

# **CS157A Database Project**

## **A Web Application for Study Materials**

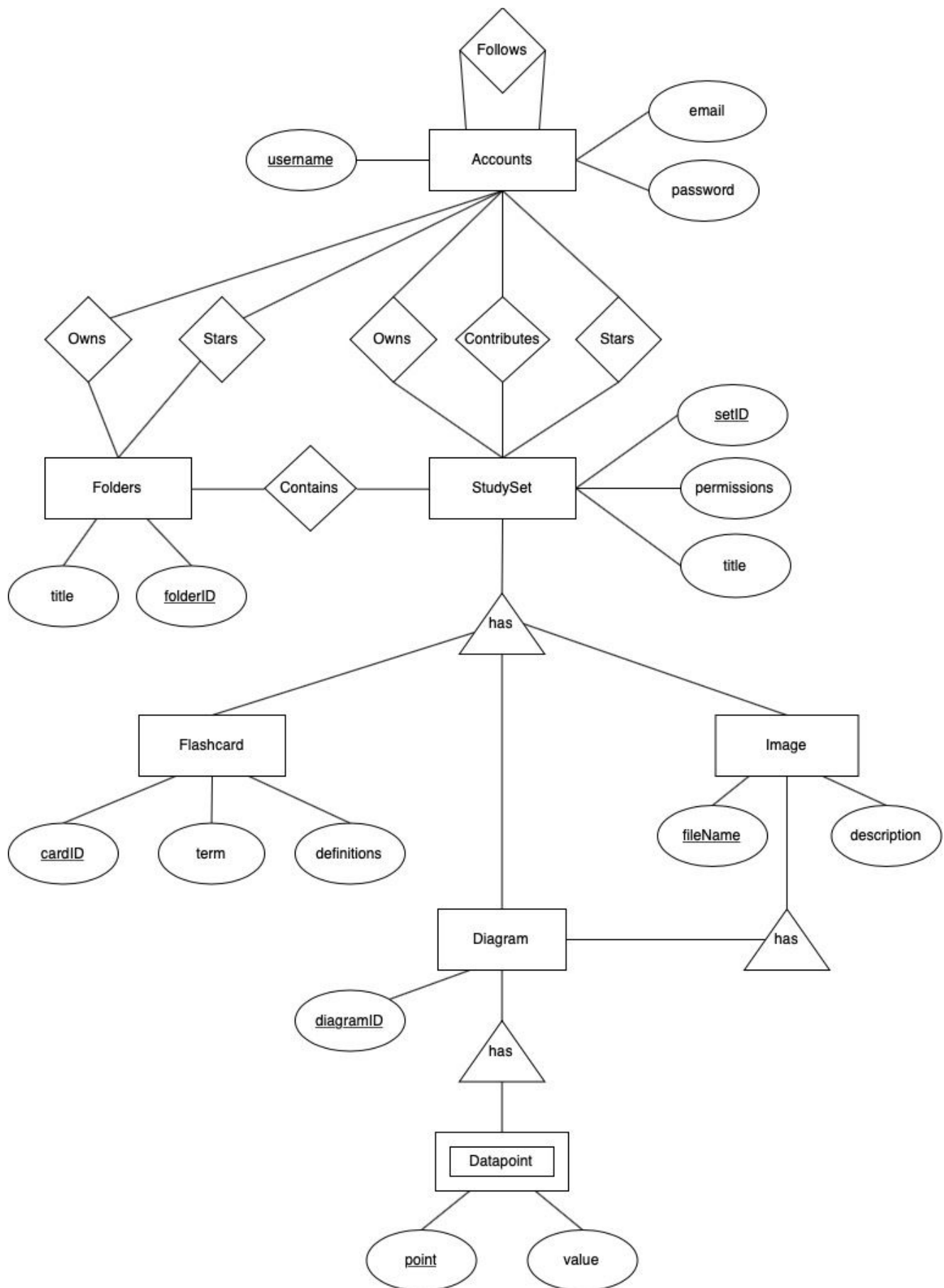
### **Project Design**

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## E/R Diagram Breakdown

- Accounts represents user accounts which are identified by username and have attributes for email and password.
- Follows is a relationship matching accounts to itself. An account can follow other accounts to see their study sets.
- Owns is a relationship matching accounts to study set, representing the study set that each account owns. An account can own multiple study sets.
- Contributes is relationship similar to Owns. It represents study sets that a user has contributed to, but doesn't necessarily own. Multiple accounts can contribute to multiple StudySets.
- Stars is a relationship similar to Contributes and Owns between Accounts and StudySets. It represents what study sets a user has starred in order to keep track of.
- StudySet is an entity that represents study sets. Each studySet has Flashcards, Images, and/or Diagrams.
- Folders is an entity that represents folders. Each folder contains StudySets and is identified by folderID.
- Owns is a relationship mapping Accounts to Folders. An Account can own multiple folders.
- Stars is a relationship similar to owns between Folders and Accounts. It represents what Folders a user has starred in order to keep track of.
- Contains is a relationship mapping StudySets to Folders. It represents a StudySets that are associated with Folders.
- Flashcard is an entity with a term and definitions, the two sides of a flashcard, identified by the cardID.
- Image is an entity that simply represents an image that a user can upload to be contained in a study set identified with its fileName and has a description.
- Diagram is an entity that is identified by diagramID. It has an image and can have multiple Datapoints.
- Datapoint is a weak entity that represents points places on the diagram. It is associated with a particular diagram and identified through its point and has a value.

# Database Model Data

<i>Relationship StudySet -has- Flashcard, Image, Diagram</i>			
<b>setID</b>	<b>cardID</b>	<b>fileName</b>	<b>diagramID</b>
100	501		
100		786	
100		282	
100			853
100	524		
100			642
100	258		
100		252	
100			842
100	352		
110		244	
110	111		
110		555	
111	253		
111	987		

<i>Relationship</i> <b>Folders -contains- StudySets</b>	
<b>folderID</b>	<b>setID</b>
111	
100	284
100	434
101	363
