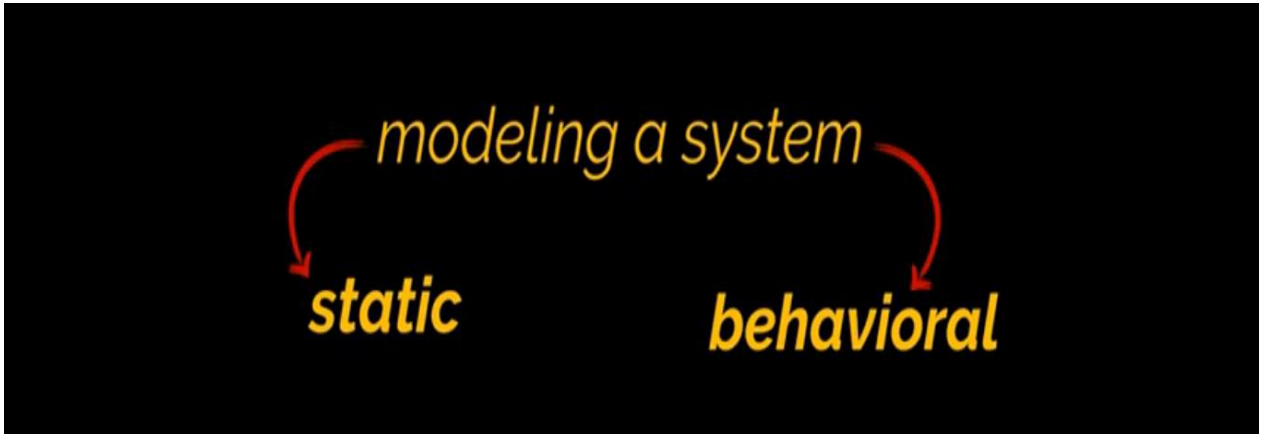
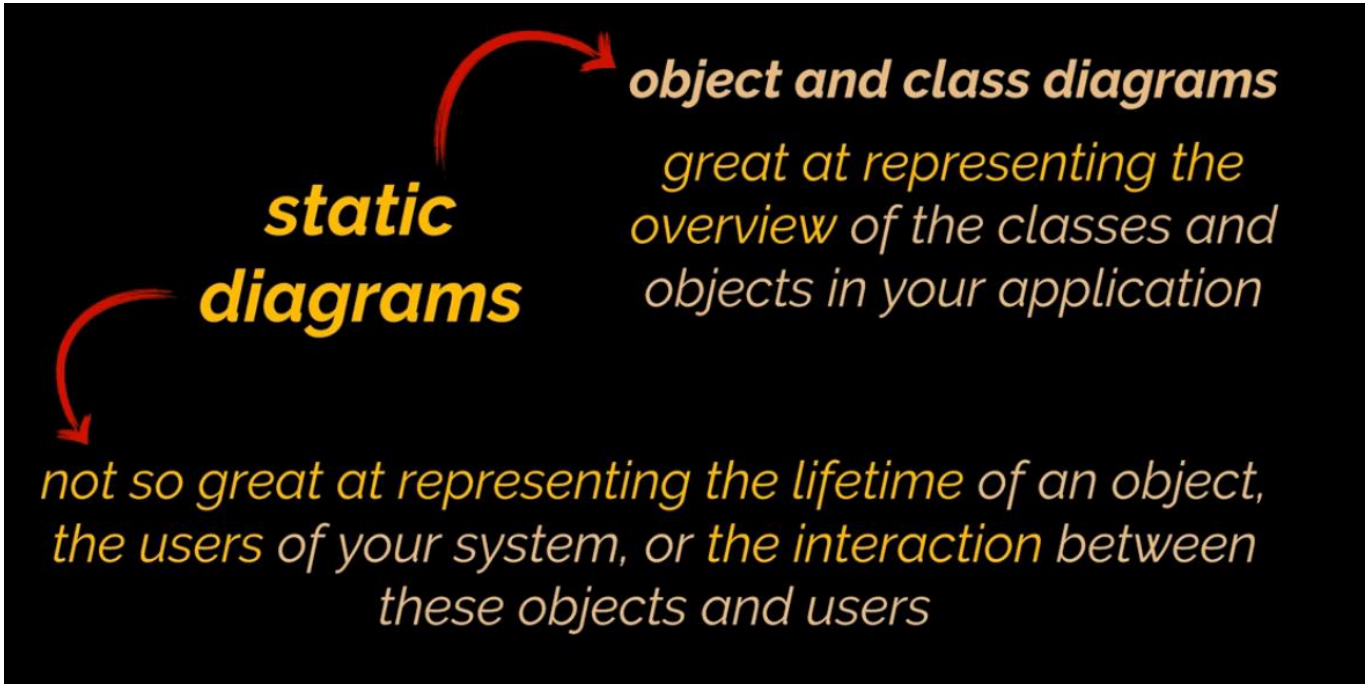
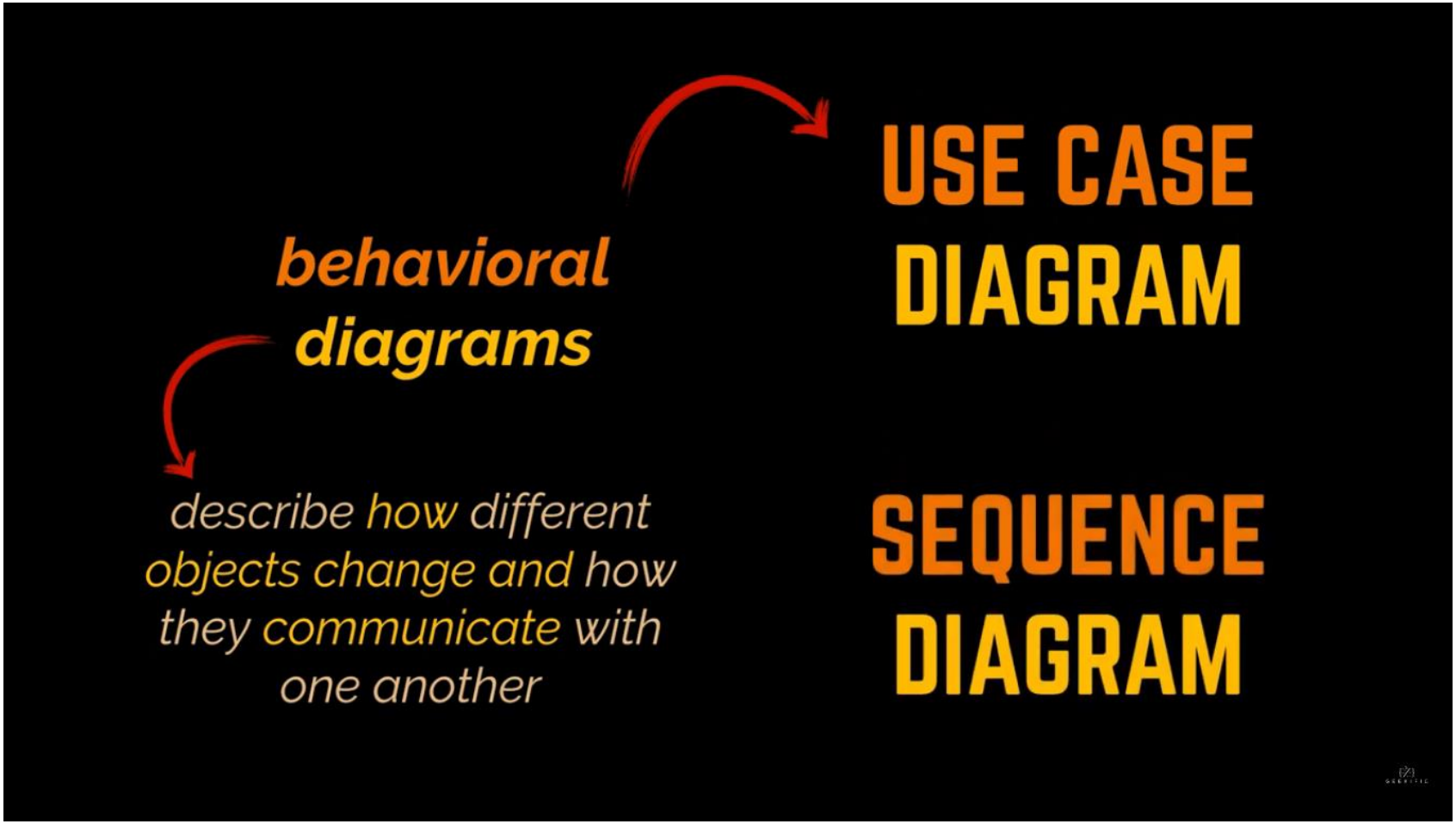
