CS 327E Intro

September 10, 2018

Terminology

- Database / BigQuery Dataset
- Relation / Entity Type / Table
- Field / Attribute / Column
- Row / Entity / Tuple / Record
- Cell / Value
- Data Type (e.g. INT64, NUMERIC, STRING, BOOL, DATE, ARRAY)
- Schema
- Constraint (e.g. NOT NULL / Required, Primary Key, Foreign Key)

Table Relationship: One-to-Many (1:m)

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Author

id	name	section
1	Mary Tuma	news
2	Michael King	arts
3	Nina Hernandez	news
4	Sunil Kumar	music

Article

id	title	date	*authid*
1	Amazon in Austin's Pocket	2018-01-27	1
2	CodeNEXT's New Friend	2018-01-28	1
3	Quote of the Week	2018-01-28	3
4	SXSW News	2018-01-29	2
5	More from Steve Adler	2018-01-29	1

Table Relationship: One-to-One (1:1)

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1	Amazon in Austin's Pocket	2018-01-27	1
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Article_Stats

id	clicks	likes	dislikes	comments
1	120	45	9	13
2	0	0	0	0
3	8	0	0	2
4	30	4	0	1
5	9	1	3	3

Table Relationship: Many-to-Many (m:n)

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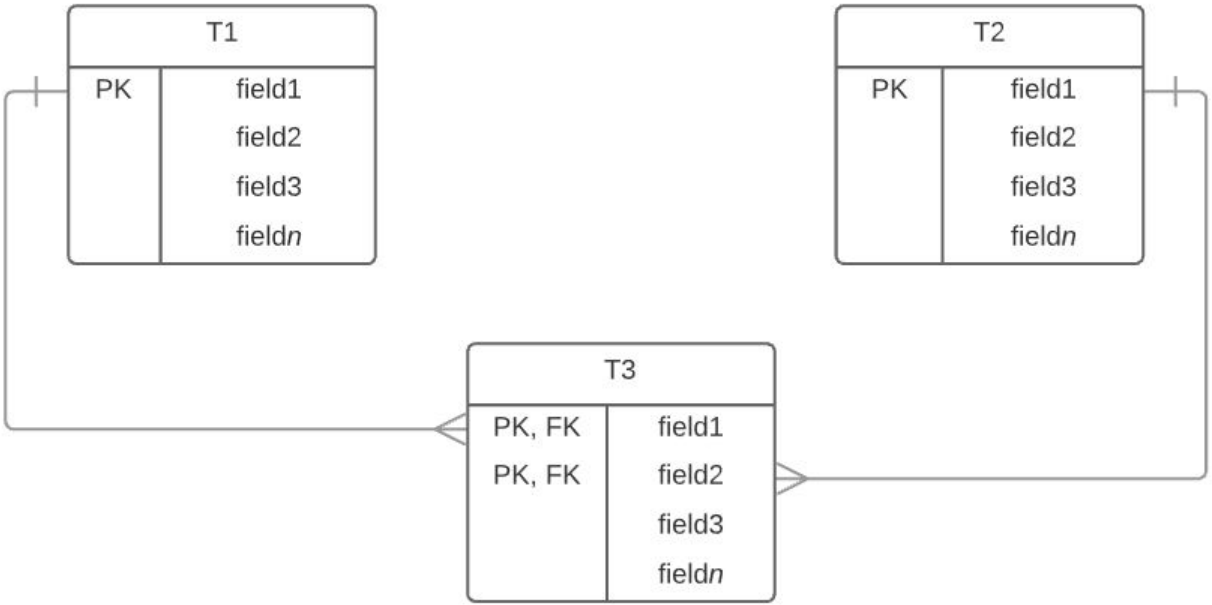
Tag

id	tag	*aid*
1	Politics	1, 2, 5
2	Austin	1, 2, 3, 4, 5
3	Mayor	3, 5
4	Business	1, 2, 5
6	Land Development	2
37	Employment	1, 5

Article

id	title	date	*authid*	*tid*
1	Amazon in Austin's Pocket	2018-01-27	1	4, 37, 2
2	CodeNEXT's New Friend	2018-01-28	1	2, 6
3	Quote of the Week	2018-01-28	3	2, 3
4	SXSW News	2018-01-29	2	2, 40, 7
5	More from Steve Adler	2018-01-29	1	1, 2, 3

Relational Representation of Many-to-Many (m:n)



Relational Representation of Many-to-Many (m:n)

Tag

id	tag
1	Politics
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Tagged_Article

tid	*aid*
4	1
37	1
2	1
2	2
6	2

Survey

Q1. What do **you** hope to get out of this class?

A. Learn how to write complex SQL
B. Learn how to administer a database system
C. Learn how to create a data processing pipeline

Survey

Q2. Do you have experience with some **cloud services**?

A. Virtual Machines (e.g. Compute Engine, EC2)
B. Blob Stores (e.g. Cloud Storage, S3)
C. Databases (e.g. Cloud SQL, BigQuery, RDS)
D. Other
E. None

Survey

Q3. How proficient are you in **Python**?

A. I’m an expert
B. I’m a beginner
C. I’m somewhere in the middle

Milestone 1

http://www.cs.utexas.edu/~scohen/milestones/Milestone1.pdf