

File - C:\msys64\home\Sean\soft_eng_examples\adapter_design\src\Main.java

```
1 import java.util.Vector;
2
3 public class Main {
4     public static void main(String[] args) {
5
6         Vector<PaymentGateway> payment_gateways = new Vector<>();
7
8         PaypalGateway paypal_gateway = new PaypalGateway();
9         paypal_gateway.SetEmail("test@test.com");
10        payment_gateways.add(paypal_gateway);
11
12        StripeGateway stripe_gateway = new StripeGateway();
13        stripe_gateway.SetCardName("Joe");
14        stripe_gateway.SetCardNumber("161843541354");
15        stripe_gateway.SetExpiration(3, 2028);
16        payment_gateways.add(stripe_gateway);
17
18        SquareGateway square_gateway = new SquareGateway();
19        square_gateway.SetLocationId(3);
20        PaymentAdapter payment_adapter = new PaymentAdapter(square_gateway);
21        payment_gateways.add(payment_adapter);
22
23        for (PaymentGateway pay : payment_gateways) {
24            String result = pay.PayAmount(1.0f);
25            System.out.println(result);
26        }
27
28    }
29 }
30
```

File - C:\msys64\home\Sean\soft_eng_examples\adapter_design\src\PaypalGateway.java

```
1 public class PaypalGateway implements PaymentGateway {
2     private String email;
3
4     public void SetEmail (String email) {
5         this.email = email;
6     }
7
8     @Override
9     public String PayAmount(float amount) {
10         String result;
11         if (email.contains("@") && email.contains(".com")) {
12             result = "Using Paypal to make payment of $" + amount;
13         }
14         else {
15             result = "PayPal needs valid email!";
16         }
17
18         return result;
19     }
20 }
21
```

File - C:\msys64\home\Sean\soft_eng_examples\adapter_design\src\SquareGateway.java

```
1 public class SquareGateway {
2     private int locationId;
3
4     void SetLocationId(int location_id) {
5         this.locationId = location_id;
6     }
7
8     public String PayLocation(float amount) {
9         String result;
10        if (locationId >= 0) {
11            if ((locationId % 2) == 0) {
12                result = "Using Square to make payment of $" + amount * 1.02f;
13            }
14            else {
15                result = "Using Square to make payment of $" + amount * 1.01f;
16            }
17        }
18        else {
19            result = "Square needs valid location id!";
20        }
21
22        return result;
23    }
24 }
25
```

File - C:\msys64\home\Sean\soft_eng_examples\adapter_design\src\StripeGateway.java

```
1 public class StripeGateway implements PaymentGateway {
2     private String name;
3     private String cardNumber;
4     CardExpiration expiration;
5
6     public void SetCardName (String name) {
7         this.name = name;
8     }
9
10    public void SetCardNumber (String card_number) {
11        cardNumber = card_number;
12    }
13
14    public void SetExpiration(int month, int year) {
15        expiration = new CardExpiration();
16        expiration.month = month;
17        expiration.year = year;
18    }
19
20    @Override
21    public String PayAmount(float amount) {
22        String result;
23        if (!name.isEmpty() && !cardNumber.isEmpty() && (expiration.year >= 2023) && (
24            expiration.month >= 1)) {
25            result = "Using Stripe to make payment of $" + amount;
26        }
27        else {
28            result = "Stripe needs valid card name, number and expiration date!";
29        }
30        return result;
31    }
32 }
33
```

File - C:\msys64\home\Sean\soft_eng_examples\adapter_design\src\CardExpiration.java

```
1 public class CardExpiration {  
2     public int month;  
3     public int year;  
4 }  
5
```

File - C:\msys64\home\Sean\soft_eng_examples\adapter_design\src\PaymentAdapter.java

```
1 public class PaymentAdapter implements PaymentGateway {
2     private final SquareGateway squareGateway;
3
4     PaymentAdapter(SquareGateway square_gateway) {
5         this.squareGateway = square_gateway;
6     }
7
8     @Override
9     public String PayAmount(float amount) {
10         return squareGateway.PayLocation(amount);
11     }
12 }
13
```

File - C:\msys64\home\Sean\soft_eng_examples\adapter_design\src\PaymentGateway.java

```
1 public interface PaymentGateway {  
2     String PayAmount(float amount);  
3 }  
4
```