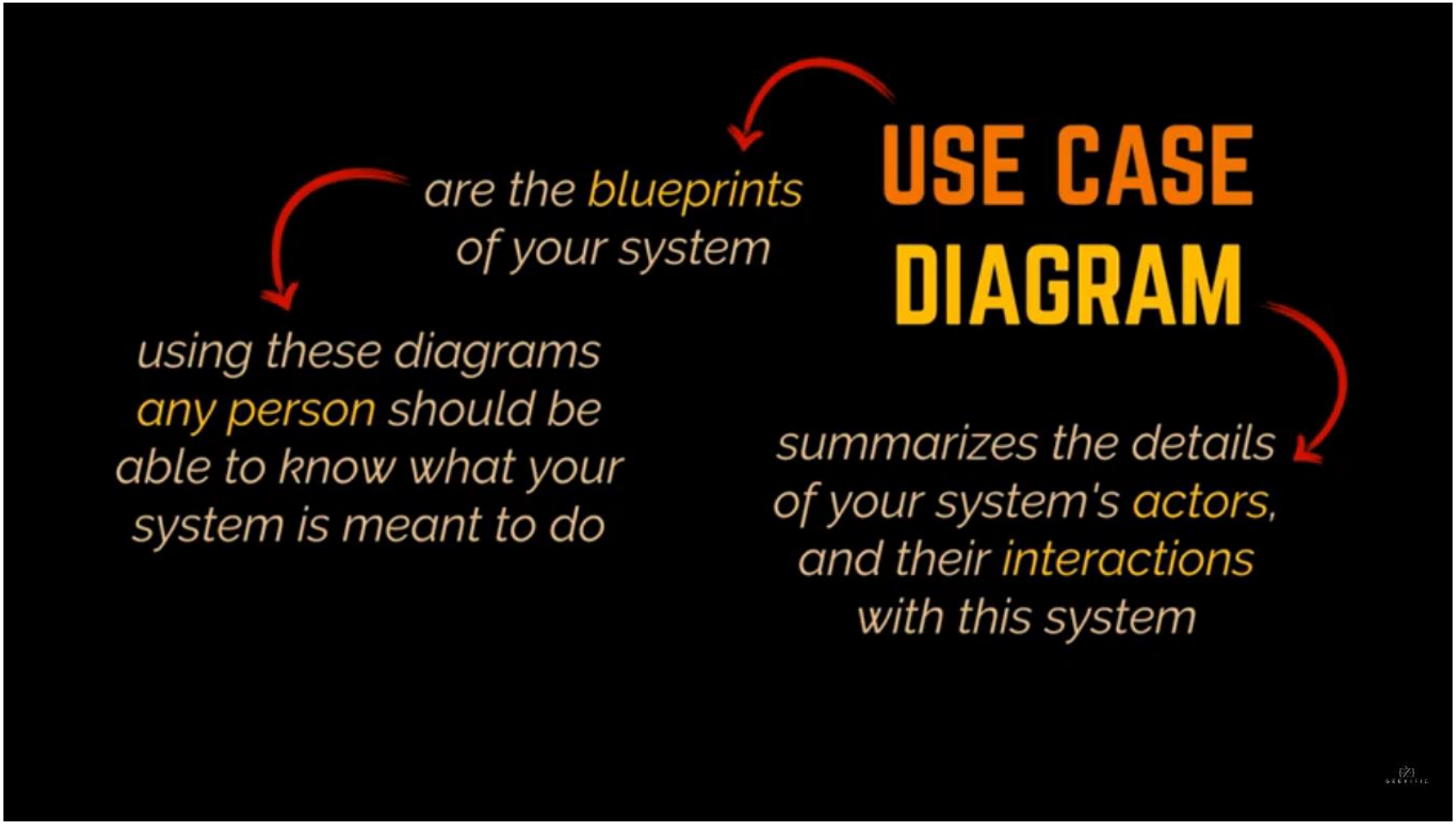
Relationship between sequence diagrams and use cases


