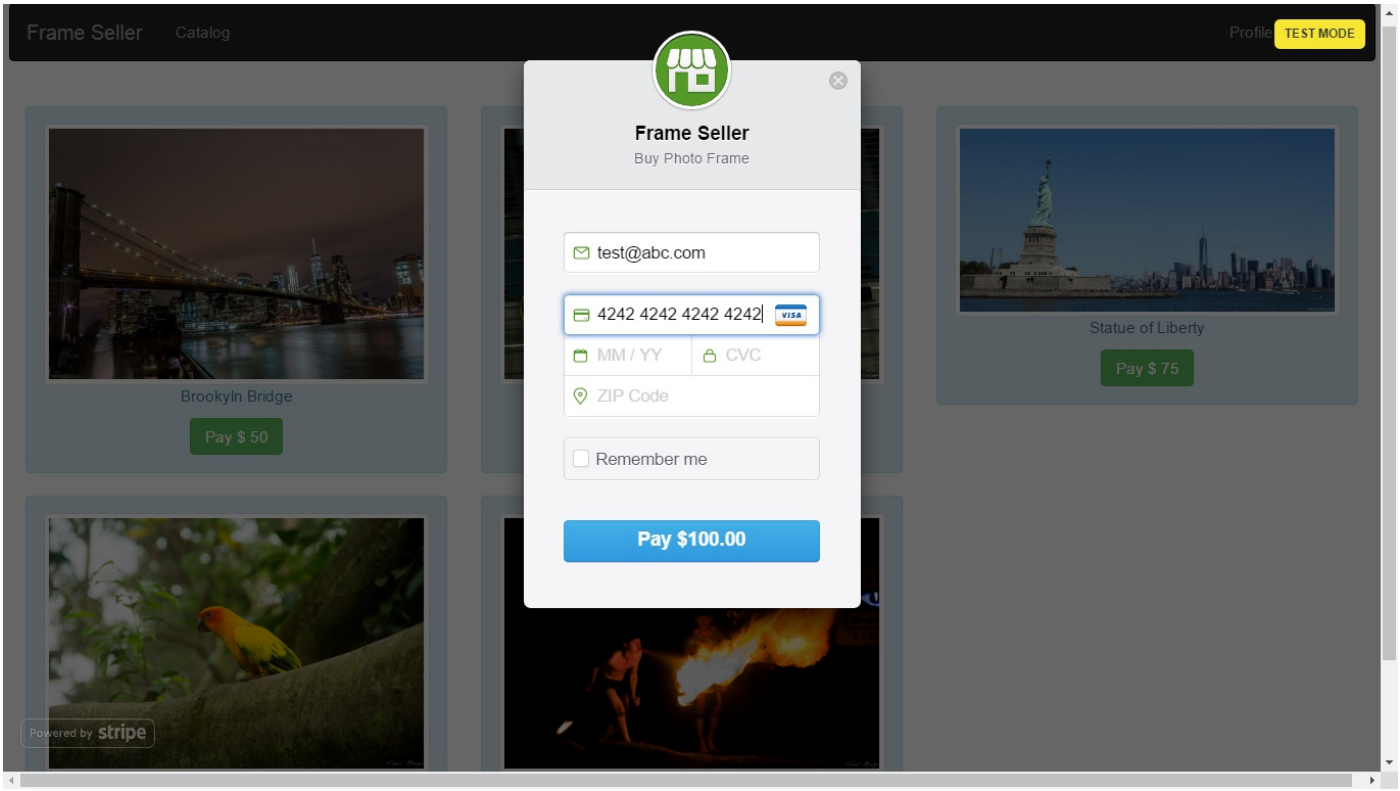
Last Name:

