1. Hiking

1.1. Rent a ReachNow to drive to mountain rainier on weekends with friends

1.2. On the way, fill the gas

1.3. On the way, eat at restaurant for lunch

1.4. Buy the ticket to get into the park

1.5. Book a hotel or check in the hotel.

Identify Objects and behaviors:

1.1 Rent a ReachNow to drive to mountain rainier on weekends with friends

Hiker:

Data: name, phone, address, money, leaseTime

Behaviors: surfCarRentalWebsite, search, contactTheRenter, rentTheReachNow

Internet

Data : RentalCar, Collection of Websites

Behaviors : searchForCarRentalWebsites

Car rental website:

Data: URL, products, bankAccount

Behaviors: search, sort, display, compare, placeTheOrder

Rental car:

Data: rentalPrice, size, off-roadPerformance, leaseTime

Behaviors:

CreditCard

Data : Number, name, company, expiry, securityCode

Behavior :

CreditCardCompany

Behavior : authorizeTransaction

Sequence of invoking behaviors on Objects:

RentCarOnInternet:

Renter hiker,

Internet internet,

ElectronicWebsite RentalCar,

Car ReachNow,

CreditCard card,

CreditCarCompany visa

RentingConfirmation response

If Internet.isAvailable

Hiker.searchInInternet-> internet, question: Collection of car rental websites

//Hiker.findDesirableWebsiteInFirstPage -> Collection of Websites : website

pageNumber = 1;

Loop

if Hiker.findsNoPages

break

end

Hiker.findDesirableWebsiteInAPage -> internet, question, page Number : website

RentalCars = website;

If RentalCars is not empty

break

else

pageNumber = pageNumber + 1

end

End

RentalCars = website

If RentalCars is not empty or RentalCars!=null

RentalCars.searchForReachNow -> priceRange, size, off-road performance, lease time : Collection of Cars

myAssistant = ReachNow

hiker.rentReachNow -> myAssistant, creditCard, address, RentalCars : RentingConfirmation

response = rentingConfirmation

Else

Hiker.cantrentcar

Else

hiker.browseInternetAfterAWhileBack

1.2 On the way, fill the gas

Gas station

Data: gasPrice, typesOfGas, bankAccount

Behaviors: fill the gas, charge

Gas

Data: volume, price, type

Behavior:

Hiker:

Data: name, model of car, money, types of gas

Behaviors: searchForTheGasStationOnTheWay, searchForSuitableGas, fillTheGas, pay the fee

CreditCard:

Data: number, name, company, expiry, pin

Behavior:

CreditCardCompany:

Behavior: authorizeTransaction

Sequence of invoking behaviors on Objects:

fill the gas

customer hiker,

GasStation gasStation1,

Gas gas#,

CreditCard card,

CreditCarCompany visa

transactionConfirmation response

If gasStation.isAvailable

Hiker.searchForSuitableGas-> type, volume

Gas=gas#

Hiker.payTheFee-> gas#, gasStation, creditCard, name: transactionConfirmation

Response=transactionConfirmation

Else

Hiker.searchForAnotherGasStation

1.3. On the way, eat at restaurant for lunch

Hiker:

Data: name, money

behaviors: searchForRestaurantOnTheWay, payTheFee, havelunch

Restaurant

Data: bankAccount, types of dishes, address

Behaviors: makeAndProvideFood, charge

Dish

Data: taste, types, size, flavor, price

Behavior:

Sequence of invoking behaviors on Objects:

Eat at restaurant for lunch

customer hiker,

Restaurant foodie,

Lunch lch,

If restaurant.isAvailable

Hiker.searchForDishes-> types, flavor, size, price->lch

Lunch=lch

If lch.isAvailable

Hiker.order->lch, flavor, size, type, price

Hiker.eat->lch

Hiker.pay->lch, creditCard, name, foodie:transactionConfirmation

Response=transactionConfirmation

Else

Hiker.searchForAnotherLunch

Else

Hiker.searchForAnotherRestaurant

1.4. Buy the ticket to get into the park

Park:

Data: address, bankAccount, ticket

Behavior: charge

Ticket:

Data: price, type, number

Behavior:

Hiker:

Data: name, money, number

Behavior: BuyTheticket, getIntoThePark

Sequence of invoking behaviors on Objects:

Buy the ticket to get into the park

customer hiker,

Park yellowStone,

Ticket tik,

If park.isAvailable

Hiker.countTheTotalNumber

Hiker.buyTheTicket->creditCard, name, yellowStone: transactionConfirmation

Response=transactionConfirmation

Hiker.getThetickets

Hiker.getIntoThePark

Else

Hiker.searchForAnotherPark

1.5. Book a hotel or check in the hotel.

Hotel:

Data:address, BankAccount, name, price

Behaviors: provideRooms, charge

Hiker:

Data:name, number, money

Internet

Data:collection of hotel websites

Behavior:searchForHotelWebsites

Website:

Data: URL, bankAccount

Behavior: display, sort, placeTheOrder

Sequence of invoking behaviors on Objects:

