CS157A Team 2
Database Design Documentation Revision
A Book Reading and Review Web Application

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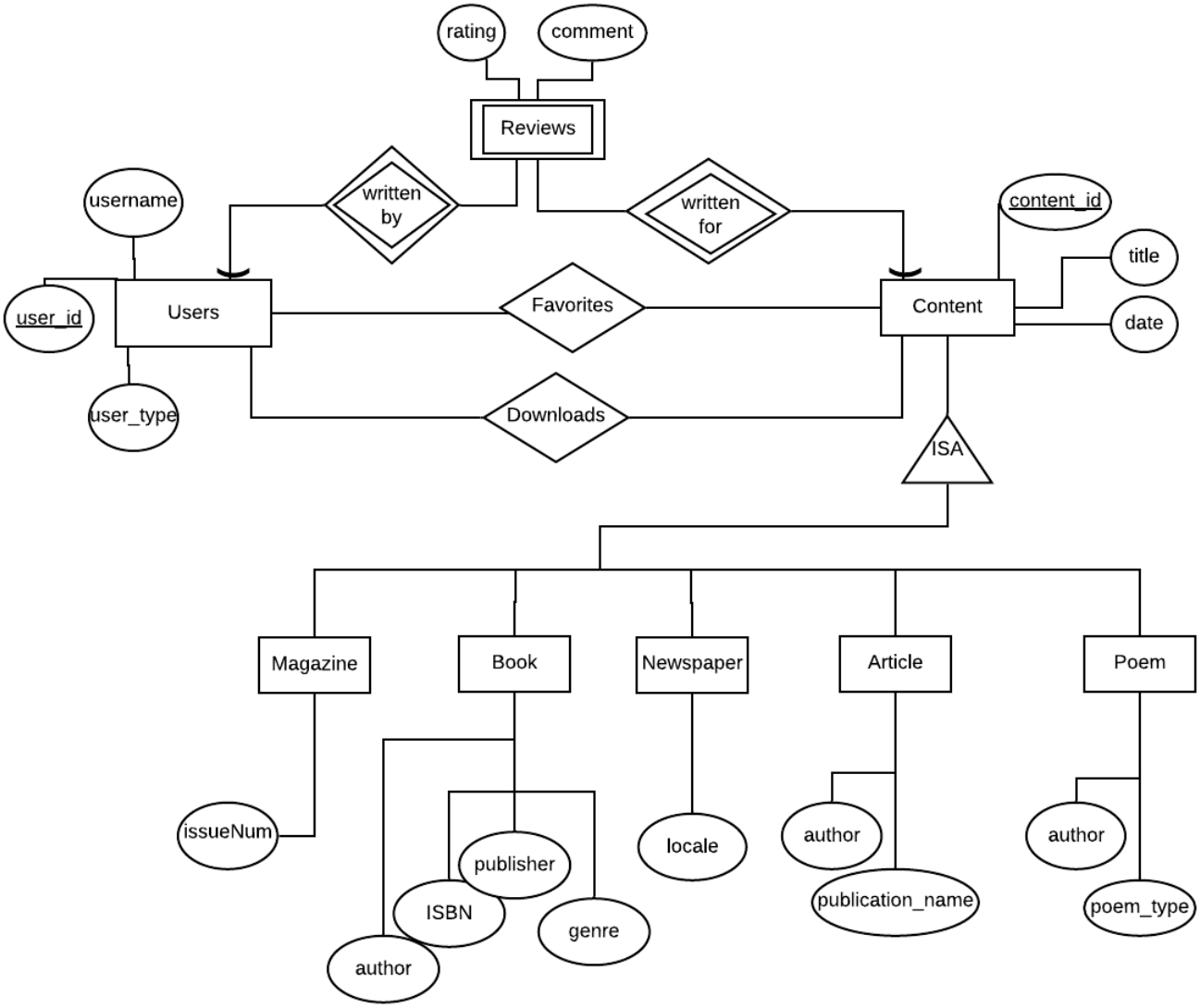
1 Entity-Relationship Diagram



2 Database Schema

- Users(<u>user_id</u>, username, use_type)
- Reviews(<u>user_id</u>, <u>content_id</u>, rating, user_comment)
- Favorites(<u>user_id</u>, <u>content_id</u>)
- Downloads(<u>user_id</u>, <u>content_id</u>)
- Content(<u>content_id</u>, title, publish_date)

- Article(conent_id, author, publication_name)
- Magazine(content_id, issueNum)
- Book(content_id, ISBN, author, genre)
- Newspaper(content_id, locale)
- Poem(content_id, poem_type, author)

3 Database Tables

3.1 Users

user_id	username	user_type
1	bobby12	regular
10	AI	regular
11	boot	regular
12	goolger	regular
13	password	regular
14	enterpirseUser	regular
15	dispo341	regular
2	tim12	admin
3	joe01	admin
4	tim	admin
5	joseph	regular
6	mikeWU	regular
7	timard	regular
8	WUmiek	regular
9	jame	regular