modeling a system
static
behavioral

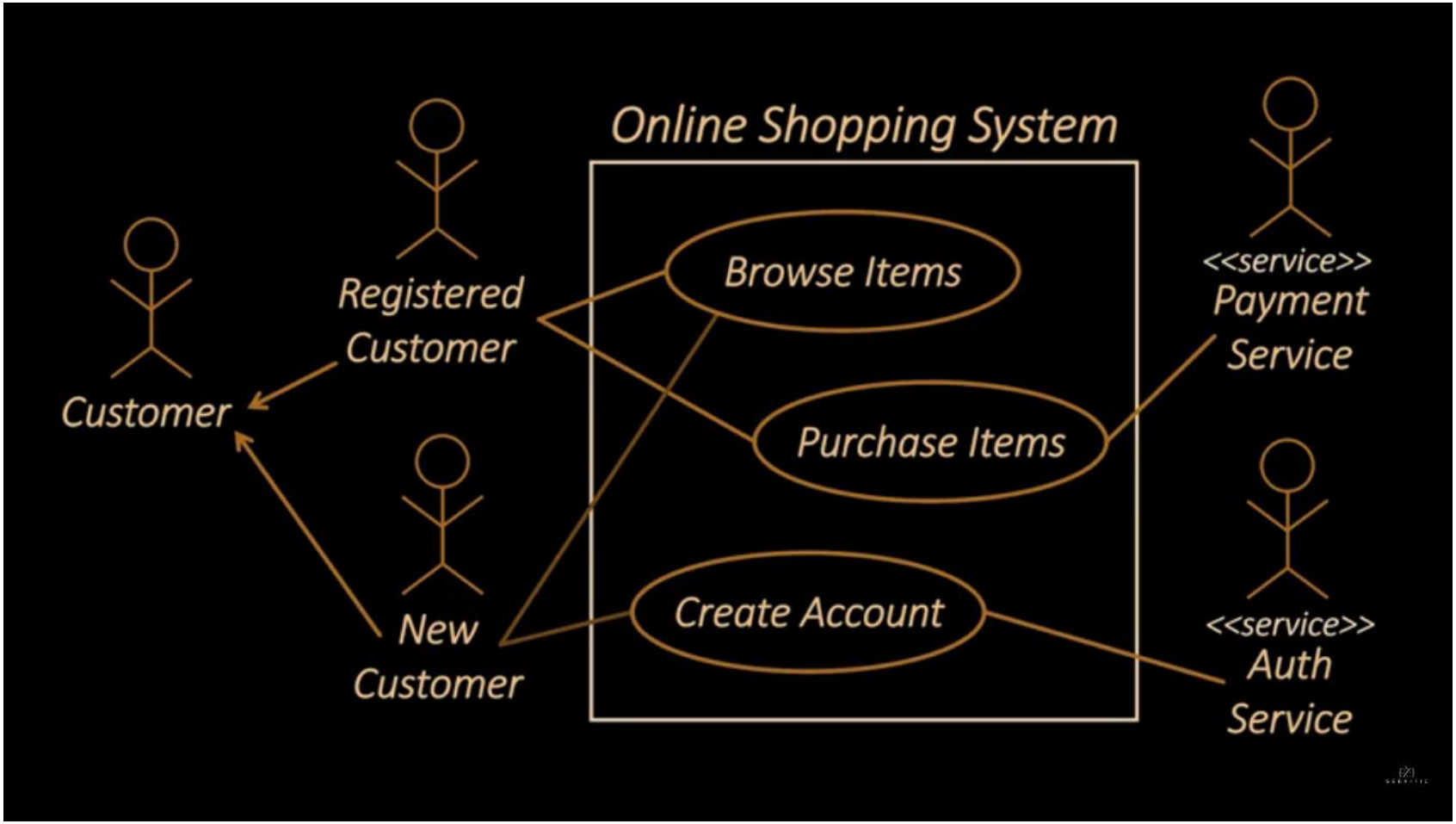

static diagrams
object and class diagrams
great at representing the overview of the classes and objects in your application
not so great at representing the lifetime of an object, the users of your system, or the interaction between these objects and users


behavioral diagrams
USE CASE DIAGRAM
describe how different objects change and how they communicate with one another
SEQUENCE DIAGRAM


USE CASE DIAGRAM
are the blueprints of your system
