SOCIAL MEDIA NETWORK DATABASE

This **Social Media Network** database models a small but complex online community where users interact through friendships, posts, comments, and group memberships. The **Users** table holds personal details such as names, locations, and occupations, with some missing data (NULL values) to simulate real-world scenarios. The **Friendships** table captures relationships between users, including both active and inactive statuses. Users share content through the **Posts** table, which tracks likes and shares, while their interactions with posts are recorded in the **Comments** table. Additionally, users can join interest-based communities via the **Groups** table, with memberships stored in the **Group Memberships** table. This database is designed for SQL practice and can be transferred to a Neo4j graph database, where users and posts become nodes, and relationships such as friendships, comments, and group memberships are modelled as edges, offering a rich environment for exploring relational and graph-based data structures.

Users

user_id	full_name	email	location	join_date	birth_date	occupation
10001	Alice Johnson	alice@email.com	New York	2020-01-15	1990-04-12	Engineer
10002	Bob Smith	bob@email.com	Los Angeles	2019-06-23	1985-07-22	Marketing Specialist
10003	Carol White	carol@email.com	NULL	2021-02-10	NULL	Data Scientist
10004	David Brown	david@email.com	San Francisco	2018-09-18	1987-03-29	NULL
10005	Emma Davis	emma@email.com	NULL	2022-07-22	1995-11-05	Teacher
10006	Frank Miller	frank@email.com	Boston	2019-11-12	NULL	NULL
10007	Grace Harris	grace@email.com	Seattle	2021-03-30	1991-05-14	Software Engineer
10008	Henry Wilson	henry@email.com	NULL	2020-05-22	1989-01-25	Doctor
10009	Irene Green	irene@email.com	New York	2021-07-10	NULL	Architect

Posts

post_id	user_id	content	post_date	likes	shares
20001	10001	Exploring the benefits of clean energy solutions.	2021-01-15	10	2
20002	10001	Excited to announce a new partnership with GreenTech.	2021-02-10	5	1
20003	10002	Marketing strategies for the digital age.	2021-05-18	20	4
20004	10003	Data science trends to watch in 2022.	2022-03-20	7	0
20005	10004	The art of minimalistic design in web development.	2021-09-10	15	3
20006	10005	Best practices for teaching in a virtual environment.	2022-11-22	12	6
20007	10001	Innovative engineering solutions for a sustainable future.	2021-12-22	9	2
20008	10007	How AI is revolutionizing software engineering.	2022-01-11	4	1

Comments

comment_id	post_id	user_id	comment_text	comment_date
30001	20001	10002	Great post Alice!	2021-01-16
30002	20001	10003	Interesting thoughts!	2021-01-17
30003	20003	10001	Good point Bob!	2021-05-20
30004	20003	10007	I agree!	2021-05-22
30005	20005	10006	Well said David!	2021-09-12
30006	20005	10003	Nice perspective!	2021-09-13

Friendships

friendship_id	user_id_1	user_id_2	friendship_date
40001	10001	10002	2020-01-15
40002	10001	10003	2020-03-10
40003	10002	10004	2020-05-05
40004	10003	10005	2021-07-25
40005	10004	10006	2019-10-11
40006	10005	10007	2020-02-15
40007	10006	10008	2021-03-20
40008	10008	10009	2021-06-12
40009	10009	10001	2022-01-18

Groups

group_id	group_name	created_by	creation_date	category
50001	Tech Enthusiasts	10003	2021-04-15	Technology
50002	Book Lovers	10005	2020-09-18	Books
50003	Fitness Group	10007	2021-06-12	Fitness

Group Memberships

membership_id	user_id	group_id	join_date
60001	10001	50001	2021-05-20
60002	10002	50002	2020-10-22
60003	10003	50001	2021-04-16
60004	10005	50002	2020-10-23
60005	10007	50003	2021-06-13
60006	10001	50003	2021-08-12