

Customer Produc... w application

application pro application.yml y bootstrap.mill public Product DTO

getProductByld(Integer productId) throws EkartProductException {

application proid

application.pr...

Optional Product productop = productRepository. FindByld(productId) ; Product

product =productop.orElseThrow() -> new

EkartProductException("Productservic.PRODUCT\_NOT\_AVAILABLE") ) ;

ProductDTO, productDTD = new ProductDTO() ;

productoto.setBrand(product.getBrand() ) ;

productoto.setCategory(product.getCategory() ) ;

productoto.setDescription(product.getDescription() ) ;

productoto.setName(product.getName()); productDTO.setPrice(product.getPrice() ) ;

productDto.setProductId(product.getProductId() ) ;

productoto.setAvailableQuantity(product.getAvailableQuantity());

Package Explorer 33

B & CartMS (Nov21-SEZ-NOS-Java\_A\_Group:3\_Server

Customers [boot) (devtools] [Nav21-5E72-N Ekart-Gateway

(Nov21-SET2-NCS-Lave\_A\_Group >

Nov21-SETZ-NCS-Java\_A\_Group-8\_Server-side Payment MS

[Nov21-SETZ-NCS-Lava\_A\_Group

Product Ms [Nov21-SETZ-NCS-Jawa\_A\_Group=3 V src/main/java

v com.infy.ekart.product

ProductApplication.java v com.infy.ekart.product.api

> Customer ProductAPI.java > i com.inty ekart.product.dto >

com.infy.ekart.product.entity > com.infy.ekart.product.exception > com.infy

ekart.product\_repository v com.infy.ekart.product.service

> Customer Product Service.java > Customer ProductServiceImpl.java #

com.infy.ekart.product.utility

src/main/resources > JRE System Library Llava5E-11] > Maven Dependencies

target/generated-sources/annotations

return productDTO;

463

DVD

Boverride public void reduceAvailablequantity (Integer productId,  
Integer quantity) throws EkartProductException

```
Optional<Product> productop = productRepository.findById(productId) ; Product  
product =productop.orElseThrow() -> new Ekart ProductException("Product  
Service.PRODUCT_NOT_AVAILABLE"));  
product.setAvailableQuantity(product.getAvailableQuantity()-quantity);
```

Customer Product PIX

application properti

application properti..

Y application:ym

bootstrap.yml

application properti.

application properti..

// Get the specific product by calling getProductById) of

// Customer Product Service and return the same

GetHapping(value = "/product/productId) ) public

ResponseEntity<ProductDTO>

getProductById(PathVariable Integer productId) throws  
Ekart ProductException

ProductDTO product = customer

Productservice.getProduct@yld(productId) ; return new

ResponseEntity (product;HttpStatus.OK);

Package Explorer

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Customer VIS INov21-SETZ-NCS A Group Ekart-Gateway  
I Nev21-SET-NCS-WHY I\_A\_Group  
Nov21-SET2-NCS-Java\_A\_Group-8\_Server-side \*  
PaymentMS [Nov I-SETZ-NCS-  
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21SETZ-NCS-Lava\_A\_Group=8

src/mainjava y cominty.ekart.product

2. ProductApplication.java v continfy ekart.product.api.

> CustomerProductapljava > com.inty.ekart.product.dto  
cominty.ekart.product.entity com infy.ekart.product.exception  
cominty.ekart.product\_repository 5 . com.infy.ekart.product  
service

5 com.infy ekart-product utility > src/main/resources > JRE  
System Library ThavaS-111

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Producti

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educe the au

quantity of product by

Customer Productservice and retu futirapping(value =

"/update/[productId]") public ResponseEntitystring>

reduceAvailableQuantity(Pathvariable Integer productid,

Request Body Integer quantity) throws Ekart ProductException

```

{ customer Product
Service.reduceAvailableQuantity(productId, quantity) ; String
message =
environment.getProperty("ProductAPI.REDUCE_QUANTITY_
SUCCESSFULL") ; return new ResponseEntity (message,
HttpStatus.CREATED);

```

59

```
1 package com.infy.ekart.product.dto;
```

```
3import javax.validation.constraints. Min;
```

```
7 public class ProductDTO {
```

11

120 13

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```

    CartMS [Nov 21-SET2-NCS-Java_A_Group-8_Servet > CustomerMS
        [boot] [devtools] [Nov21-SETZ-NO Ekart-Gateway
            [Nov21-SET2-NCS-Java_A_Group: >
                Nov21-SETZ-NCS-Java_A_Group-8_Server-side > PaymentMS
                    [Nov21-SET2-NCS-Jave_A_Group ProductMS
                        [Nov21-SETZ-NCS-Java_A_Group-B

```