using these diagrams any person should be able to know what your system is meant to do
summarizes the details of your system's actors, and their interactions with this system

Online Shopping System
Browse Items
Registered Customer
Payment Service
Customer
Purchase Items
Create Account
New Customer
Auth Service

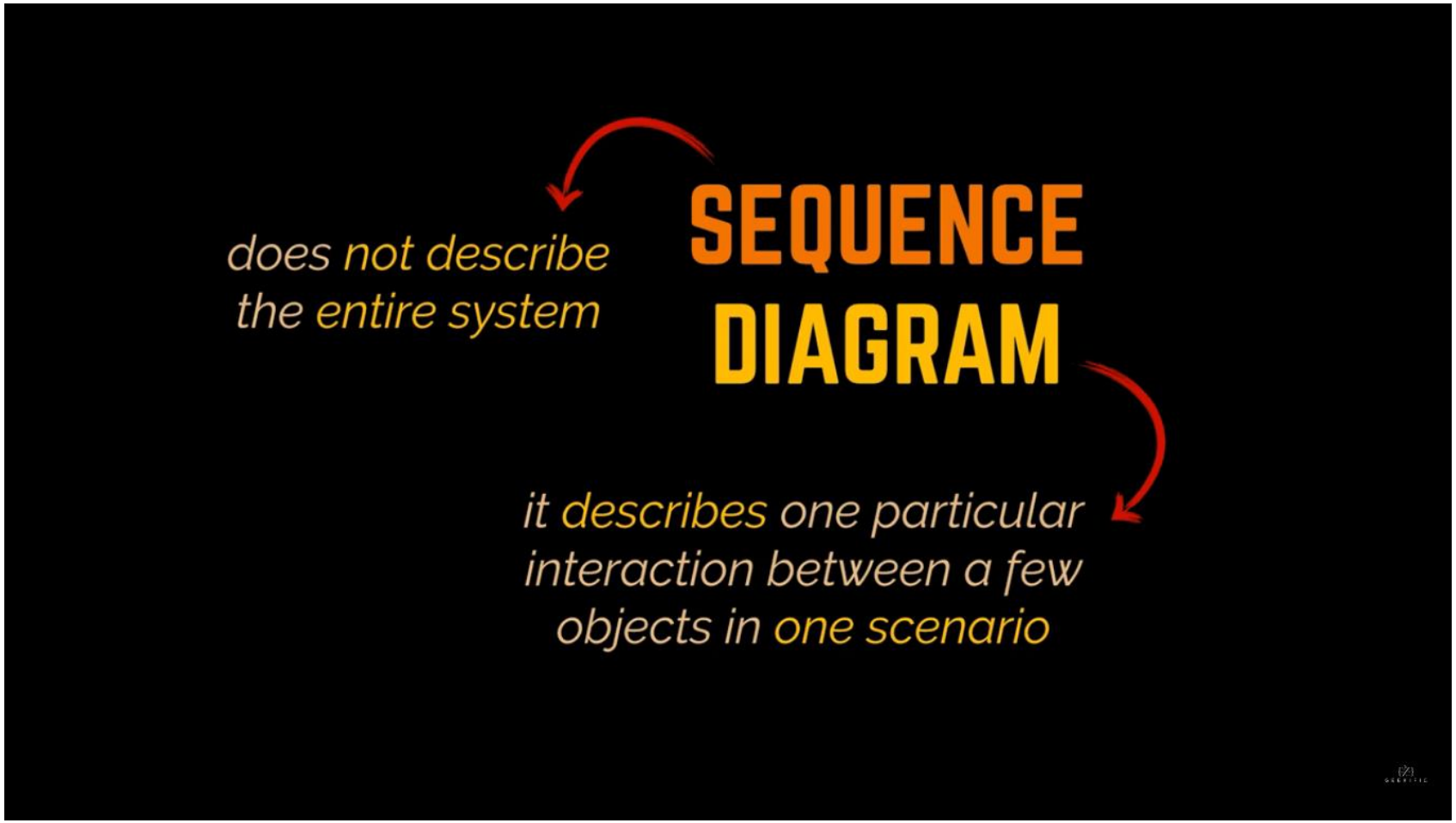
Online Shopping System
Customer
Registered Customer
New Customer
Browse Items
Purchase Items
Create Account
<<service>>
Payment Service
<<service>>
Auth Service