Book a hotel or check in

customer hiker,

Hotel daysInn,

Internet internet,

Website bookinghotelwebsite,

If Internet.isAvailable

Hiker.searchInInternet->internet, question: collection of hotels

If hiker.findSuitableHotels & hotel.isAvailable

Hiker.bookHotel->creditCard, name, number, daysInn:reservation & transactionConfirmation

Response=transactionConfirmation

Hiker.checkIn->hotel.provideRooms

Else

Hiker.searchForAnotherSuitableHotels

Else

Hiker.surfOnTheInternetAfterAWhile

1. Organise a career fair(Suppose you are the organiser)

Career fair:

Data: time, names of companies, types of jobs, address

Behaviors: provideJobDetails

Organiser:

Data: name, e-mail, phone number

Behaviors: contactWithCompanies, prepareForTheCareerFair, arrangPlaceForCareerFair, releaseInformationAboutCareerFair

Company:

Data: address, contact way, scale, foundation time, number of employees, major domain

Behaviors: recruit, chat with job seekers, read the resumes

Job seekers:

Data: name, phone number, e-mail, resume, education background

Behavior: writeResume, prepareForPresention, chatWithPrincipalOfCompanies, Compare, choose

Place for the career fair

Data: address

Behavior: provideSpaceForChatting

Sequence of invoking behaviors on Objects:

Organise the career fair

Organiser qitarah,

PlaceForCareerFair pike,

Company A,

Qitarah.contactWithcompanies->time, name, major domain->collection of companies

companyNumber=0;

Loop

If qitarah.findNoCompanies

Break

End

Qitarah.findDesirableCompanies->name, types, time

Company = A

If A.agreeToJoinTheCareerFair

companyNumber=companyNumber+1

Else

Qitarah.contactAnotherCompany

End

Qitarah.prepareForTheCareerFair

Qitarah.arrangeThePlaceForTheCareerFair

If pike.isAvailable

Qitarah.applyForPike

Qitarah.arrangeTime

Else

Qitarah.findAnotherPlaceForTheCareerFair

If company.isAvailable

Jobseeker.presentResume

If company.acceptTheResume

JobSeeker.chatWithPrincipalOfCompany

If company.giveOffer && jobSeeker.receiveOffer

Break

If company.giveOffer && jobSeeker.refuseOffer

Company.meetNextJobSeeker

Else

jobSeeker.presentResumeToAnotherCompany

Else

jobSeeker.haveATryAtAnotherCompany

1. Order Pizza from Pizza Hut

Consumer:

Data: name, address, money, phone number

Behaviors: scanTheMenu, choosePizza, callPizzaHutToOrder, pay, eat

Pizza hut:

Data: pizza types, bankAccount, name

Behavior: sendThePizza, transactionConfirmation

creditCard:

Data: name, company, number, expiry, security code

Behavior:

creditCardCompany:

Behavior: authorizeTransaction

Sequence of invoking behaviors on Objects:

Order pizza

Consumer qitarah,

Pizzahut pizzahut,

Creditcard boa,

If pizzaHut.isAvailable

Qitarah.scanTheMenu

Qitarah.choosePizza

If pizza.isAvailable

Qitarah.callToOrderAndPayForOrder->pizza, creditCard, address, pizzaHut:transactionConfirmation

pizzaHut.sendThePizza

Qitarah.eatPizza

Else

Qitarah.chooseAnotherPizza

Else

Qitarah.chooseAnotherPizzaHut

4. Design a code sharing platform (eg: Github).

User:

Data: name, password, e-mail, phone number, account number

Behaviors: createTheAccount, setThePassword, search, createTheOrganization, uploadTheCode, share, fork, joinTheGroup, discussWithFriends

Designer:

Data: nameOfPlatform, detailsAboutPlatform, detailsAboutHowToShare

Behaviors: analyzeIDE, designCodeSharingPlatform

Platform:

Data:

Behaviors: saveUsername, saveAccount, providePlatformForSharingCode, findFIle

Designer.analyzeIDE

Designer.nameThePlatform

If website.isAvailable

Platform.inviteUserToSignIn

If user.haveAccount

User.signIn

Else

User.createNewAccount

Else

User.surfTheInternetAfterAWhile

End

User.uploadCode

Platform.makeCodePublic

User.saveCode

platForm.saveCode

user.searchForCodeFile

If file.exist

Platform.display

Else

Platform.runError

1. Design a soft-drink/snacks vending machine.

Consumer:

Data:name, address, phone number, money

Behaviors: chooseProducts, pay, eatOrDrinkProducts

Machine:

Data:types of products

Behaviors: giveProducts, transactionConfirmation

Products:

Data: name, type, price

Consumer qitarah,

Product snack,

If vendingMachine.isAvailable

Qitarah.chooseProducts

If Products.isAvailable

Qitarah.pay->name, creditCard, products, machine: transactionConfirmation

Response=transactionConfirmation

Qitarah.getProduct

else

Qitarah.chooseAnotherProduct

Else

Machine.outOfService

Qitarah.chooseAnotherMachine