```
src/main/java V com.infy.ekart product
```

```
» ProductApplication.java #com.infy.ekart, product.api
```

```
» Is CustomerProductApl.java V com.infy.ekart.product.dto
```

```
> ProductDTO.java
```

```
    com.infy.ekart.product.entity # com.infy.ekart product.exception
```

```
com.infy.ekart.product.repository v com.infy.ekart.product.service
```

```
> 1 CustomerProductservice.java >> CustomerProductServiceImpl.java
```

```
com.infy.ekart product.utility > > src/main/resources 3. JRE System Library
```

```
[JavaSE-111
```

```
private Integer productId; @Pattern (regexp="[A-Za-ze-9\\.\s-]+",
```

```

message="{product.invalid.name}" ) private String name; @pattern
(regex="[A-Za-z]{10,}").message="{product.invalid.description}")
NotBlank (message="{product.invalid.description}") private String description;
private String category; @pattern(regex="[A-Za-z]{3,}").message="{product.
invalid.brand}")
NotBlank (message="{product.invalid.brand}") private String brand;
@Min(value=1, message="{product.invalid.price}") private Double price;
@Min(value=1, message="{product.invalid.quantity}") private Integer
availableQuantity;
160

```

```

16
196
20
212 22 23
24
250 26
public Integer getProductId() {
return productId;

```

Mandek

y application.yml

y bootstrap y

CustomerProduc... application.pr. application.pro 1 package  
com.infy.ekart.product.service;

> >

3+ import java.util.ArrayList;

15

> >

```

16 @Service (value = "customer ProductService"> 17 @Transactional 13
public class Customer Product Service Impl implements Customer Product Service {
19e Autowired 23 private ProductRepository productRepository;

```

v

Package Explorer X E

a Cart MS (Nov21-SET2-NCS-Java\_A\_Group-3\_Serve A > CustomerMS

[boot] [devtools] [Nov 21-SETZ-N Ekart-Gateway (Nov21-SET-NCS-Java\_A\_Group >  
Nov21-SET2-NCS-Java\_A\_Group-2\_Server-side

> PaymentMS [Nov21-SET2-NCS-Java\_A\_Group e ProductMS  
[Nov21-SETZ-NCS-Java\_A\_Group-8

src/main/java V com.infy.ekart.product

> ProductApplication.java V t com.infy.ekart.product.api

5 . CustomerProductApl.java > Ef com.infy.ekart.product.dto > .

com.infy.ekart.product.entity > com.infyekart.product.exception > #

com.infy.ekart.product.repository V com.infy.ekart.product.service

P CustomerProductService.java

B. CustomerProductServiceImpl.java 3. Hj com.infy.ekart.product.utility

> src/main/resources > JRE System Library JavaSE-11) »ml, Maven  
Dependencies

target/generated-sources/annotations

target/generated-test-sources/test-annotation 5 loas

7/This method will retrieve list of all the products from database @Override

public List<ProductDTO> getAllProducts() throws EkartProductException {

//retrieving list of product from repository Iterable<Product products =

productRepository.findAll(); List<ProductDTO> productDTOs = new ArrayList<>();

products.forEach(product ->{

ProductDTO productDTO = new ProductDTOO; productDTO.setBrand

(product.getBrando); productDTO.setCategory (product.getCategory 0);

productDTO.setDescription(product.getDescription());

productDTO.setName(product.getName());

A Problems Javadoc Declaration 5 Synchronize X Git (Products)

This view is not populated on startup. You can choose to populate Git  
(ProductMS) without contacting the server or to **Populate Synchronize**  
application propertit

y application.yml

bootstrap.yml

application.pro

>

I CustomerProductAPL.- 23 application propett

24 CrossOrigin 25 Rest Controller 26 RequestMapping(value = "/product-api")

27 Validated 20 public class Customer ProductAPI {

> > v

Autowired private Customer Productservice customer ProductService;

Package Explorer & E

B CartMS (Nov21-SETZ.Ncs-Java\_A\_Group-8 Server > CustomerMS

[Nov21-SETZ-NCS-Java\_A\_Group Ekart-Gateway [Nov

21-SET2-NCS-Java\_A\_Group

Nov21-SET2-NCS-Java\_A\_Group-8\_Server-side PaymentMS

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ProductMS (Nov21-SET2-NCS-JavaA\_Group-8 V srd/main/java

v com.infy.ekart.product

O ProductApplication.java vt com.infy.ekart.product.api

> CustomerProduct API.java

com.infy.ekart.product.dto > com.infy.ekart.product.entity > #

com.infy.ekart.product.exception

com.infy.ekart.product.repository > # com.infy.ekart product service > #

com.infy.ekart.product.utility

> src/main/resources > JRE System Library JavaSE-11]

33 34

Autowired private Environment environment;

Log logger = LoggerFactory.getLog(Customer ProductAPI.class);

38 39 400

Get all the product details by calling getAllProducts of

CustomerProductService and return the same GetMapping(value = "/products") public

ResponseEntity<List ProductTO>> getAllProducts() throws Ekart ProductException {

List ProductDTO) products = customer ProductService.getAllProducts(); return new

ResponseEntity (products, HttpStatus.OK)

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PaymentPljava X

E BE V21-SETZ-NCS-Java\_A Gro A [Nov21-SETZ-NOS-Java\_A\_ET2-NCS-Java:

A\_Group-8/ up-B\_Server-side [Nov21-5 Nov21-SER-NCS-Java\_A\_C

472 48

Autowired private PaymentCircuitBreakerService paymentcircuitoreaker Service;

-49

see 51