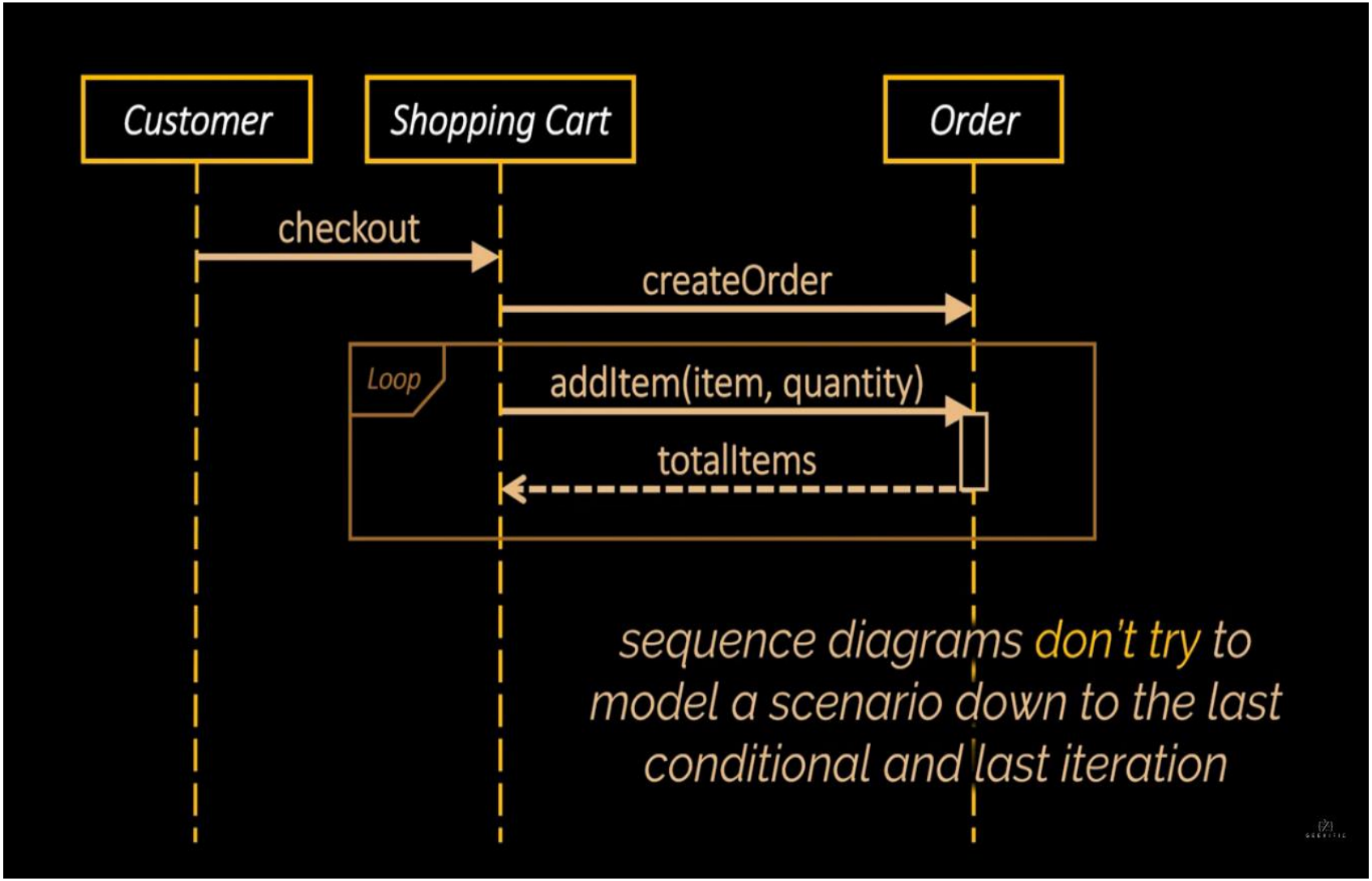

Online Shopping System
Customer
Registered Customer
New Customer
Browse Items
Purchase Items
Create Account
<<service>>
Payment Service
<<service>>
Auth Service

