CS157A Database Project
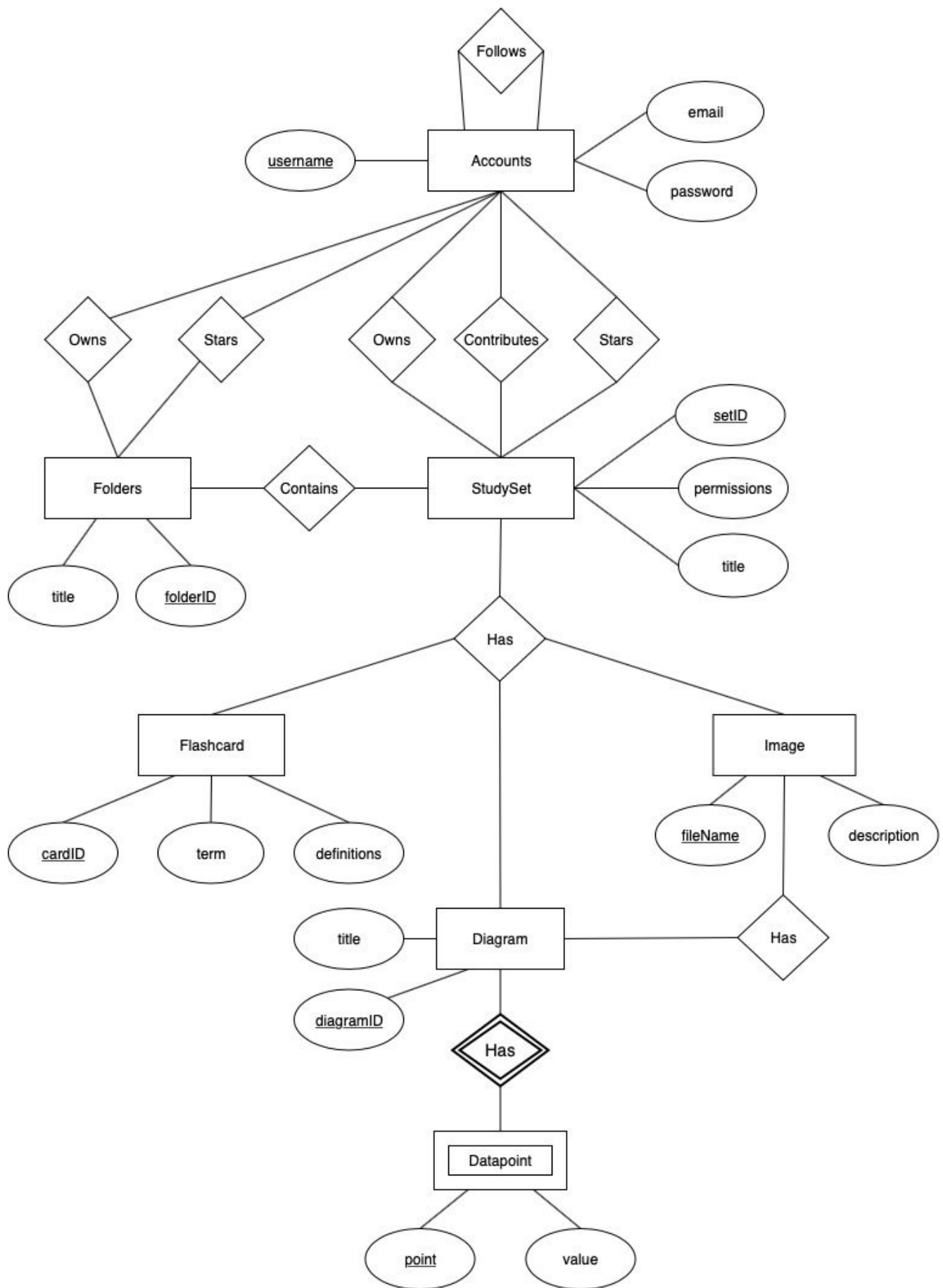
A Web Application for Study Materials

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 stared 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 stared 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

Relationship StudySet -has- Flashcard, Image, Diagram			
setID	cardID	fileName	diagramID
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		

Relationship Folders -contains- StudySets	
folderID	**setID**
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	
username	**setID**
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