3.2 Reviews

user_id	content_id	rating	user_comment
1	23	3	fun
1	28	1	good book
1	46	3	nicee
1	49	5	decent
1	59	1	NULL
1	60	2	NULL
1	61	1	NULL
1	66	1	NULL
10	18	1	NULL
2	52	4	bad book
5	22	2	boring
5	24	1	bad
5	73	4	NULL
7	61	2	NULL
8	55	7	I love this book so much it is so good best book ever!
8	62	2	NULL

3.3 Favorites

user_id	content_id
1	1
1	4
1	7
1	12
1	17
10	4
11	4
12	4
12	6
13	14
14	4
19	4
5	2
6	4
8	4

3.4 Downloads

user_id	content_id
1	1
1	5
1	7
1	12
1	17
10	4
11	4
12	4
12	6
13	14
14	4
19	4
5	2
6	4
8	4

3.5 Poem

content_id	author	poem_type
61	Georgre Bush	Haiku
62	James Jones	Haiku
63	James Reds	Ballad
64	John Renyolds	Ballad
65	Patrick Renyolds	Ballad
66	Harry Renyolds	Ballad
67	Daisy Renyolds	Haiku
68	Patrick James	Haiku
69	Patrick Bush	Ode
70	Patrick Renyolds	Ballad
71	James Bush	Haiku
72	Tomard Renyolds	Love
73	Gustavo Renyolds	Love
74	Frank Renyolds	Ballad
75	J. Renyolds	Ballad

3.6 Content

content_id	title	publish_date
1	Snowbaording Magazine	2018-08-01
2	Snowbaording Magazine	2018-09-01
3	Snowbaording Magazine	2018-10-01
4	Snowbaording Magazine	2018-11-01
5	Snowbaording Magazine	2018-12-01
6	Snowbaording Magazine	2019-01-01
7	Snowbaording Magazine	2019-02-01
8	Snowbaording Magazine	2018-03-01
9	Snowbaording Magazine	2019-04-01
10	Snowbaording Magazine	2019-05-01
11	Snowbaording Magazine	2019-06-01
12	Snowbaording Magazine	2019-07-01
13	Snowbaording Magazine	2019-08-01
14	Snowbaording Magazine	2019-09-01
15	Snowbaording Magazine	2019-10-01
16	In the Electric Mist	2019-02-01
17	Babylon 5	2018-04-01
18	Mortuary	2017-11-11
19	Counterfeit Coin	2018-06-05
20	Ah, Wilderness!	2018-10-13
21	Independencia	2018-10-24
22	Lost Son, The	2018-11-20
23	Wild Child	2019-07-14
24	Little Big Soldier	2018-11-18
25	Medea	2017-12-16
26	One Fine Spring Day	2019-07-05
27	Galaxina	2018-12-18
28	Godzilla 2000	2017-11-09
29	Free Soul, A	2019-08-21
30	Attack on the Iron Coast	2019-04-30
31	New York Time	2018-06-28
32	New York Time	2018-04-10
33	New York Time	2018-10-04
34	New York Time	2018-08-30
35	New York Time	2018-05-29
36	New York Time	2019-09-05
37	New York Time	2019-08-16
38	New York Time	2018-12-01
39	New York Time	2018-07-24
40	New York Time	2018-09-07
41	New York Time	2018-09-17
42	New York Time	2019-01-18
43	New York Time	2019-05-13
44	New York Time	2019-10-02
45	New York Time	2018-04-30
46	Why WWII was Bad	1994-12-11
47	WWI -- The Good War	1994-12-10
48	Vietnam War: 20 Year Later	1994-12-09
49	Cold War	1994-12-01
50	The Good War	1994-12-01
51	The Bad War	1994-12-01
52	10 Reasons Why Poems are Good	1994-12-05
53	5 Reasons to use NoSQL	1994-12-05
54	7 Reaons to use MySQL	1994-12-05
55	12 Reasons to Normalize Database	1994-12-05
56	Neural Nets for Preschoolers	1994-12-11
57	How to Perform Surgery	1994-12-11
58	How to write ER Diagrams	1994-12-01
59	SJSU Announces New Gym	1994-12-01
60	SJSU Power Outage	1994-12-12
61	A Walk	1666-01-11
62	A Run	1266-01-11
63	A Jog	1631-12-10
64	A Dog	1435-10-10
65	A CAT	1123-10-10
66	A Harry Potter	1823-01-09
67	Table	1923-01-09
68	I love Databases	1941-11-09
69	Best Poem Ever	1921-01-09
70	Consumerism	1941-01-09
71	Capitalism	1952-01-09
72	Canda	2035-11-09
73	Food	1635-11-09
74	A Long Run in the Park	1835-04-12
75	A Ballad to James	1935-11-12

3.7 Magazine

content_id	issueNum
1	291
2	292
3	293
4	294
5	295
6	296
7	297
8	298
9	299
10	300
11	301
12	302
13	303
14	304
15	305