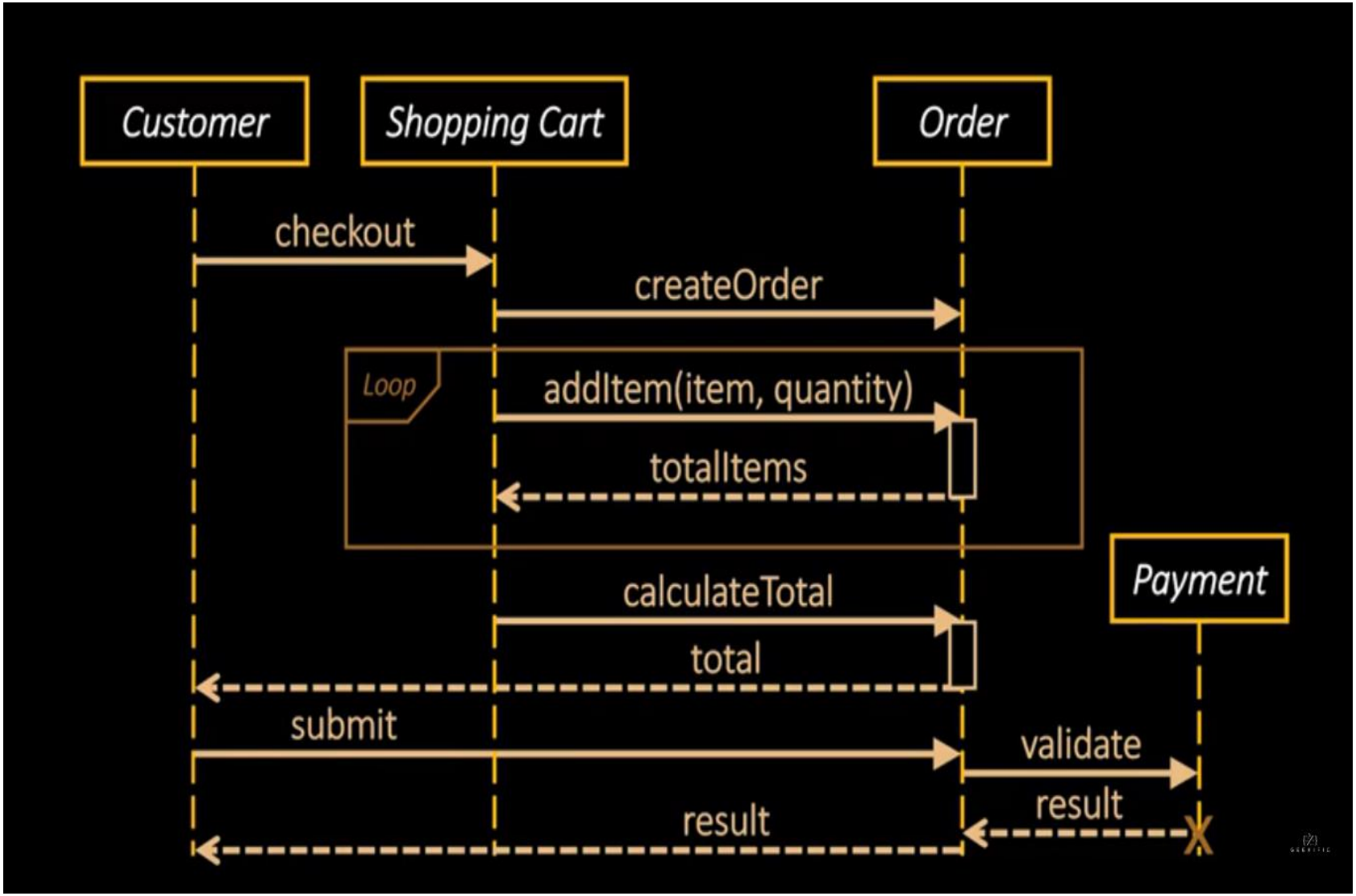
in the diagram we've been drawing we
didn't dive in the details of each use-case
as we did for written use-cases

doesn't represent a single use-case
but several use-cases and multiple
actors at the same time