```
BAutowired private Environment environment;
```

536

```
Autowired private RestTemplate templates
```

```
api
```

```
private static final Log Logger = LoggerFactory.getLog(PaymentAPI.class);
```

57

```
ato entity exception
```

```
epository service
```

59€

```
PostMapping(value = "/customer/customerEmailId:+)/cards) public
```

```
ResponseEntity<String> addNewCard(RequestBody CardDTO cardDTO,
```

```
@Pattem(regex = "[a-zA-Z0-9._]+ [a-zA-Z]{2, }N-[a-zA-Z][a-zA-Z.]+",
```

```
message = "{invalid.email.format}") @PathVariable("customer
```

```
throws EkartPaymentException, NoSuchAlgorithmException { Logger.info{ "Recieved  
request to add new card for customer : " + cardDTD.getCustomerEmailId() );
```

```
utility
```

## nnotations

### es test-annotations

```
int cardid; Cardid = paymentservice.addCustomercard(customerEmailId,  
cardDTO); String message =
```

```
environment.getProperty("PaymentAPI.NEW_CARD_ADDED_SUCCESS"
```

```
) ; String toReturn = message + cardId; toReturn = toReturn.trim(); return new
```

```
ResponseEntityo(toketurn, HttpStatus.OK);
```

74

```
@PutMapping(value = "/updates card") public
```

```
ResponseEntity<String> updateCustomerCard(valid RequestBody Cardoto  
cardoro)
```

```
thenus FVartamentfvrrantian Nurhalenrith=Fvrentinn 1
```

## PaymentAPL.java X

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2-NCS-lava\_A\_Group-8\_--8\_Server-side (Nov 21-5 v21-SETZ-NCS-Java\_\_6  
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```
@PutMapping(value = "/update/card") public ResponseEntity<String>
updateCustomerCard (@valid RequestBody CardDTD cardDTO)
throws EkartPaymentException, NoSuchAlgorithmException {
    Logger.info("Recieved request to update card : " + card to-getCardid() + " of
customer :
+ cardDTO.getCustomerEmailid() ;

paymentservice.updateCustomerCard(cardDTO); String modificationSuccessHg =
environment.getProperty("PaymentAPI.UPDATE_CARD_SUCCESS"); return new
ResponseEntity<> (modificationSuccess Msg, HttpStatus.OK) ;
```

### eption ository

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vice

```
BDeleteMapping(value = "/customer/customerEmailid: -+}/card/{cardID}/delete")
public ResponseEntity<String> deleteCustomerCard(@PathVariable("cardID") Integer
cardID,
Pattern (regexp = "fa-IA-Z0-9._]+[a-IA-Z][2,\\.[-ZA-Z][a-zA-Z.]+ "message -
"{invalid.email.format}")
throws EkartPaymentException { Logger.info("Recieved request to delete card
:" + cardID +" of customer : " + customerEmailid);
Pathvariable("customer Ema
```

```
paymentservice.deleteCustomerCard(customersailid, cardID) : String
modificationSuccess Msg -
environment.getProperty("PaymentAPI.CUSTOMER_CARD_DELETED_S
UCCESS"); return new ResponseEntityo(modificationSuccessMsg, HttpStatus.OK);
stations
```

