

State based modeling

Step 1: Identifying and categorize all nouns

Behavioural model

The behavioural model indicates how software will respond to external events.

To create a model, we should perform the following steps.

1. Evaluate all use cases to fully understand the sequence of interaction within the system

2. Identify events that drive the interaction sequence and understand how these events relate to specific objects

3. create a sequence for each use case

4. Build a state diagram for the system

potential class

① Book

② customer

③ Employee

✓ ④ cart

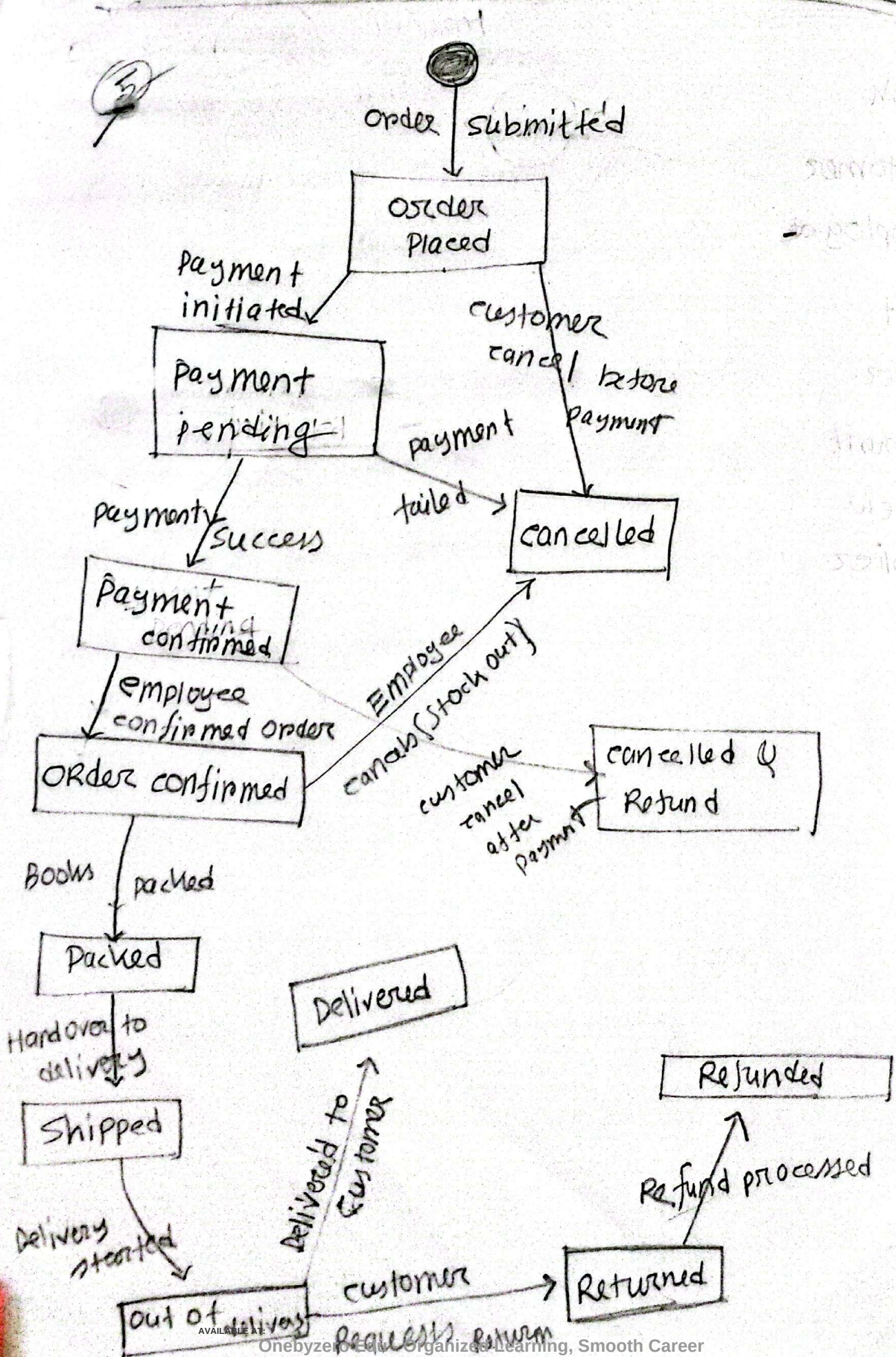
✓ ⑤ order

✓ ⑥ payment

optional ⑦ Review

a ⑧ supplier

State Transition Diagram (Order 10101)