101	524
100	434
100	258
382	929
382	283
382	352
929	482
929	111
929	292
929	253
929	987

*Relationship Accounts -owns- StudySets*

<b>username</b>	<b>setID</b>
abc123	373
abc100	284
abc100	434
xyz101	363
xyz101	524
xyz101	434
xyz101	258
goo382	929
goo382	283
goo382	352
goo382	482
goo382	111
goo382	292
hello	253
hello	987

## Entity Accounts

	username	email	password
▶	android>apple	facts@gmail.com	root
	first	test@gmail.com	root
	second	test@gmail.com	root
	sjsu	sjsu@gmail.com	root
	sjsu1	sjsu@gmail.com	root
	sjsu10	sjsu@gmail.com	root
	sjsu11	sjsu@gmail.com	root
	sjsu2	sjsu@gmail.com	root
	sjsu3	sjsu@gmail.com	root
	sjsu4	sjsu@gmail.com	root
	sjsu5	sjsu@gmail.com	root
	sjsu6	sjsu@gmail.com	root
	sjsu7	sjsu@gmail.com	root
	sjsu8	sjsu@gmail.com	root
	sjsu9	sjsu@gmail.com	root
★	NULL	NULL	NULL

## Entity Flashcards

	cardID	terms	definitions
▶	1	testing	to prove/disprove a guess through experiements
	2	computer science	the study of computers
	100	testing	to prove/disprove a guess through experiements
	101	testing	to prove/disprove a guess through experiements
	102	testing	to prove/disprove a guess through experiements
	104	testing	to prove/disprove a guess through experiements
	200	computer science	the study of computers
	300	testing	to prove/disprove a guess through experiements
	301	testing	to prove/disprove a guess through experiements
	303	testing	to prove/disprove a guess through experiements
	400	testing	to prove/disprove a guess through experiements
	401	testing	to prove/disprove a guess through experiements
	403	testing	to prove/disprove a guess through experiements
	500	computer science	the study of computers
	501	computer science	the study of computers
	503	computer science	the study of computers
	4763...	yeeted	past tense of yeet
★	NULL	NULL	NULL

### Entity Folders

	title	folderID
▶	first folder	1
	second folder	2
	first folder	4
	second folder	5
	first folder	6
	second folder	9
	first folder	10
	second folder	11
	first folder	60
	second folder	90
	first folder	100
	second folder	110
	Physics	44678
	Physics	44679
	Physics	446710
	Physics	446712
	Physics	4467100
	Physics	4467120
•	NULL	NULL

### Entity StudySets

	setID	permissions	title
▶	1	admin	First study set
	2	user	Biology Study set
	3	user	Physics Study set
	100	user	test
	101	user	test
	102	user	test
	103	user	test
	104	user	test
	105	user	test
	106	user	test
	107	user	test
	108	user	test
	109	user	test
	110	user	test
	111	user	test
	112	user	test
	113	user	test
•	NULL	NULL	NULL