### test-annotations

```
GetMapping(value = "/customer/customer Emailid}/card-type/{cardType}") public
ResponseEntity<List<Cardoto>> getCardsofcustomer (Pathvariable String
customerEmailid,
gPathVariable String cardType) throws EkartPaymentException {
```

```
Logger.info("Recieved request to fetch cards of customer : " + customerEmailid
+ having card type as:
+ cardType);
```

101 102

```
Il *PaymentAPI.java X
```

123

```
Logger.info("Recieved request to fetch cards of customer : " +
customerEmailid + - having card type as: # 182
```

```
+ cardType); 103 184
```

```
List<CardDTO> CardTos =
```

```
paymentService-getCustomerCardofCardType( customer Emailid,
cardType); 185
```

```
return new ResponseEntity (cardTos, HttpStatus.OK); 186 127 188
```

```
circuitBreaker (name="payment Service",
```

```
fallbackMethod="payFororderFallback") 109 PathMapping(value =
```

```
"/customer/{customerEmailid}/pay-order") 110
```

```
VT Annotate this method for handling resilience
```

```
Get the order details from Customers for the given orderId (available in
```

```
TransactionD10) 77 Update the Transaction details with the obtained Order
```

```
details in above step: along with transaction date and total price
```

```
// Authenticate the transaction details for the given customer by
```

```
calling authenticatePayment() method of paymentservice w/ Add the
```

```
transaction details to the database by calling addTransaction() method of
```

```
PaymentService // Update the order status by calling
```

```
updateOrderafterPayment() method of paymentCircuitBreakerservice // Set
```

```
the appropriate success or failure message and return the HE public
```

```
ResponseEntity<String> payFororder
```

```
@Pattern(regex =
```

```
"[a-zA-Z0-9._]+[a-zA-Z]{2,}\\-[a-zA-Z][a-zA-Z.]+", message = "
```

```
[invalid.email.format]") Pathvariable("customerEmailid") String
```

```
customerEmailid, valid requestBody Transaction to transactionDTO)
```

```
throws NoSuchElementException, EkartPaymentException,
```

```
PayorderFallbackException ResponseEntity<OrderDTO>
```

```

orderDetails=template.getForEntity("http://customers/Ekart/customerorder-api/order"transactionDTO.getOrder().getOrderId(),OrderDTO.class);
transactionDTO.setTransactionDate(orderDetails.getBody().getDateoforder());
transactionDTO.setTotalPrice (order Details.getBody().getTotalPrice() : paymentService
authenticatePayment[customer Emailid, transaction TO) paymentService.
addTransaction(transactionDTO); paymentCircuitBreaker
Service.updateOrderafterPayment(transactionDTO.getOrder().getOrderId(
), transaction to get TransactionStatus().toString()); String
message=environment.getProperty("PaymentAPI.
TRANSACTION_SUCCESSFULL_ONE")+transactionDto.getTotalPrice()
+
Environment.getProperty("PaymentAPI.TRANSACTIONS_SUCCESSFULL
_ONE") +
transactionDto.getOrder().getOrderId()+environment.getProperty("Payment
API. TRANSACTION_SUCCESSFULL_THREE® )+transaction to
getTransactionId() ; 138
//write your logic here
129
MH
Transaction

```

## Problems

### Javados m. Declaration Et Synchronize 3

```

125
| 126
paymentservice.addTransaction(transaction To): paymentCircuitBreaker
Service.updateOrderAfterPayment(transactionDTO.getOrder().getOrderId
()), transactionDTO.getTransactionStatus().toString() ; String
message=environment.getProperty("PaymentAPI. TRANSACTION
SUCCESSFULL_ONE )+transaction to.getTotalPrice() +
benvironment.getProperty("PaymentAPI. TRANSACTION_SUCCESSFULL_ONE)+
transactionDto.getOrder().getOrderId()+environment.getProperty("Payme

```

ntAPI.

TRANSACTION\_SUCCESSFULL\_THREE")+transactionDTO.getTransaction write your logic here

return new ResponseEntity<>(message, HttpStatus.OK);

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// Implement a fallback method here //If exception message is Payment.

TRANSACTION\_FAILED\_CW\_NOT\_MATCHING then set message as

Payment. TRANSACTION\_FAILED\_CV\_NOT\_MATCHING 77Else set the

message as PaymentAPI. PAYMENT FAILURE FALLBACK //Return the above message

as response public ResponseEntity<String> payForörderFallback(String

customer Emailid, TransactionDTO transactionDTO,

RuntimeException exception) { String msg= "";

if(exception.getMessage().equals("Payment.