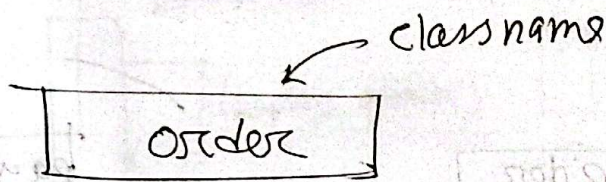
Sequence diagram

Definition: Sequence diagram describe interaction among classes in terms of an exchange of messages over time.

• It indicates how events cause transitions ~~ex~~ from object to object.

Notations

① Life lines:



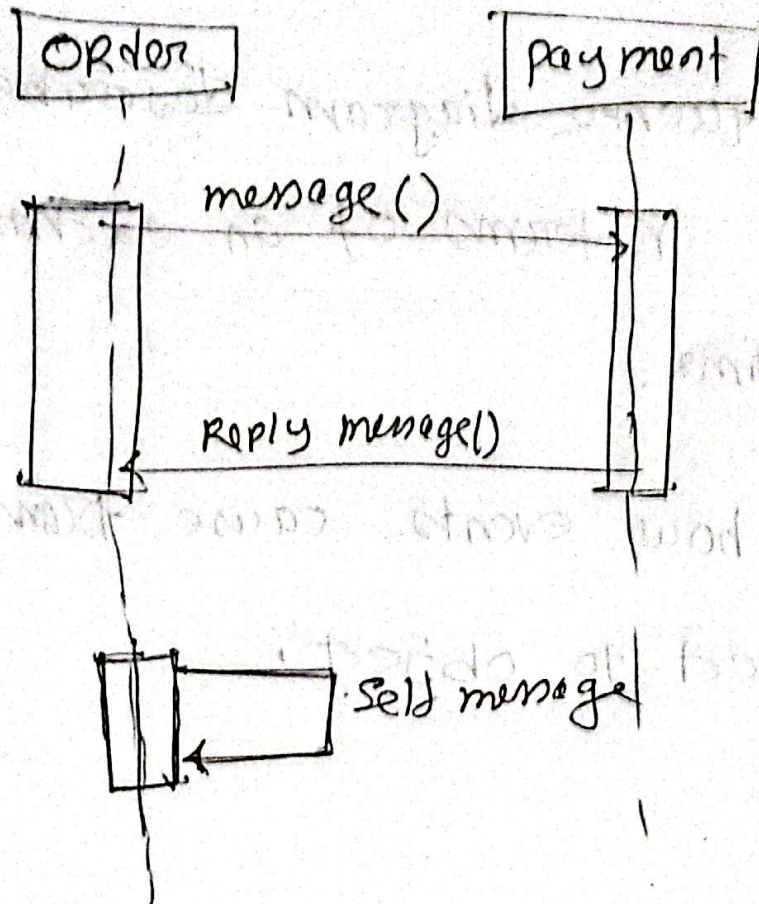
② Activation

③ Activation - or execution