3.8 Article

content_id	author	publication_name
46	Patrick	New York Times
47	Jones	New York Times
48	Tim Cook	New York Times
49	Steve Job	New York Times
50	Bill Gate	New York Times
51	Tom Gate	New York Times
52	Michael Gate	New York Times
53	John Lennon	New York Times
54	John Lennon	New York Times
55	Timard Jones	New York Times
56	Mike Wu	New York Times
57	Mike Wu	New York Times
58	Harry Potter	New York Times
59	Harry Potter	New York Times
60	James Potter	New York Times

3.9 Newspaper

content_id	locale
31	New York City, NY
32	New York City, NY
33	New York City, NY
34	New York City, NY
35	New York City, NY
36	New York City, NY
37	New York City, NY
38	New York City, NY
39	New York City, NY
40	New York City, NY
41	New York City, NY
42	New York City, NY
43	New York City, NY
44	New York City, NY
45	New York City, NY

3.10 Book

content_id	ISBN	author	publisher	genre
16	304555343-5	Murdoch Cave	Leela Buterton	Comedy
17	659196532-7	Goldy Aimeric	Ali Gaitskell	Comedy
18	491743522-6	Jelene Fancet	Linzy Shelf	Comedy
19	346181073-8	Paulie Ouldcott	Adrianna Gresch	Adventure
20	868282781-6	Taber Deguara	Shanta Daouze	Horror
21	109670642-3	Clareta O'Carran	Winifield	Sci-Fi
22	239189700-6	Osbourne Kingsly	Antonella Fancett	Crime
23	671528801-1	Stevena Gotling	Mabelle MacFaul	Drama
24	583092606-7	Debi Vala	Madelon Croux	Drama
25	674056408-6	Merilee Blackall	Oates Raspison	Crime
26	273454549-7	Wanda Morbey	Shawn Kosel	Crime
27	544491903-6	Clyde Marginson	Jocko Connors	Comedy
28	469558624-X	Magdaia Killelay	Prudence Rudsdell	Crime
29	541188048-3	Philippa Frays	Noel Doerrling	Action
30	133956813-6	Sharron Earley	Roze Sterzaker	Comedy

4 Entities

4.1 Users

Users are defined as those who have a valid account login for the website. The attributes for Users are as follows:

- type: A user can be of two types, admin or regular. Admins have special privileges
- username: The unique username by which a user logs into the web application
- userID: the unique identifier by which a user's information is tracked

4.2 Content

Content comes in many forms. There are four subclasses of Content, but it possible that there exist an item that is only classifiable as Content and none of its subclasses.
The attributes for Content are as follows:

- content_id: The unique content identifier
- title: The name/title of the content
- date: The date the content was published, if available

4.3 Books

Books are a special case of Content. They have special attributes which sets them apart; however, books inherit the primary key from content. In addition, books have the following attributes:

- ISBN: the unique book ISBN number

- publisher: the publisher of the book
- author: The author of the book
- genre: the genre of the book

4.4 Magazines

Magazines are a special case of Content. They have special attributes which sets them apart; however, magazines inherit the primary key from content. In addition, magazines have the following attributes:

- issueNum: the issue number of the magazine.

4.5 Newspapers

Newspapers are a special case of Content. They have special attributes which sets them apart; however, Newspapers inherit the primary key from content. In addition, magazines have the following attributes:

- location: the locality of a Newspaper, if available.
- publication: the name of the newspaper publication

4.6 Articles

Articles are standalone pieces of writing which may, in some cases, be significant enough to publish on the web application as it's own piece of media. Articles inherit the primary key from Content but have additional relationships, as described in the relationships section. Articles also have the following additional attributes:

- author: the author of the article

4.7 Poems

Poems are a specialized form of content, usually artistic in nature. Poems inherit the primary key from Content but have additional attributes, as described in the relationships section. Articles also have the following additional attributes:

- author: the author of the poem (if available)
- type: the type of poem (ballad, epic, prose, haiku, etc.)

4.8 Reviews

Reviews are the way by which users rate their satisfaction with a particular piece of content. Reviews are a weak entity set due to the reliance on the primary keys from its relationships with User and Content, as described in the relationship section. Reviews consist of the following attributes:

- rating: the star rating given (out of 5)
- comment: the comment left in addition to the rating (optional)

5 Relationships

5.1 User Writes Reviews

A user (admin or regular) is the author of zero or many reviews. The weak entity set Review borrows the primary key username of User. This is a supporting relationship for the Review entity set.

5.2 Review Written for Content

A piece of content can obtain many reviews, but each review only belongs to one particular piece of content. The weak entity set Review borrows the primary key id from Content. This is a supporting relationship for the Review entity set.

5.3 User Favorites Content

A user can favorite content, which allows them to keep track of their favorite items. Content can be favorited by zero or many users. Users can favorite zero or many pieces of content.

5.4 User Downloads Content

We would like to keep track of user's download history. A user can download zero or many pieces of content, and a piece of content may be downloaded by zero or many users.