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		**Collaborators**

Responsibilities		Collaborators
● 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()	● User ● Message

Enterprise Business Rules	**Message**	
Responsibilities		Collaborators
- 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()		- User - Conversation

Application Business Rules	**ConversationQueue**	implements Queue<Conversation>

Responsibilities		Collaborators
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()	• Conversation • KeyedConversation • ConversationSorter

Application Business Rules	**UserManager**	
Responsibilities		Collaborators
• getProfile() • create() • login() • logout() • delete() • follow() • unfollow() • getRelevantConversations()	• request(RequestModel)	• User • UserInteractor • UserRepository • ConversationRepository • RequestModel (data structure)

Application Business Rules	**UserInteractor**	**Implements InputBoundary**
Responsibilities		Collaborators
		● User ● UserRepository ● UserRepository ● ConversationRepository ● RequestModel (data structure)

Application Business Rules	**ConversationManager**	
Responsibilities		Collaborators
• createConversation() • changeConversationStatus() • addUser() • getUserList() • removeUser() • addMessage()	• request()	• 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		Collaborators
● Adds Message to Conversation	● request(Requestmodel)	● Message ● Conversation ● User ● ConversationRepository ● MessageRepository ● UserRepository ● RequestModel

Application Business Rules	ChangeStatus	Extends ConversationInteractor
Responsibilities		Collaborators
• Toggles "Open" status of Conversation	• request(Requestmodel)	• Conversation • ConversationRepository • RequestModel

Application Business Rules	**AddUser**	**Extends ConversationInteractor**

Responsibilities		Collaborators
● Adds User to Conversation	● request(Requestmodel)	● User ● Conversation ● ConversationRepository ● UserRepository ● RequestModel

Application Business Rules	Create (Conversation)	Extends ConversationInteractor
Responsibilities		**Collaborators**
● Creates new Conversation	● request(Requestmodel)	● Conversation ● ConversationRepository ● RequestModel

Application Business Rules	GetUserList	Extends ConversationInteractor

Responsibilities		Collaborators
● Returns UserProfiles	● request(Requestmodel)	● User ● Conversation ● User Repository ● ConversationRepository ● UserProfile ● RequestModel

Application Business Rules	**RemoveUser**	**Extends ConversationInteractor**
Responsibilities		Collaborators
● Removes User from Conversation	● request(Requestmodel)	● User ● Conversation ● User Repository ● ConversationRepository ● RequestModel

Application Business Rules	InterestSorter	**Implements ConversationSorter**
Responsibilities		Collaborators
● getPriority()		● ConversationQueue ● Conversation

Application Business Rules	**RandomSorter**	**Implements ConversationSorter**
Responsibilities		Collaborators
● getPriority()		● ConversationQueue ● Conversation

Application Business Rules	Create (User)	Extends UserInteractor
Responsibilities		**Collaborators**
● Creates new user	● request(Requestmodel)	● User ● UserRepository ● RequestModel

Application Business Rules	Delete (User)	Extends UserInteractor

Responsibilities		Collaborators
● Deletes user and all references to user	● request(Requestmodel)	● User ● Conversation ● ConversationRepository ● UserRepository ● RequestModel

Application Business Rules	**Follow**	**Extends UserInteractor**
Responsibilities		Collaborators
● User follows another user	● request(Requestmodel)	● User ● UserRepository ● RequestModel

Application Business Rules	**GetProfile**	**Extends UserInteractor**

Responsibilities		Collaborators
● Returns UserProfile	● request(Requestmodel)	● User ● UserRepository ● RequestModel

Application Business Rules	**GetRelevantConversations**	**Extends UserInteractor**
Responsibilities		Collaborators
● Adds Conversations to ConversationQueue	● request(Requestmodel)	● User ● Conversation ● ConversationQueue ● ConversationRepository ● UserRepository ● RequestModel

Application Business Rules	**Login**	**Extends UserInteractor**
Responsibilities		**Collaborators**
● Logs in User	● request(Requestmodel)	● User ● UserRepository ● RequestModel

Application Business Rules	Logout	Extends UserInteractor
Responsibilities		**Collaborators**
● Logs out User	● request(Requestmodel)	● User ● UserRepository ● RequestModel

Application Business Rules	**Unfollow**	**Extends UserInteractor**
Responsibilities		**Collaborators**
● User unfollows a different User	● request(Requestmodel)	● User ● UserRepository ● RequestModel

Application Business Rules	**UserProfile**	
Responsibilities		Collaborators
- Allows non-sensitive user data to be passed to a client browser - getID() - getUsername() - getLocation() - getInterests() - isLoginStatus() - getFollowing() - getFollowers() - getConverations()		User

Interface Adapters

UserController

Responsibilities		Collaborators
- Creates appropriate request models - Delegates to appropriate interactors		● Application.UserManager ● Application.RequestModel ● Application.InputBoundary ● Adapters.InOut (interface) ● Many Interactors

Interface Adapters

ConversationController

Responsibilities		Collaborators
- Creates appropriate request models - Delegates to appropriate interactors		- Application.ConversationrManager - Application.RequestModel - Application.InputBoundary - Adapters.InOut (interface) - Many Interactors

Interface Adapters		
MessageController		
Responsibilities		Collaborators
- Creates appropriate request models - Delegates to appropriate interactors		- Application.MessageManager - Application.RequestModel - Application.InputBoundary - Adapters.InOut (interface) - Many Interactors