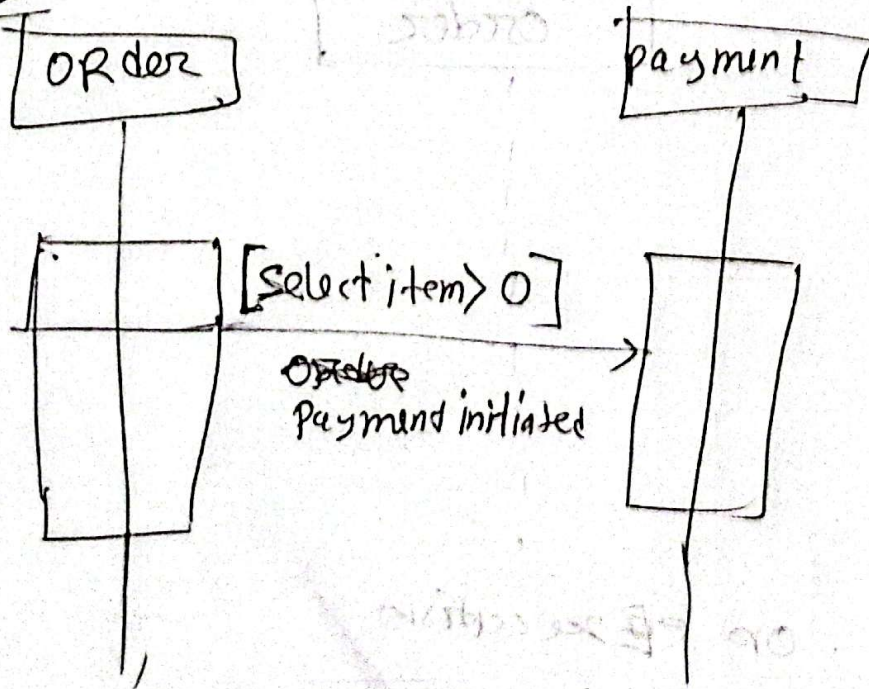


3

messages

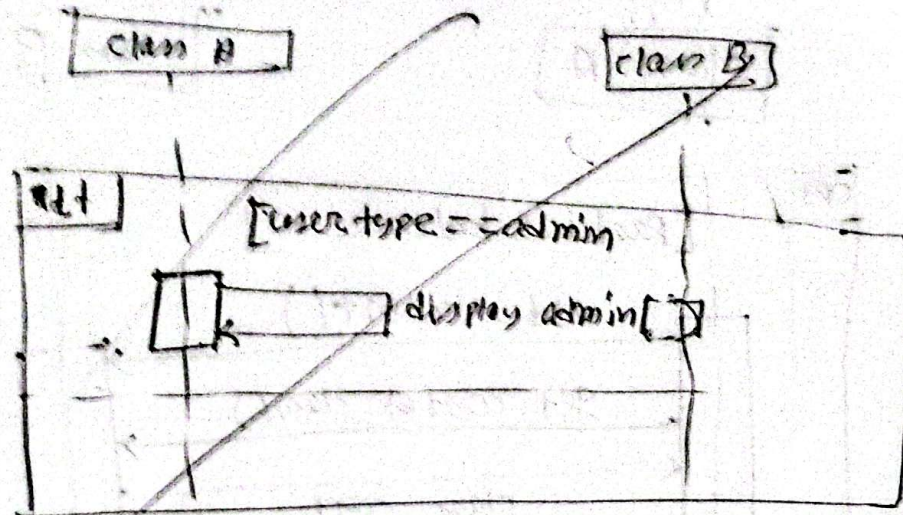


4) Guards



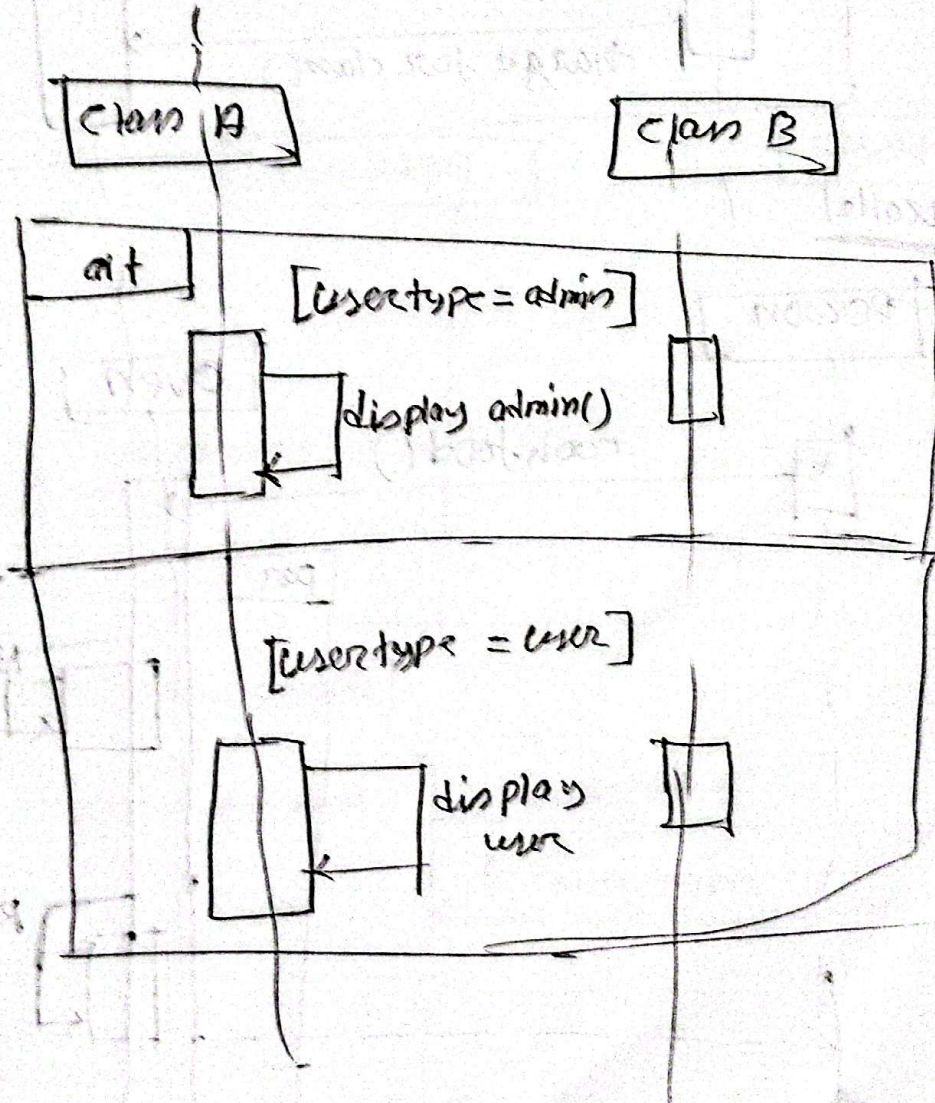
③ Alternative

else



if/else

