

CRC Model

Optimistic Newts

Enterprise Business
Rules

User

Responsibilities

Collaborators

- id
- username
- password
- location
- interests
- rating
- numRatings
- loginStatus
- following
- followers
- Conversations
- getLoginStatus()
- setLoginStatus
- getId()
- setId
- getUsername()
- setUsername()
- getPassword()

- setPassword()
- getLocation()
- getInterests()
- setInterests()
- setLocation()
- addInterest()
- removeInterest()
- getRating()
- addRating()
- addFollowing()
- removeFollowing()
- getFollowing()
- addFollowers()
- removeFollowers()
- getFollowers()
- addConversation()
- removeConversation()
- getConversations()

- Conversation

Enterprise Business
Rules

Conversation

Responsibilities

- id
- title
- topics
- location
- locationRadius
- minRating
- maxSize
- closingTime
- isOpen
- messages
- users
- getId()
- getTitle()
- setTitle()
- getTopics()
- removeTopics()
- getLocation()
- setLocation()

- getIsOpen()
- toggleIsOpen()
- getLocationRadius()
- setLocationRadius()
- getMinRating()
- setMinRating()
- getMaxSize()
- setMaxSize()
- getClosingTime()
- setClosingTime()
- getMessages()
- addMessage()
- removeMessage()
- getUsers()
- getNumUsers()
- addUser()
- removeUser()

Collaborators

- User
- Message

Enterprise Business
Rules

Message

Responsibilities

- body
- author
- writtenAt # set to time of constructor call
- lastUpdatedAt
- getBody()
- setBody()
- getAuthor()
- getWrittenAt()
- getLastUpdatedAt()
- setLastUpdatedAt() #set to time of method call. Make this private and call inside of setBody()

Collaborators

- User
- Conversation

Enterprise Business
Rules

ConversationQueue

implements Queue<Conversation>

Responsibilities

For [Queue interface](#)

- add()
- element()
- offer()
- peek()
- poll()
- remove()
- + some Collection interface methods

Overriding [Collection Interface](#)

- size()
- isEmpty()
- contains()
- toArray()
- remove()
- containsAll()
- addAll()
- removeAll()
- retainAll()
- clear()
- insert()

ConversationQueue specific:

- conversations (heap)
- heapify()
- location
- locationRadius
- Interests
- getLocation()
- getLocationRadius()
- getInterests()
- toKeyedConversation()
- getSorter()
- size()
- isEmpty()
- iterator()