TRANSACTION\_FAILED\_CW\_NOT\_MATCHING"))

msg="Payment. TRANSACTION\_FAILED\_CV\_NOT\_MATCHING" ; else

msg="PaymentAPI.PAYMENT\_FAILURE\_FALLBACK";

142 153 144 145 146 247 148 149 150 151 152 153 ) 154

return new ResponseEntity (mg, HttpStatus. BAD\_REQUEST);

//write your logic here

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application

HeMS [boot (devtools) Nov 1-SET2-NCS-Jawa\_A

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Customers...

```
package com.infy.ekart.customer service; 3@import java.util.List: 17 18
```

```
gbservice(value=customer Service) 19 Transactional 20 public class
```

```
Customerservice Impi implements Customerservice
```

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Autowired
```

```
private Customer Repository CustomerRepository: 236
```

```
Gatowired 20 private Order Repository orderRepos
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```
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```

```
m.inty ukat customer om.intyekart.customer api
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infy.ekart.customer.ee winty ekart.customer.entity
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inly.ekart.customer exception
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att customer repository inty ekart.customer service
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stomer Servietjiva Eustomer ServiceImpl.java
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Customer ServiceImpl! OrderService.java
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rderServiceImpl.java
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inly.ckart.customer utility T esource
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```
| This method will buthenticate customer canil id and passWord and  
return customer details
```

```
Boverride publicistomerDTO NuthenticateCustomer satirinig alle string password)
```

```
throus EartcustomerException
```

```
CustomDTO customeEDTO = null;
```

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tetrieving customer data from repository Optional customer optionalaustome

customerRepository.findeydt til toleranse()); Customer customer = optional customholst

hrow() -> neu Ekortcustomereception us to Va comparing entered and with pbstond

stored in a if (password.equals(customer.getPassword()) )

throw new Ekartuustomer Exceptioni" customers

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Dependencies: generated-sources anotations

generated-test-sources/test-arinoitations

customer = new customer-DTOO: customer to setEmail Id custo get silid) )

customer to settlamer customer.get() customer to setPhoneNumber

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customer-getPhoneNumber customers toetAddress customer getAddress) return custot  
010:
```

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end
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## Package Explorer X

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CustomerMS [boot] (devtools) [Nov21-SETZ-NCS-Java_A_  
Ekart-Gateway [boot] [Nov21-SET2-NCS-Java_A_Group-8_C >  
Nov21-SET2-NCS-Java_A_Group-8_Server-side [Nov21-5  
> PaymentMS[boot] [devtools] [Nov21-SETZ-NCS-Java_A > > src/main/java  
4 src/main/resources
```

```
application.properties application.yml
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bootstrap.yml E log4j2.properties
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messages.properties
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Validation Messages.properties > BAJRE System Library [JavaSE-11] > Maven  
Dependencies
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application.yml X J PaymentPljava E messages properties Customer Carta 1  
resilience4j:
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    circuitbreaker instances:
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PaymentService:
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```
failure-rate-threshold: 50 ring-buffer-size-in-closed-state: 5  
ring-buffer-size-in-half-open-state: 3 wait-duration-in-open-state! 6ás  
automatic-transition-from-open-to-half-open-enabled: true
```

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## Suite 4 RELEASE - Customer Sermain edor Navigate Search Project

Run Window

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Customerjava

[ Order.java

Gustomerserv 19

bootsrapyaml

Customer

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1156 4117

2/this method will update the address Boverrida public void

updateShippingaddress(String customerid, string address) throws Entusiterception

retrieving address details from repository. Optional customers optionalCustomer =

customerRepository.alindayid(custodto ) Customer customer - optional customer orElse

Throw(O -> na kartcustomer Exception("

C e rvite.CUSTOHENH\_10 customer.setAddress(address)

119

- 121

123 123 124 1255 126 127

this thed 11 remove address for particular customer details override public void

deleteShippingAddress(String customersilld) throws ElartourterException :

//retrieving customer details to repository Optional customers optat

```
customer = customerRepository.findById(customerEmail.toLowerCase())
customer = Optional.ofNullable(customer).orElseThrow() - med kortcustomerException
custo Customer.setAddress(null);
```

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EMS [bout] (devtools) (Nay21-5E72-NES-Lava A Π.aan/μαυρα in

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Customer Servicempli JiderService.java BideServicempl.java niny.skart.customer  
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[JavaSE=111 Dependencies generated-sources annotations

generated-test-sources/test-annotations

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119 132 131 1.22 138

herride public Customer to get customer By Email Id (String silid) throws

Ekatastometraception

Customer to customerDTO - null

retrieving customer data from repository Optional customers optional customer  
customerRepository.findById(customerEmail.toLowerCase()); Customer customer optionalCustomer or  
else Throw () - Entoutumeption territoris

T Wearing entered passwordth patuordnud in 1

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customer CustomerDTODE customeTO-setEnailIdi customer sid(J) customer to  
sethare(custo egetal) customer to setphoneNumber (Cicoter zatPhonenumber))  
customer.setAddress(customer.getAddress()) return customer DTD

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Stuttgart



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workspace-spring-Fool-suite 4-4.6.0.RELEASE - Customers/srcmain/ File Edit

Source Refactor Navigate Search Project Run Window

h Help

MYSN2752JAA-079

Customer.java Customerserv... y bootstrapy

orderRepository.save(order);

76

CustomerMS/...