dotted line

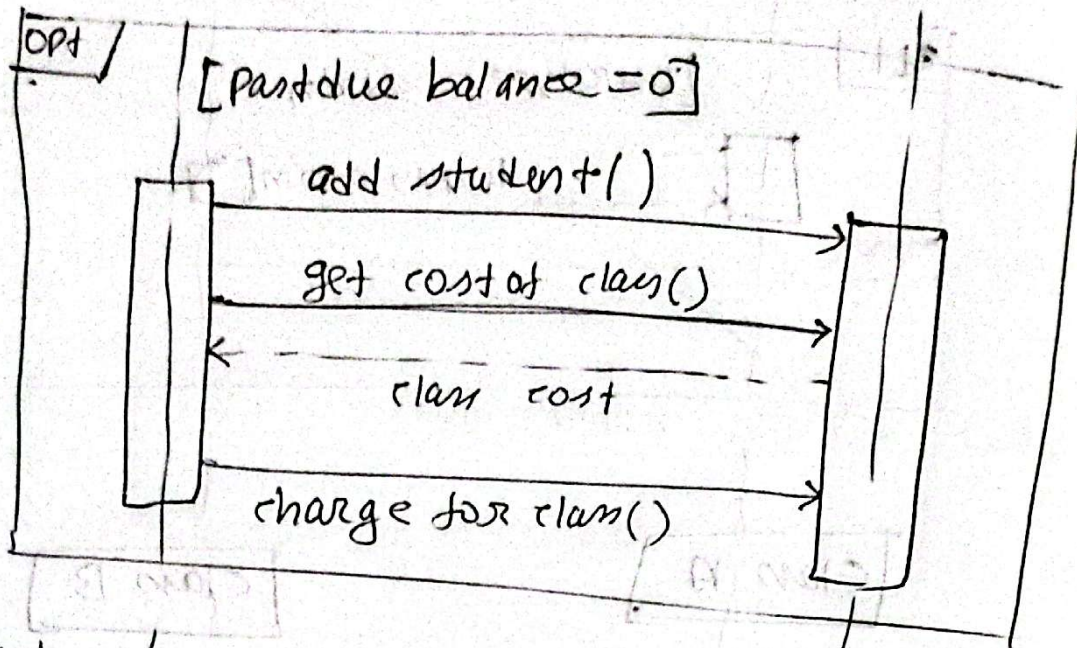


⑥ If-then

Reg
class A

Drama

class B



⑦ parallel

Person

Oven



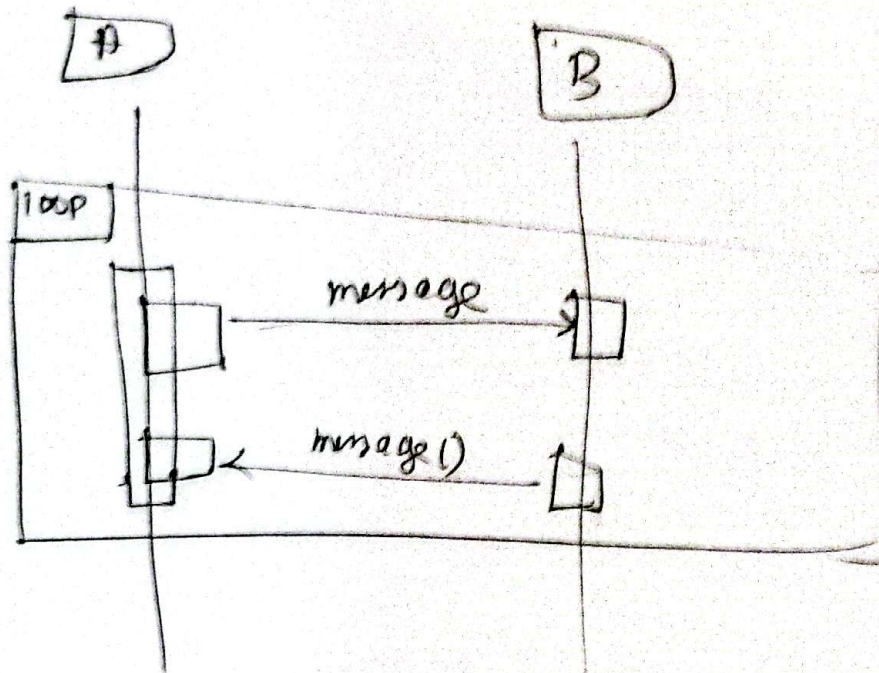
cook food()

