IU 1
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IU 7
IU 8

query	Interactive / update / 1			
title	Add person			
pattern		studyAt (classYear ← \$studyAt[i]. workAt (workFrom ← \$workAt[j].	id = \$studyAt[i]	
desc.	Add a Person node , connected to the network by 4 possible edge types.			
params	<pre>Person.id Person.firstName Person.lastName Person.gender Person.birthday Person.creationDate Person.locationIP Person.browserUsed Person-isLocatedIn->City.id Person.speaks Person.email Person-hasInterest->Tag.id (Person-studyAt->University.id, Person-</pre>	ID String String String Date DateTime String ID {String} ID {String} {(ID, 32-bit)}	personId personFirstName personLastName gender birthday creationDate locationIP browserUsed cityId languages emails tagIds	
	<pre>studyAt->.classYear) (Person-workAt->Company.id, Person-workAt- >.workFrom)</pre>	Integer)} {(ID, 32-bit Integer)}	workAt	

IU 1	query	Interactive / update / 2		
IU 2	title	Add like to post		
IU 3 IU 4 IU 5	pattern	$ \begin{array}{c c} & & & & \\ \hline Person & & & & \\ \hline id = \$personId & & & \\ \hline \end{array} $		
IU 6	desc.	Add a likes edge to a Post.		
IU 7		1 Person.id ID personId		
	params	2 Post.id ID postId		
		3 Person-likes->.creationDate		

IU 1	query	Interactive / update / 3		
IU 2	title	Add like to comment		
IU 3		likes		
IU 4	pattern	(creationDate ← \$creationDate) Comment		
IU 5	id = \$personId			
IU 6	desc.	Add a likes edge to a Comment.		
IU 7				
IU 8		Person.id ID personId		
	params	2 Comment.id ID commentId		
		3 Person-likes->.creationDate		

Interactive / update / 4

		-
IU 1	query	Interactive / update / 4
IU 2	title	Add forum
IU 3 IU 4 IU 5 IU 6 IU 7 IU 8	pattern	Forum $id \leftarrow \$ forumId \\ title \leftarrow \$ forumTitle \\ creationDate \leftarrow \$ creationDate$ $hasTag$ $tag in \$ tags$
	desc.	Add a Forum node , connected to the network by 2 possible edge types.
	0.000.	1 Forum.id ID forumId
		2 Forum.title String forumTitle
	params	3 Forum.creationDate DateTime creationDate
		4 Forum-hasModerator->Person.id ID moderatorPersonId
		5 Forum-hasTag->Tag.id {ID} tagIds

IU 1	query	Interactive / update / 5			
IU 2	title	Add forum membership			
IU 3 IU 4 IU 5	pattern	$ \begin{array}{c c} & & & & \\ \hline \textbf{Person} & & & & \\ \hline (joinDate \leftarrow \$joinDate) \\ \hline id = \$personId \\ \hline \end{array} $			
IU 6	desc.	Add a Forum membership edge (hasMember) to a Person.			
IU 7	params	1 Person.id ID personId 2 Forum.id ID forumId			
		3 Forum-hasMember->.joinDate DateTime joinDate			

IU 1	query	Interactive / update / 6		
IU 2	title	Add post		
IU 3 IU 4 IU 5			Post id ← \$postId imageFile ← \$imageFile	
IU 6 IU 7 IU 8	pattern	Forum containerOf → id = \$forumId	creationDate ← \$creationI locationIP ← \$locationIP browserUsed ← \$browserU language ← \$language content ← \$content length ← \$length	harten N Tan
	desc.	Add a Post node to the social network construction is Located In, has Tag).	onnected by 4 po	ossible edge types (hasCreator, containerOf,
	params	<pre>1 Post.id 2 Post.imageFile 3 Post.creationDate 4 Post.locationIP 5 Post.browserUsed 6 Post.language 7 Post.content 8 Post.length 9 Post-hasCreator->Person.id 10 Post<-containerOf-Forum.id 11 Post-isLocatedIn->Country.id 12 Post-hasTag->Tag.id</pre>	ID String DateTime String String String Text 32-bit Integer ID ID ID ID {ID}	postId imageFile creationDate locationIP browserUsed language content length authorPersonId forumId countryId tagIds

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query	Interactive / update / 7		
title	Add comment		
pattern	Comment replyOf—con	Comment \$commentId titionDate ← \$creationDate titionIP ← \$locationIP werUsed ← \$browserUsed tent ← \$content th ← \$length	$id = $country $ $id = $country Id$ $hasTag \longrightarrow Tag$ $id in $tagIds$
desc.	Add a Comment node replying to a Post/of types (replyOf, hasCreator, isLocatedIn, has		eted to the network by 4 possible edge
params	<pre>1 Comment.id 2 Comment.creationDate 3 Comment.locationIP 4 Comment.browserUsed 5 Comment.content 6 Comment.length 7 Comment-hasCreator->Person.id 8 Comment-isLocatedIn->Country.id 9 Comment-replyOf->Post.id 10 Comment-replyOf->Comment.id 11 Comment-hasTag->Tag.id</pre>	ID DateTime String String Text 32-bit Integer ID ID ID ID	commentId creationDate locationIP browserUsed content length authorPersonId countryId replyToPostId, -1 if the Comment is a reply of a Comment replyToCommentId, -1 if the Comment is a reply of a Post tagIds

IU 1	query	Interactive / update / 8		
IU 2	title	Add friendship		
IU 3 IU 4 IU 5	pattern	$\frac{\text{knows}}{\text{(creationDate} \leftarrow \$creationDate)}}$ $id = \$person1ld$ $id = \$person2ld$		
IU 6	desc.	Add a friendship edge (knows) between two Persons.		
IU 7 IU 8		1 Person.id ID person1Id		
	params	2 Person.id ID person2Id		
		Person-knows->.creationDate		