2 application...

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OrderService

a

return order-getOrderId()

Bio

Override public OrderDTO EetOrder Details (Integer orderId) throws

EartCustomerException [

Optional order> optionalOrder orderRepository. FindBydiorderId) Order order =

optionalOrderar Else Throwo -> now EkartcustomerException

(Morderservice.ORDER\_NOTLIFOUND" });

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Project Explorer 23

E T e Nov21-SET-NCS-Java A Group-24\_Server-side (Nov 21-SET. >

CartMS

Customer MS [boot] [devtools] [Nov21-SET2-NCS-Java A

> std/main/java > > com.infy.ekart.customer

```
? com.infy.ekart.customerapi > # com.infy.ekart.customer.dto > H
com.infy.ekart.customer.entity
com.infy.ekart.customer.exception > com.infy.ekart.customer.repository
com.infy.ekart.customer.service > EI Customer Service.java
Customer ServiceImpl.java
CustomerServiceImpl - P! Order Servicejava
    > Order ServiceImpl.java i com.infy.ekart.customer.utility
sc/main/resources
application.properties bootstrap.yml
    log2.properties E messages.properties
Validation Messages.properties > JRE System Library [JavaSE-11]
Maven Dependencies target/generated-sources/annotations
atget/generated-test-sources/test-annotations 5 logs
sto > target
```

```
mynew E ΠΙΥΠΙΥ εmd
Ürderb.To orderDTO - new Order TOO . orderDTO, setorderId (orderId) ; order to
setCustomer Email IdCorder-getCustomerEmailId() ) ;
orderDTO.setDateofDelivery(order.getDateofDelivery) ;
orderTo.setDatefororder(order.getDateoforder) ) ; order DTO.setPayment Through
order.getPayment Through().toString() ; order to.setTotalPrice order.getTotalPrice) ;
order to setorderStatus(order.getOrderStatus().toString() ) ;
orderDTO.setDiscount(örder.getDiscount() ; ListcorderedProductDtos
arderedProductotos = new ArrayList<OrderedProductDTO>(); for(ÖrderedProduct
ordered Product : order.getOrderedProducts)
Ordered Product To orderedProductOTO = new OrderedProductDTOO; ProductTo
productDTO= new ProductDTOO): productDTO.set ProductId(ordered
Product.getProductld() ; orderedProductTo
setorderedProductld(arderedProduct-getörderedProductld());
orderedProductTo.setquantity orderedProduct.getQuantity());
orderedProductDto.setProduct productDTO); ordered Product Tos-addiordered
ProductToTO) :
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order to setördered Products(orderedProductToTOS) netur orderOTB;
```

```
dovecrude public void updateOrderStatus ( Integer ordered, OrderStatus
orderStatus) throws EcartCustomerException
Optional orderOptionalOrder = order Repository.findById(orderId); Order
order = optionalGeder.orElseThrow (3) -> new
EcartCustomerException (harder Service ORDER_NOT_FOUND)
order.setOrderStatus (orderStatus);
```

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Customer cust=new customers List customers optional=customer Repository. Findilytime
(custo OTO-teName()); List Customer listen tonerepositon findyPhoneNumber(customer to
getPhoneNumber()); boolean ic Phanervailable=custoaer Repository findiya (customer to-gette (
). EsEmpty(); boltan a mevaliable customerRepository. FindüyPhanelimber customer to
getPhone Number()) Ichapty); if I is PhoneAvailable) {
```

```
if(isName Available)
```

```
custostame cu f rDTO.getName(): cust.se Phone Number customer
.getPhoneNumber())
```

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ard. String Listorder list orderRepo. Finday customersild customer tallid) Optional
customers passwordfrom customer Repository findeyPasswordcurrentPassword):
Customer cust-net Customer): Ifclpasswordfroabb.equals(current Password) )
throu nes EcartCustoxiception CustomererviceWALTD_NEL PA550)
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(currred ord.equals(ie Dassword]
throw new EkartCustomer option customer
Service-OLD_14550D_MET_PASSIORD, SADET)
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cust.setPassword [nessord)
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String dress) the  
customer centist

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com.infy.ekart.customer service;  
CustomeM5  
2 application  
OrderService 3  
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```
30 import java.time. LocalDateTime; 22 Service' value="orderService) 23
Transactional 24 public class OrderserviceImp] implements Order Service /
```