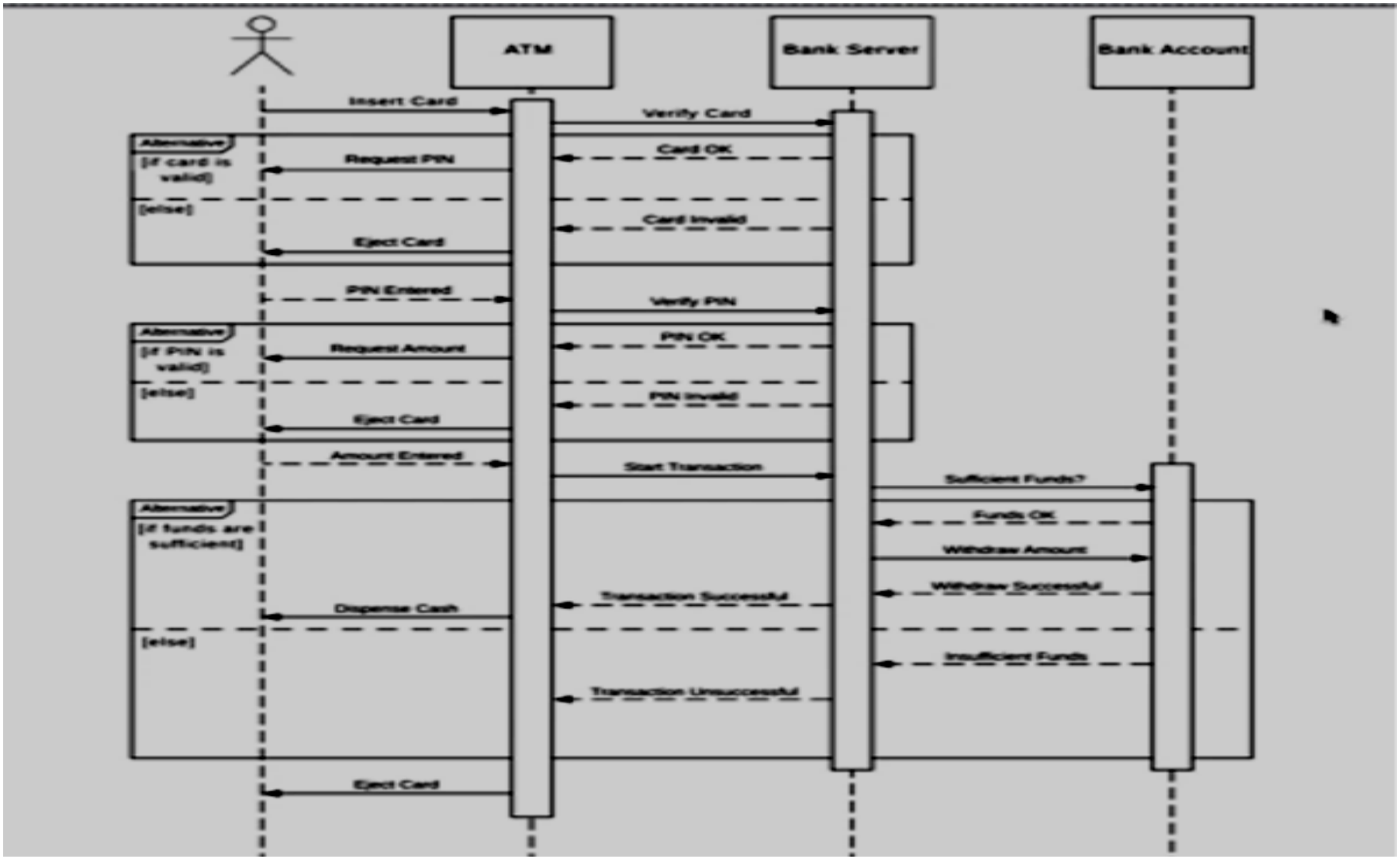
it is a high-level overview of the
relationship between the use-cases,
actors, and services or our system


does not describe
the entire system
SEQUENCE
DIAGRAM
it describes one particular
interaction between a few
objects in one scenario