par

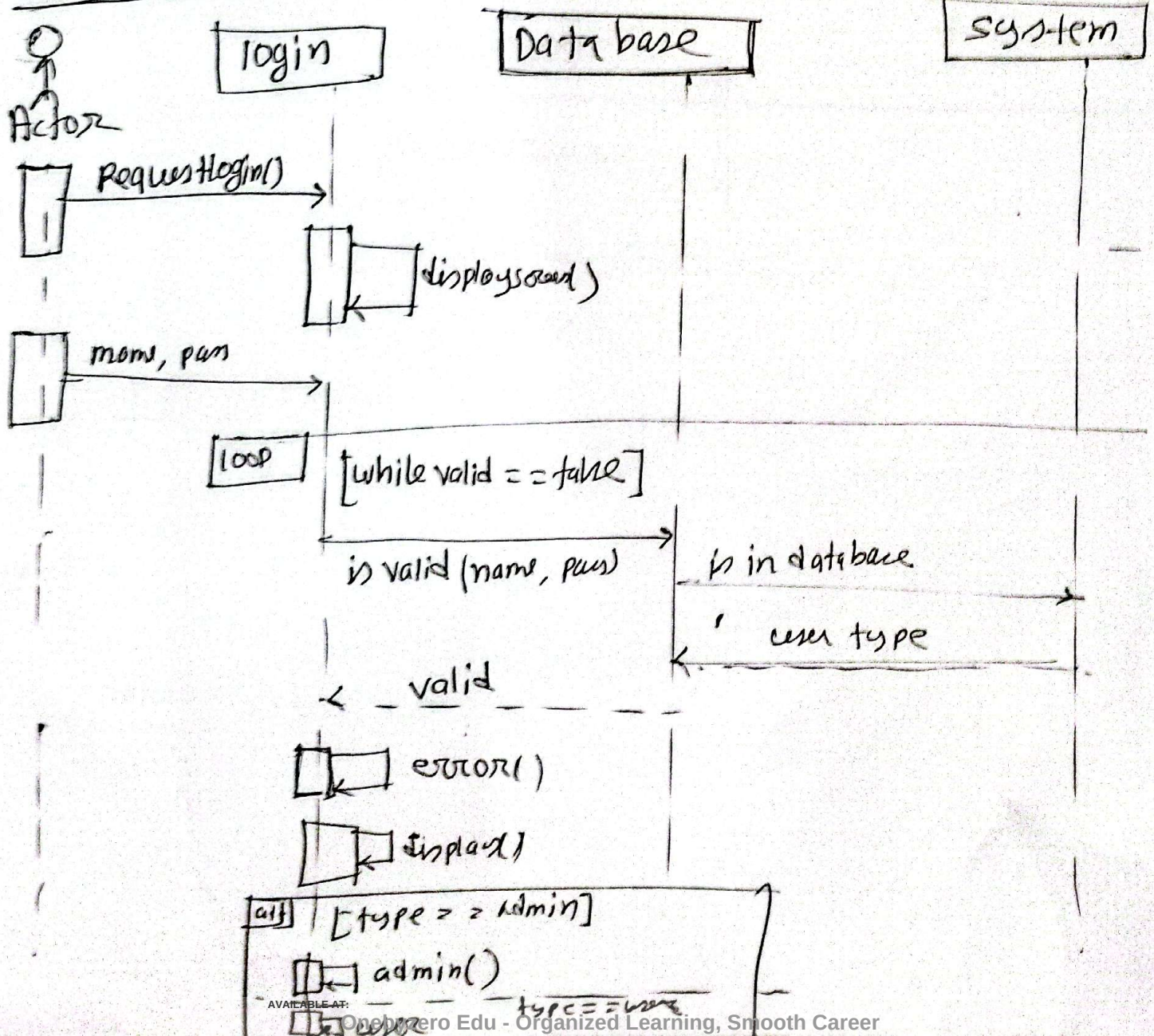
Heat food

Rotate food

⑨ loop



log in scene



customer

system

payment

Employee

loop

SearchBook(criteria)

← DisplayBookList()

viewBookDetails(ID)

← ShowDetails()

addToCart(ID, qty)

← confirmAdded()

placeOrder()

← requestPayment()

submitPayment()

verifyPayment()

alt

PaymentSuccessful

PaymentSuccessful()

createOrder()

updateStock()

sendOrderConfirmation

notifyHowOrder(ID)

viewPendingOrder()

showOrderList()

confirmOrder()

updateStatus(confirmed)

sendNotifi(confi)

packOrder(ID)

U.S. (Packed)

← notifi (packed)

Payment failed

Payment Failed (Reason)

← Display error
message

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