256 Autowired

```
private OrderRepository arderRepository;
```

28 29

30 A 31

```
Autowired private Customer Service customerservice: @Override public Integer  
placeOrder(Order to orderDTO) throws ExartCustomerException [  
Customer to customerDTO Ecustomer Service.getCustorbyEmailld order to  
getCustomerEmailld); if (customerDTO. RetAddress().isBlank:0) ll  
customerDTO.EetAddress null)
```

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> CartMS vid CustomerMS [boot) [detaals] [Nov27-SETZ-NCS-Java A  
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15 application properties

bootstrap.yml log4j2.properties

messages.properties

16 Validation Messages.properties > JRE System Library [JavaSE-11] >

Miaven Dependencies > target/generated sources/annotations

target/generated-test-sources/test-annotations logs

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throw new EkartCustomer

Exception(-Orderservice.ADDRESS\_NOT\_AVAILAULE");

Order anderen Ürder();

order.setDeliveryAddress(customerDTO-Betaddress()); order.setCustomer

```
EmailId(orderDTO.getCustomerEmailId()); order.setDateofDelivery
(onderbro.getDateofdelivery 0) order.setDateüfürder(Localbatetime.now());
order.setPaymentThrough(PaymentThrough.volveOfConderbro.getPayment
through (0) i Florder.getPayment Through () .equals(Payment
Through.CREDIT CARD))
```

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order.setDiscount(10.00):
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lse { order.setDiscount(5.280) ;
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```
onder.setOrderStatus(Order Status. PLACED); Double price:@D;
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```
ListcorderedProduct> orderedProducts = new
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ArrayListcöorderedProduct>();
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Customerjava

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OrderServic...



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53 54
order.setOrderStatus (OrderStatus-PLACED); Double price= 0.0 List<OrderedProduct>
orderedProducts = new ArrayList<OrderedProduct>();
56
57 58 59
for(OrderedProductDTO orderedProductDTO: order Dro.getOrdered Products()) {
if (orderedProductDTO.getProduct().getAvailableQuantity() <
orderedProductDTO.getQuantity())
OUT
throw new EkartCustomerException("OrderService.
INSUFFICIENT_STOCK);
```

```
65 66
OrderedProduct orderedProduct = new OrderedProduct();
orderedProduct.setProductId(orderedProductDTO.getProduct().getProductId()); orderedProduct
setQuantity(orderedProductDTO.getQuantity()); orderedProducts.add (orderedProduct); price
= price + orderedProductDTO.getQuantity() * orderedProduct.getPrice();
Product(-getPrice:
```

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src/main/resources

application.properties bootstrap.yml log4j2.properties messages.properties

Validation Messages.properties JRE System Library (Java5E-11] al Maven

Dependencies

target/generated-sources/annotations

target/generated-test-sources/test-annotations logs

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```
order.setOrderedProducts (orderedProducts);
```

```
order.setTotalPrice(price - ( 189 - order.getDiscount(*) ) / 100);
```

```
orderRepository save(order) return order.getId() ;
```

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```
Override public OrderDTO getOrderDetails (Integer orderId) throws  
EkarCustomerException {
```

```
Optional orders optionalOrder = orderRepository.findById(orderId) ; Order
```

```
order = optionalOrder.orElseThrow = new EkarCustomerException
```

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(OnDecentice.ORDER_NOT_FOUND"
```

```
OrderDTO order DTO = new Order DTOO order to setorderId(orderId) ; order to
```

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setCustomer EmailId(order.getCustomer EmailId() 95 order
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to.setDateofDelivery(order.getDateofDelivery (1)
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36 eststapping(value = "/customercart-api")

7 . dated 38 E class CustomenCartAPI { 4e Autowired **41 Hivate**

**CustoerCartservice** customer Cartservice; 439 Autowired **44 rivate**

**Environment environment;**

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460 stored 47 LoadBalanced 48 rivate RestTemplate template 49 **se og logger**

**LogFactory.getLog(CustomerCartAPI.class);** 522 Postopping[value = "/products

58 ublic ResponseEntity<String> addProductToCartolid grequestBody Customer

CartOTO customercarta)