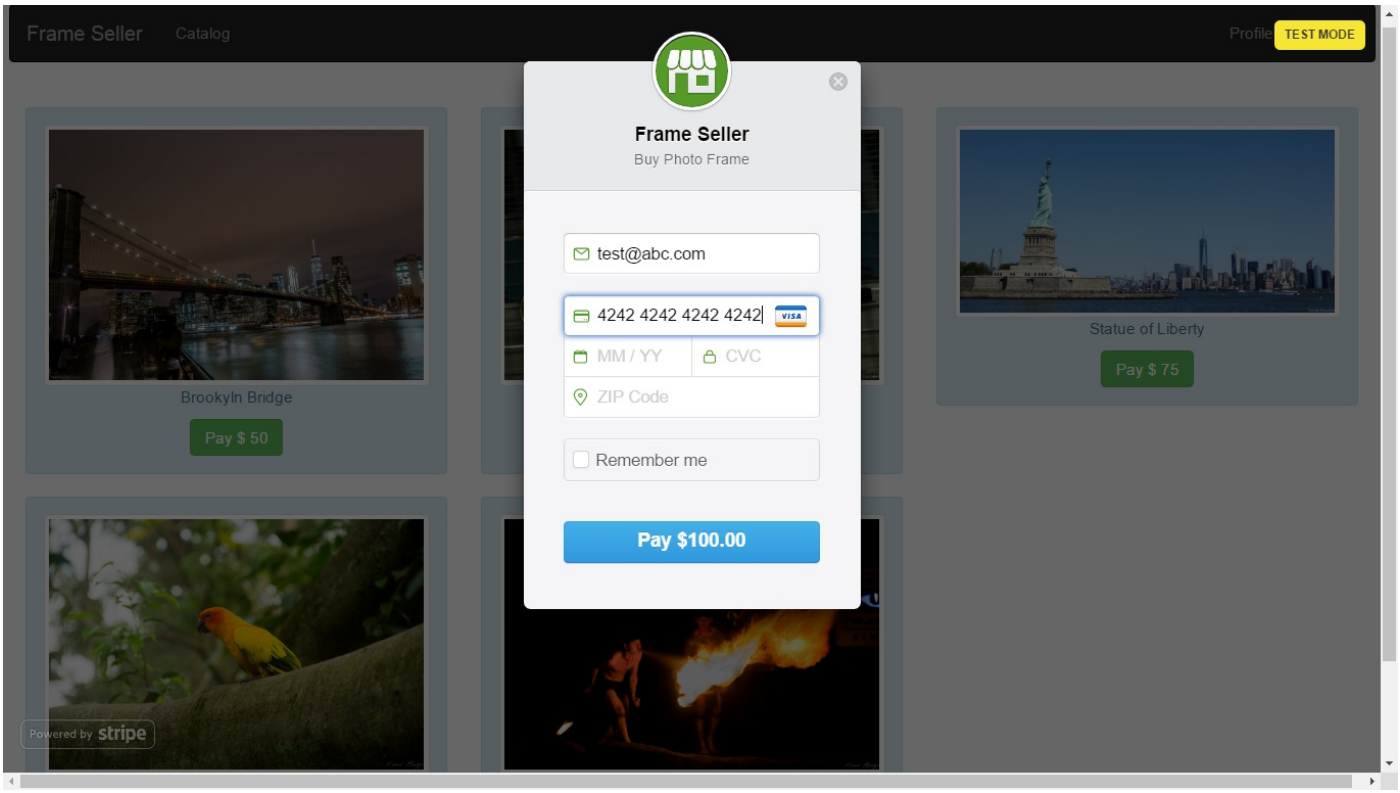
Email:

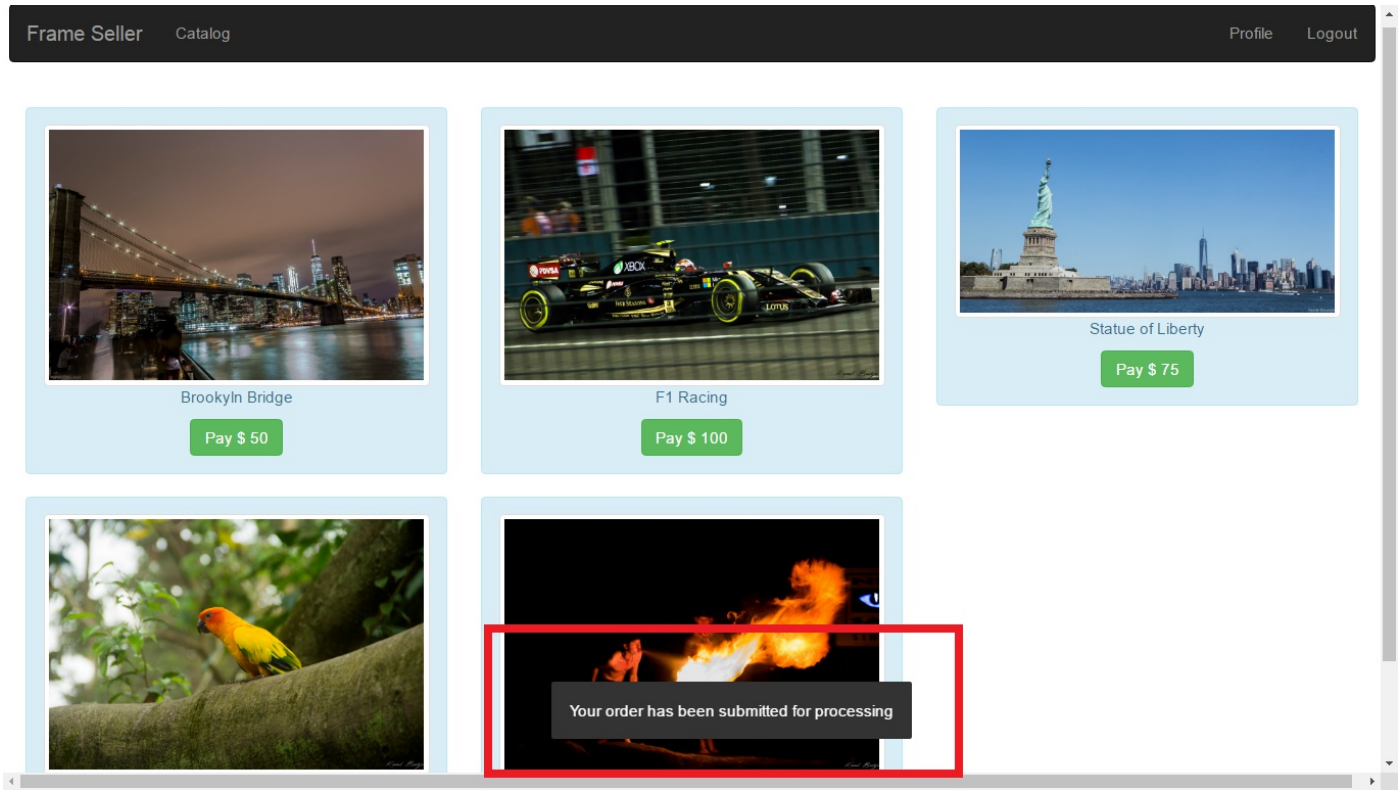
Password:

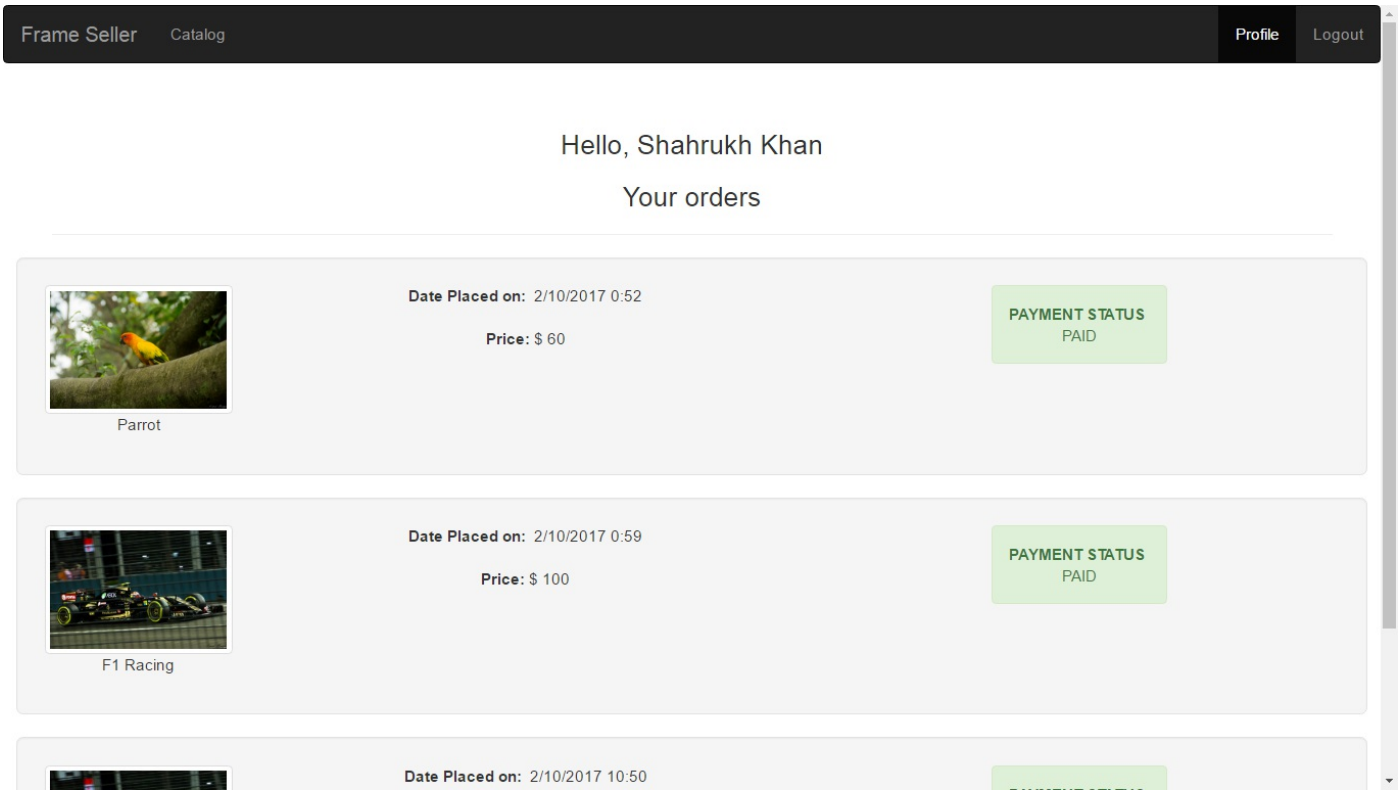
Repeat Password:

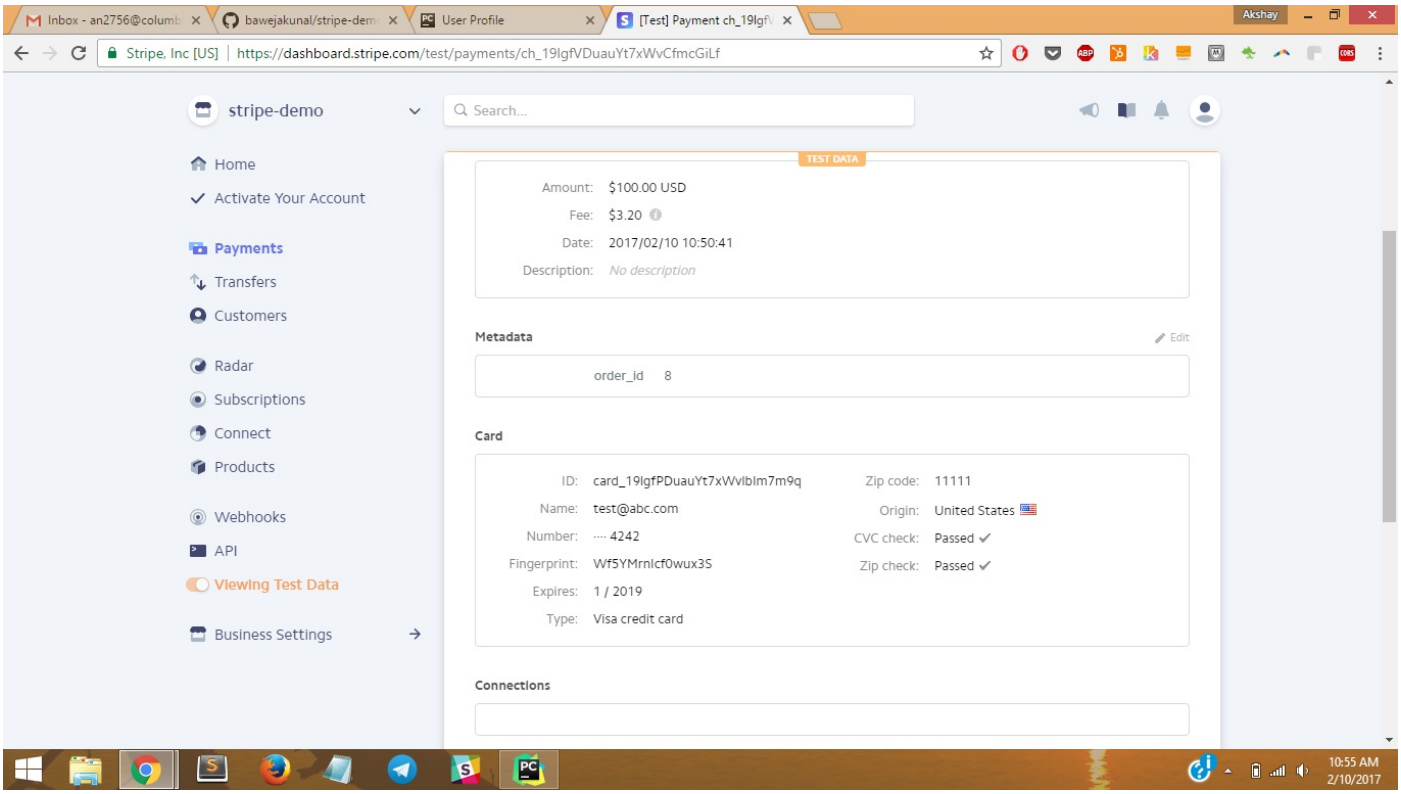
Sign Up




Frame Seller
Catalog
Profile
TEST MODE
Frame Seller
Buy Photo Frame
test@abc.com
4242 4242 4242 4242
MM / YY
CVC
ZIP Code
Remember me
Pay $100.00
Brookyln Bridge
Pay $ 50
Statue of Liberty
Pay $ 75
Powered by stripe


Frame Seller
Catalog
Profile
Logout
Brookyln Bridge
Pay $ 50
F1 Racing
Pay $ 100
Statue of Liberty
Pay $ 75
Your order has been submitted for processing





Further Improvements

1. Use AngularJS in future assignments
2. As suggested by Prof. Donald Ferguson, segregate the microservices further into Order, Payment and User services.

3. Add randomly generated `idempotency_key` in `stripe.Charge.create()` method call to implement Stripe Idempotent Requests for retrying payment requests that fail due to network errors.