Collaborators

- Conversation
- KeyedConversation
- ConversationSorter

Application
Business Rules

UserManager

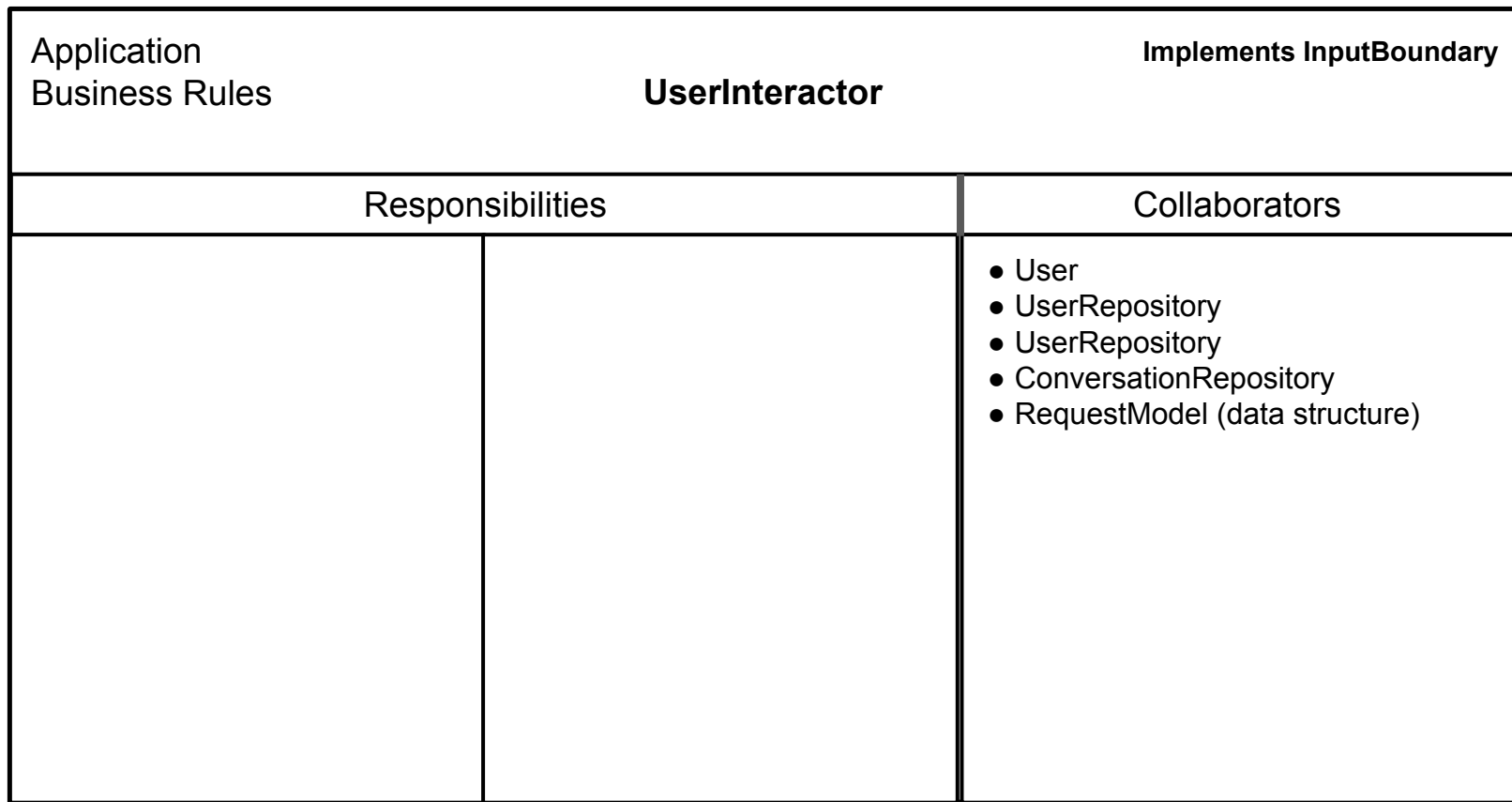
Responsibilities

- `getProfile()`
- `create()`
- `login()`
- `logout()`
- `delete()`
- `follow()`
- `unfollow()`
- `getRelevantConversations()`

- `request(RequestModel)`

Collaborators

- `User`
- `UserInteractor`
- `UserRepository`
- `ConversationRepository`
- `RequestModel` (data structure)



Application
Business Rules

ConversationManager

Responsibilities

- createConversation()
- changeConversationStatus()
- addUser()
- getUserList()
- removeUser()
- addMessage()

- request()

Collaborators

- Conversation
- ConversationRepository
- MessageRepository
- UserRepository
- ConversationInteractor
- RequestModel

Application
Business Rules

ConversationInteractor

Implements InputBoundary

Responsibilities

Collaborators

- Conversation
- MessageRepository
- UserRepository
- ConversationRepository
- RequestModel (data structure)

Application
Business Rules

MessageManager

Responsibilities

Collaborators

- Message
- MessageRepository
- UserRepository
- RequestModel

Application
Business Rules

AddMessage

Extends ConversationInteractor

Responsibilities

- Adds Message to Conversation
- request(Requestmodel)

Collaborators

- Message
- Conversation
- User
- ConversationRepository
- MessageRepository
- UserRepository
- RequestModel

Application
Business Rules

ChangeStatus

Extends ConversationInteractor

Responsibilities

- Toggles “Open” status of Conversation

- request(Requestmodel)

Collaborators

- Conversation
- ConversationRepository
- RequestModel

Application
Business Rules

AddUser

Extends ConversationInteractor

Responsibilities

- Adds User to Conversation

- request(Requestmodel)

Collaborators

- User
- Conversation
- ConversationRepository
- UserRepository
- RequestModel

Application
Business Rules

Extends ConversationInteractor

Create (Conversation)

Responsibilities

- Creates new Conversation

- request(Requestmodel)

Collaborators

- Conversation
- ConversationRepository
- RequestModel

Application
Business Rules

GetUserList

Extends ConversationInteractor

Responsibilities

- Returns UserProfiles

- request(Requestmodel)

Collaborators

- User
- Conversation
- User Repository
- ConversationRepository
- UserProfile
- RequestModel

Application
Business Rules

RemoveUser

Extends ConversationInteractor

Responsibilities

- Removes User from Conversation

- request(Requestmodel)

Collaborators

- User
- Conversation
- User Repository
- ConversationRepository
- RequestModel

Application
Business Rules

InterestSorter

Implements ConversationSorter

Responsibilities

- getPriority()

- request(Requestmodel)

Collaborators

- ConversationQueue
- Conversation
- RequestModel

Application
Business Rules

RandomSorter

Implements ConversationSorter

Responsibilities

- getPriority()

- request(Requestmodel)

Collaborators

- ConversationQueue
- Conversation
- RequestModel

Application
Business Rules

Create (User)

Extends UserInteractor

Responsibilities

- Creates new user

- request(Requestmodel)

Collaborators

- User
- UserRepository
- RequestModel

Application
Business Rules

Delete (User)

Extends UserInteractor

Responsibilities

- Deletes user and all references to user

- request(Requestmodel)

Collaborators

- User
- Conversation
- ConversationRepository
- UserRepository
- RequestModel

Application
Business Rules

Follow

Extends UserInteractor

Responsibilities

- User follows another user

- request(Requestmodel)

Collaborators

- User
- UserRepository
- RequestModel

Application
Business Rules

GetProfile

Extends UserInteractor

Responsibilities

- Returns UserProfile

- request(Requestmodel)

Collaborators

- User
- UserRepository
- RequestModel

Application
Business Rules

GetRelevantConversations

Extends UserInteractor

Responsibilities

- Adds Conversations to ConversationQueue

- request(Requestmodel)

Collaborators

- User
- Conversation
- ConversationQueue
- ConversationRepository
- UserRepository
- RequestModel

Application
Business Rules

Login

Extends UserInteractor

Responsibilities

- Logs in User

- request(Requestmodel)

Collaborators

- User
- UserRepository
- RequestModel

Application
Business Rules

Logout

Extends UserInteractor

Responsibilities

- Logs out User

- request(Requestmodel)

Collaborators

- User
- UserRepository
- RequestModel

Application
Business Rules

Unfollow

Extends UserInteractor

Responsibilities

- User unfollows a different User

- request(Requestmodel)

Collaborators

- User
- UserRepository
- RequestModel

Interface Adapters			UserController	
Responsibilities		Collaborators		
		<ul style="list-style-type: none">• Application.UserManager• Application.RequestModel• Application.InputBoundary• Adapters.InOut (interface)• Many Interactors		