**throws ExartCustoperCartException**

Rogger.info("Received a request to add products for customer

CartDTO.getCustomersailld()); 56 Integer cartId = customerčartservice.addProduct

Tocart(customer CartDTÖ) ;

**String message='environment.getProperty Customer**

**CartAPI.PRDOUCT\_ADDED\_TO\_CART":**

return nes ResponseEntity (message ++ + cartid, HttpStatus.CREATED); 59

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**Bt/e GetMapping(value = customer {customer Emailid/products, 62 ublic**

ResponseEntitydetCart ProductDTO>> getProducts from

**Pattern [regexp 2-TA-Z0-9.3-[a-zA-Z](2,.. [a-zA-Z][a-zA-Z.]+", message =**

**"(invalid. customeremail format throws EkartcustomererrtException**

athvariable("customer Emailid) String customer Email

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D CustomerCartAPL.java 3

**String message - environment.getProperty** Customer  
 CartAPT.PRODUCT\_DELETED\_FROM\_CART\_SUCCESS"); 96  
 return new ResponseEntity<String>(message, HttpStatus.OK); 97 98

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m.infy:

100 / update the quantity of product details available in the cart of customer by iel  
 / calling modifyQuantityofProduct Incart() method of CustomercartService 182 / Set  
 the appropriate success or failure message and return the same 1a3e

Pathmapping(value = "/customer/customer EmailId}/product/productId) ) 184 **ublic**  
**ResponseEntity<String> modifyQuantityof ProductInCart** ies

pattern (regexp = [a-zA-Z0-9.\_]+[a-zA-Z][2] . [a-zA-Z][a-zA-Z.] ,  
 message = \*(invalid customeremail. format)

NotNull(message = " (invalid email format) Pathvariable('productId) Integer  
 productid, 187

**RequestBody Integer quantity) throws EkartCustomer artException { 108**

169 119 customer Cartservice. sadi fyQuantityof Product

InCart(customerEmnilig, productId, quantity); 111

String message - environment.getProperty["Customer CartAPI-PRODUCT  
 QUANTITY\_UPDATE FROM CART SUECESS"); 112 return ne ResponseEntity String)  
 (message, HttpStatus.):

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ResponseEntity String> deleteAllProducts FromCart 118
Pattern (regexp = "[a-zA-Z0-9._]+[a-zA-Z]{2,}\\.[-][ -ZA-Z.] message =
(invalid.customeremail tomat) 119
throws EcartCustomer CartException {
logger.info(Received a request to clear the cart of " + customerid); 121 127
customerCart Service.deleteAll ProductsFromCart(customer Email Id) ;
String message environment.getProperty("Customer CartAPI
ALL_PRODUCTS_DELETED");
return new ResponseEntity<>(message, HttpStatus ok) : 125
1:26 123 128

```

```

Customer Cart Pljava 3 65 logger.info("Received a request to
get products details from the cart of " + customerEmailid):
Set Cart ProductDTO cantProductDTOS =
customerCartService.getProductsFromCart(customer Email Id); for (Cart
Productto cart ProductOTO: Cart ProductOTO) {
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Linky:
ProductOTO productOTO = template-getForEntity
"http://products/Ecart/product-api/products +
cantProductDTO.getProduct().getProductId(,
ProductDTO.class) getaody(); 11 We are alling the product API using hard-coded
URIE 17 Replace this call with the appropriate is name
Product API is upscaled (available in 2 numbers)Hence, we load balanced It telate
to make call to the Product API cortproductoto.setProduct&productora);
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return new Responsentityo (cart Productotos, RetaStatus.OK);
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B5 / Delete the product details from the cart of customer by calling 86  
 deleteProductFromCart method of Customer CartService B7 I Set the appropriate success  
 or failure message and return the same 85 Delete tapping value =  
 "Touser/[customers!110/product/productId}) 89 public ResponseEntity Stringa  
 deleteProduct FromCart  
 Pattern regexp = I-ZA-Ze-9.-12-2A-2][2.]-[a-zA-Z][a-zA-Z.] message =  
 "invalid.customeremail. fort)) Pathvariable("customersatild") String customersid,  
 ProductBressage = (invalidi .Fon ) PathVariable{"productId") Integer productId) **throws**  
**Ekertaustomer** CartException customer Court Service  
 deleteProductFromCart(eustomerid, productId); String messac  
 environment.getProperty Customer artAPI.PRODUCT  
 DELETED\_FROM\_CART\_SUCCESS"); return new ResponseEntity String (essage,  
 HttpStatus.)  
 91  
 theo