1.
Operation: startNewRental(memberID : MemberID)
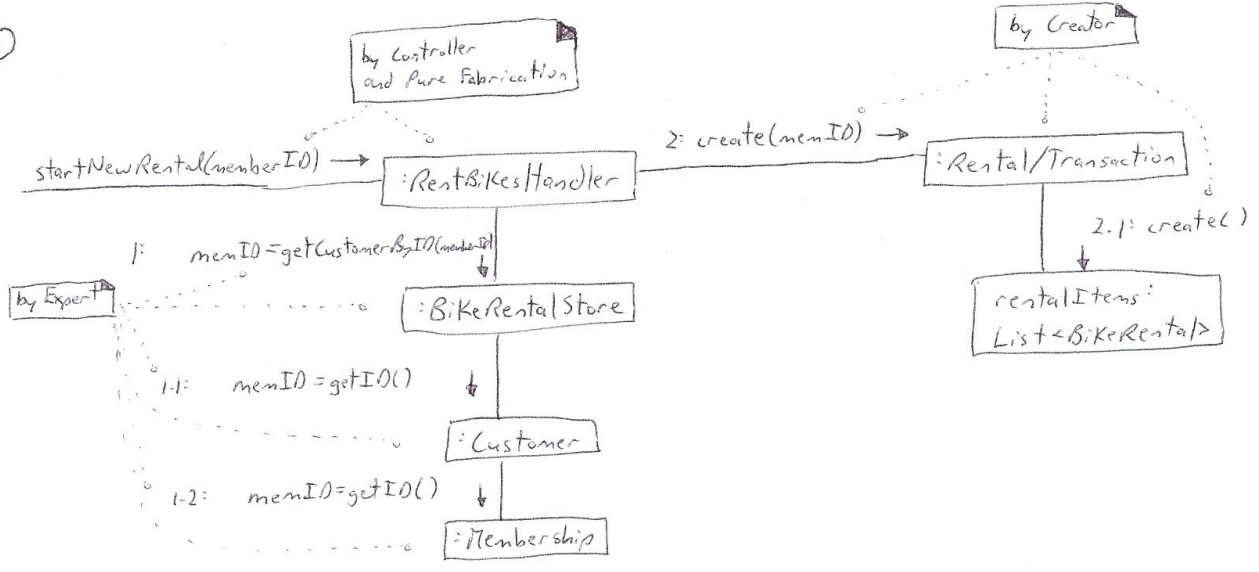Cross References: Use Cases: Rent Bikes
Preconditions: None.
Postconditions: - A Rental/Transaction instance r was created.
- r was associated with RentBikesHandler.
- r was associated with a Customer based on memberID match.
- Attributes of r were initialized.

①

by Controller
and Pure Fabrication

by Creator

startNewRental(memberID) →   :RentBikesHandler   2: create(memID) →   :Rental/Transaction

1:   memID = getCustomerByID(memberID)

by Expert

:BikeRentalStore

2.1: create()

rentalItems:
List<BikeRental>

1-1:   memID = getID()

:Customer

1-2:   memID = getID()

:Membership

2.

Operation: enterBikeItem(itemID : ItemID, qty : Integer)
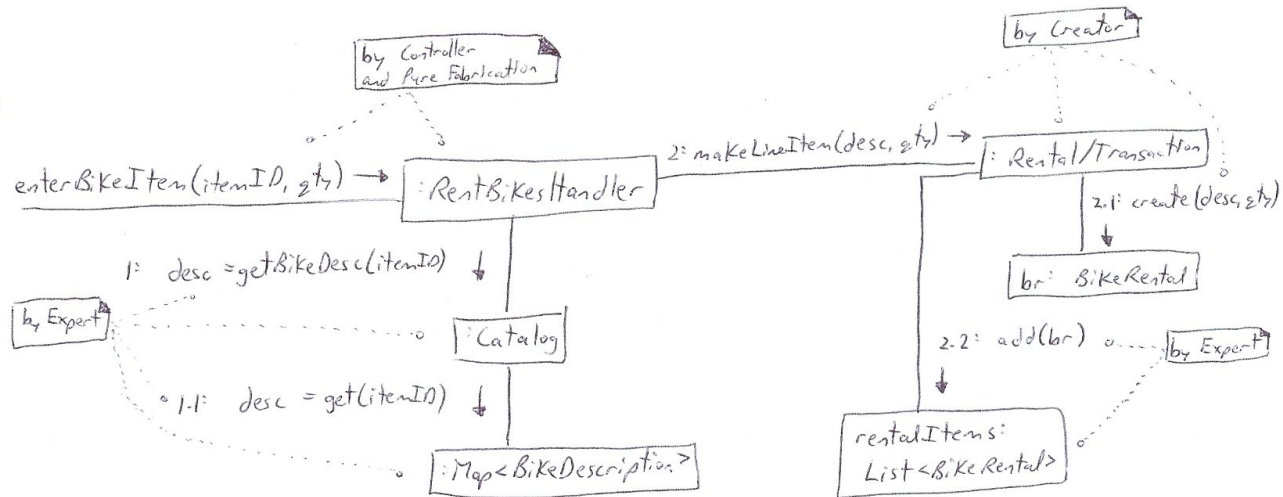
Cross References: Use Cases: Rent Bikes

Preconditions: A Rental/Transaction is underway.

Postconditions: - A BikeRental instance br was created.
- br was associated with the current Rental/Transaction.
- br was associated with a BikeDescription based on itemID match.

②

by Controller
and Pure Fabrication

by Creator

enterBikeItem(itemID, qty) → | :RentBikesHandler | ——2: makeLineItem(desc, qty) → | :Rental/Transaction |

1: desc = getBikeDesc(itemID) ↓

2.1: create(desc, qty) ↓

by Expert

| :Catalog |

| br: BikeRental |

1.1: desc = get(itemID) ↓

2.2: add(br) ↓   by Expert

| :Map<BikeDescription> |

rentalItems:
List<BikeRental>

③

BikeRentalStore

address : Address
name : Text
phoneNumber : PhoneNum

getCustomerByID(memberID: MemberID)

* customers

Customer

address: Address
name : Text
phoneNumber : PhoneNum

getID()

1 memberID →

Membership

ID : MemberID
startDate : DateTime

getID()

1 customer

Rental/Transaction

date : DateTime

makeLineItem(desc: BikeDescription, qty: Integer)

1 currentRental

1..* rentalItems {ordered}

BikeRental

dueDate : DateTime
returnDate : DateTime
returnTime : DateTime

RentBikesHandler

startNewRental(memberID: MemberID)
enterBikeItem(itemID : ItemID, qty: Integer)

1 catalog

1 description

BikeDescription

type : Text
feature : Text

1..*

Catalog

getBikeDesc(itemID : ItemID)

descriptions