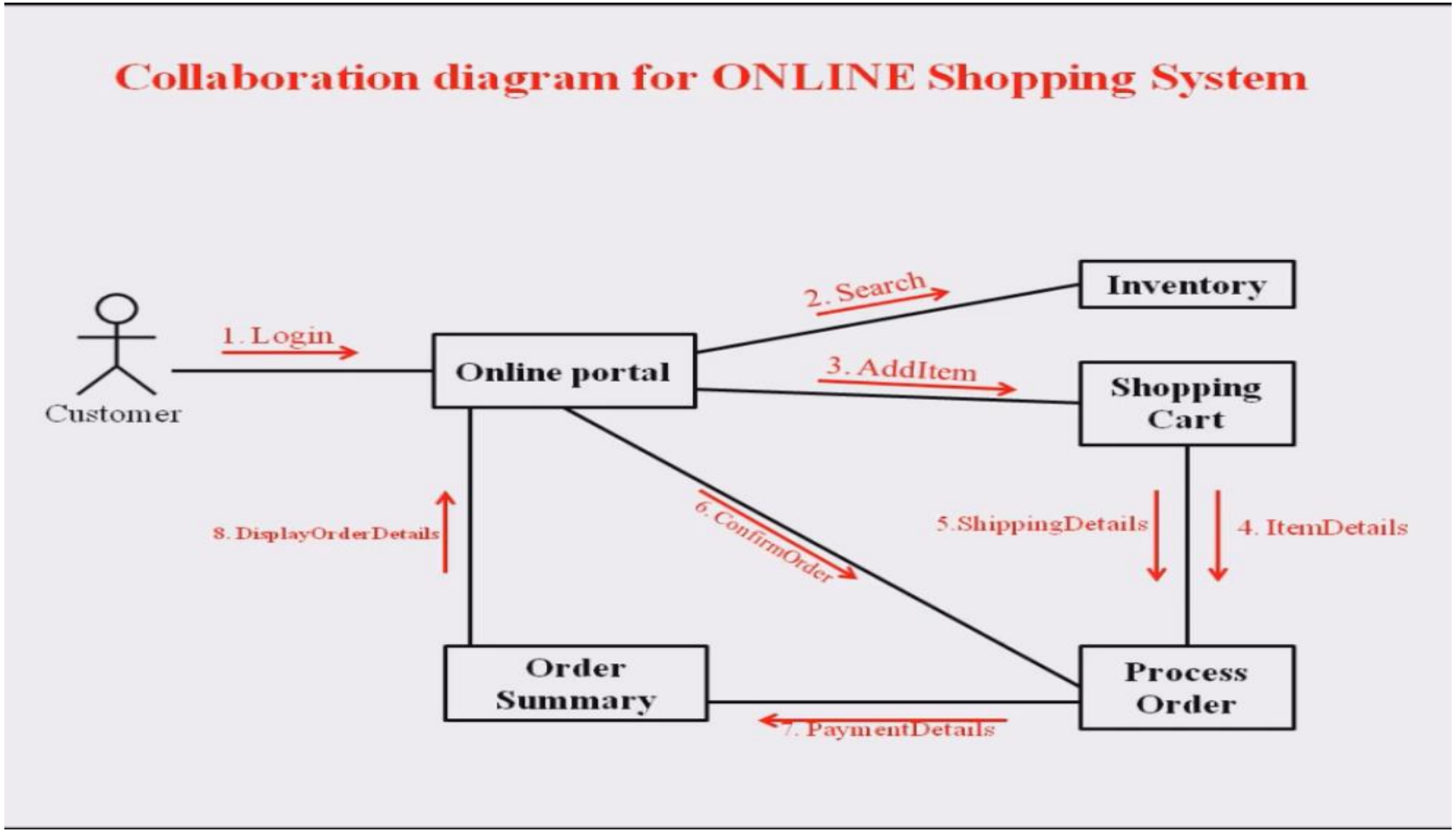
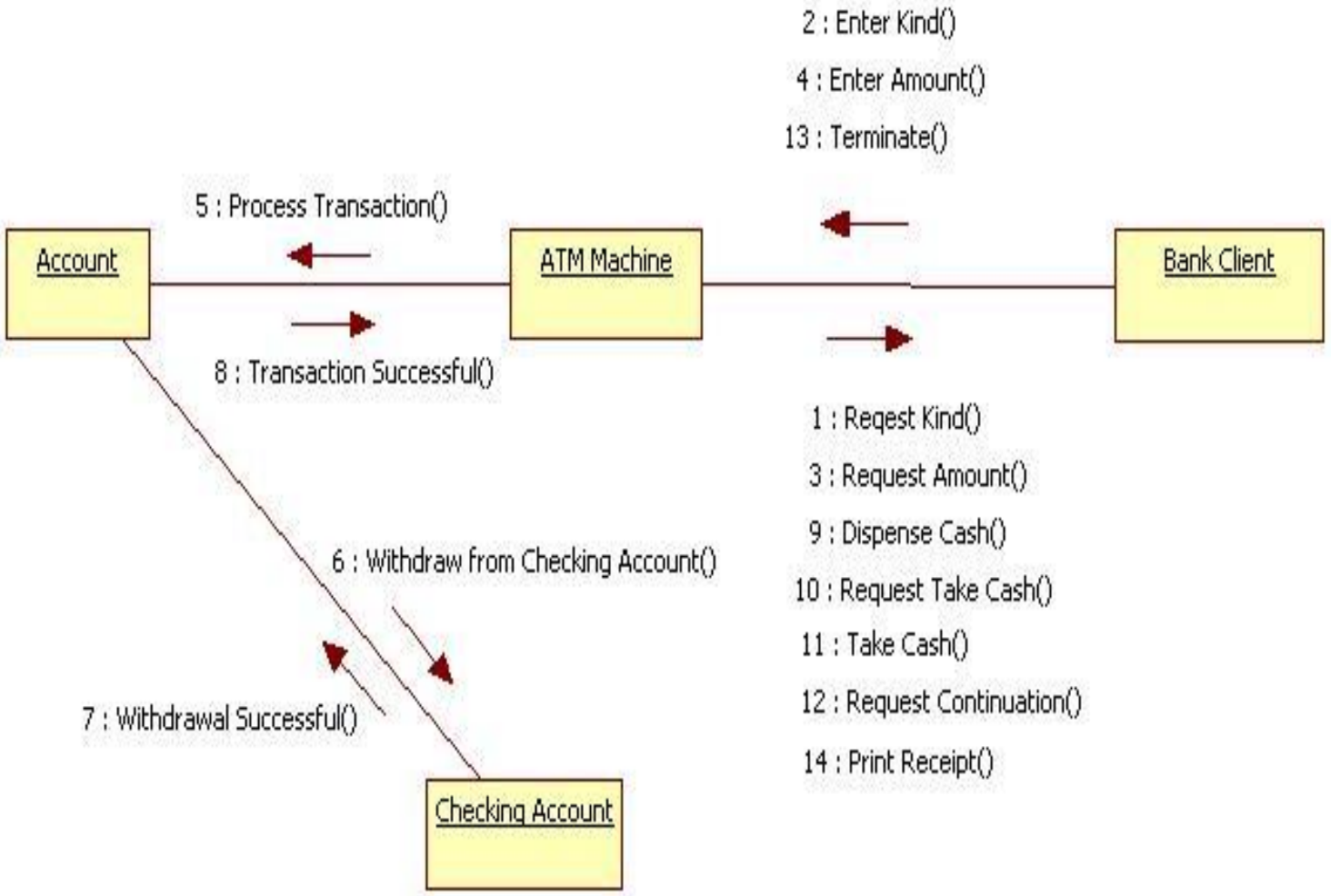

Customer
Shopping Cart
Order
checkout
createOrder
Loop
addItem(item, quantity)
totalItems
sequence diagrams don't try to model a scenario down to the last conditional and last iteration


Customer
Shopping Cart
Order
checkout
createOrder
Loop
addItem(item, quantity)
totalItems
Payment
calculateTotal
total
submit
validate
result
result

Sequence diagram for ATM transaction



Collaboration Diagram



Collaboration diagram for ATM