

Table 1

	Vertex Table				User	Team	ChatSession	ChatText
	Id	Property (V)			- userID	- teamID	- sessionID	- chatID
	1	User			- userName	- teamName	- type (team/private)	- text
	2	Chat Session			- joiningDate			
	3	Chat Text			- dateOfBirth			
	4	Team			- currentLevel			
					- authenticationKey			
	Edge Table							
	SrcId	DstId	Property (E)		Leaves / Joins / Starts		Contains	Writes
	1	2	Leaves		- userID		- sessionID	- userID
	1	2	Joins		- sessionID		- chatID	- chatID
	1	2	Starts		- timestamp		- timestamp	- timestamp
	2	3	Contains					
	1	3	Writes		Mentions	CreateTeam / JoinTeam / LeaveTeam		
	3	1	Mentions		- chatID	- teamID		
	1	4	CreateTeam		- userID	- userID		
	1	4	JoinTeam		- timestamp	- timestamp		
	1	4	LeaveTeam					
	1. Which teams are having more conversations?							
	User may have been in different teams from time to time.							
	From edge tables JoinTeam and LeaveTeam we can get the time period a user stayed in a specific team. Then have to get the count from edge table Starts for that time period which indicates how many conversations for that team from the user. Then take the sum by teams.							
	2. Do users chat more (or less) before they leave a team?							
	Can get the user left date by the edge table LeaveTeam.							
	Consider the considering date range as Max(team join date, two days before leave date) and leave date. Take count from edge table Writes for above date range which will provide number of chats and take the average of that.							
	Then take users all time Writes average for that team and compare leaveDays average and allTime average.							
	3. What are the dominant terms (words) used in a chat session within a specific time period?							
	From edge table Contains we can get the texts for time period and chat session							
	Then generate a TF-IDF matrix and get answers							
	4. Which users are most active in a specific chat session?							
	Take the count of edge table Writes filtered by sessionID. Then take userIDs out of it							
	5. How many chat sessions is a user participating in at the same time?							
	Filter the edge table Writes by specific time period and group them by sessionID and take the count out of it							