Problem Statement

Product Dissection for top leading Platforms

Welcome to this case study on dissecting and designing products for top leading platforms. In this case study, you will delve into the intriguing world of schema design for a prominent platform of your choice. Your task is to choose a top leading platform, research its features, and meticulously craft a schema design that encapsulates the essence of its functionality. By focusing on key entities, attributes, and relationships, you will gain invaluable insights into how data architecture drives the platform's effectiveness.

Step 1: Choose a Leading Platform
Select a leading platform of your choice, which could span various domains such as social media, e-commerce, finance, or any other industry. This choice will form the foundation of your exploration into its schema design.

Step 2: Research:
Thoroughly research the platform you have selected. Investigate its core features, functionalities, and user interactions. Identify the top features that define its user experience and contribute significantly to its popularity.

Step 3: Product Dissection and Real World Problems solved by the platform
In this step, you will meticulously analyse the platform's standout features and how they provide innovative solutions to real-world challenges. By identifying key functionalities that resonate with users, you'll unravel how the platform effectively addresses problems and enhances user experiences. This dissection will serve as the foundation for understanding how the schema design aligns with the platform's core objectives.

Step 4: Case Study on the real world problems and approach to solving them
In this pivotal step, you will expand on the real-world challenges uncovered in Step 3 through a comprehensive case study. Delve into specific instances where users encountered difficulties and showcase how the platform's unique features provided effective solutions. By dissecting the approach taken by the platform to overcome these challenges, you'll gain a deeper appreciation for the platform's user-centric design philosophy and how it shapes the schema design.

Step 5: Schema Design Based on Top Features
Based on the features you have identified, craft a schema design that reflects the platform's data structure. Focus on the key entities, attributes, and relationships that underpin the chosen features. Your schema should capture the essence of how the platform organises and utilises its data.

Step 6: Rationale Behind the Design

While creating the schema design, consider the rationale behind the platform's choices. Reflect on why certain entities and relationships were chosen and how they align with the platform's goals. This will help you understand the strategic decisions driving the schema's architecture.

Step 7: Create an ER Diagram
Utilise tools like the Miro platform or similar applications to create an illustrative Entity-Relationship (ER) diagram. This diagram should vividly depict the entities, attributes, and relationships present within your schema design. The ER diagram will serve as a visual representation of your insights.

Step 8: Presentation of Findings
Present your findings in a clear and concise manner. Showcase your understanding of how the schema design impacts the platform's functionality and user experience. Explain how your chosen features are integrated into the schema and how the schema's structure supports the platform's objectives.

Task Details:

1. **Answer Submission:** Your submission should include well-structured solutions for all provided questions related to product schema designs.

2. **Video Creation:** Create an informative and engaging video where you thoroughly explain the Case Study.

3. **Depth and Clarity:** Ensure your solutions are detailed and showcase your understanding of product schema design principles. Similarly, in the video, provide clear explanations that are easy to understand for a wide audience.

4. **Creativity Encouraged:** You are welcome to utilise visuals, diagrams, or creative elements to enhance the clarity and impact of your explanations.

Note:

1. Duplicate this document and proceed to write your solutions and prepare your video.
2. Include the video link in this document before final submission.

Best of luck in completing this project and showcasing your prowess in dissecting and designing product schema for leading platforms!

LinkedIn

Product Dissection for LinkedIn

Company Overview:

LinkedIn is a professional social networking platform that was founded in December 2002 and launched in May 2003. The company's primary mission is to connect the world's professionals to make them more productive and successful. LinkedIn is widely regarded as the leading platform for professional networking and has transformed the way people connect, find jobs, and share industry insights.

Issue 1: Disconnection in Digital Relationships

Real-Life Problem:
In our increasingly digitalized world, fostering genuine and meaningful professional connections can be a daunting task. Digital interactions often lack the depth and authenticity inherent in face-to-face encounters, resulting in a disconnect within digital relationships. Many professionals find it challenging to effectively convey their personalities, emotions, and professional identities through digital means.

LinkedIn's Resolution:
LinkedIn addresses the issue of disconnection in digital relationships by providing a platform that enables professionals to showcase their complete professional identity. Here's how:

Comprehensive User Profiles: LinkedIn users can construct detailed professional profiles that encompass their work history, skills, education, endorsements, and recommendations. These profiles function as digital resumes, offering a comprehensive view of a professional's background and expertise.

Media Integration: Users have the ability to enhance their profiles with various media files, such as documents, images, videos, and presentations. This feature allows professionals to spotlight their work, portfolios, and projects, injecting a personal touch into their profiles.

Professional Insights: The platform encourages users to share articles, posts, and updates related to their industry, experiences, and interests. This content-sharing aspect enables users to articulate their thoughts, insights, and perspectives, fostering more meaningful interactions.

Recommendations and Commendations: Users have the option to seek commendations and recommendations from colleagues and connections on LinkedIn. These endorsements vouch for a user's skills and professionalism, contributing to the credibility of their profiles.

Connecting and Networking: At the heart of LinkedIn's functionality is the ability to connect with other professionals. Users can establish connections with colleagues, acquaintances, industry peers, and potential employers. These connections serve as gateways to meaningful interactions and potential opportunities.

Messaging and Interactions: LinkedIn's messaging system facilitates one-on-one conversations between users and their connections. This feature provides a platform for personalized communication, networking, and professional discussions.

By integrating these functionalities, LinkedIn effectively helps professionals overcome the challenges of disconnect in digital relationships. Users can articulate their professional identities, share their experiences, connect with like-minded professionals, and participate in substantial conversations. This holistic approach empowers users to establish and nurture authentic professional relationships, effectively addressing the issue of disconnection in digital interactions.

Issue 2: Excessive Information Burden

Real-Life Problem:
Professionals often find themselves inundated with an excessive amount of information from diverse sources, encompassing news, articles, updates, and job postings. This information overload poses a difficulty in sifting through and identifying relevant and valuable content and opportunities.

LinkedIn's Resolution:
LinkedIn tackles the challenge of information overload by providing features such as personalized feeds, content suggestions, followed hashtags, job recommendations, advanced search capabilities, and email digests. These tools empower users to discover and prioritize the most pertinent content and opportunities, thereby streamlining their professional experiences.

professional niche, addressing the challenge of finding a platform for creativity and fostering personal and career growth. Professional niche, addressing the challenge of finding a platform for creativity and fostering personal and career growth.

Issue 3: Carving a Space for Creativity

Real-Life Problem: Numerous individuals aspire to explore creative pursuits, yet identifying a platform to exhibit and monetize their talents can be a formidable task.

LinkedIn's Resolution:
LinkedIn provides a platform for creative professionals to exhibit their skills, expertise, and creative projects through features like LinkedIn Articles, Project Showcases, and Professional Groups. These functionalities establish a dedicated space for individuals to articulate their creativity, receive recognition, and connect with like-minded professionals who share similar interests. Creative individuals on LinkedIn can transform their passion into a tangible manifestation of personal and professional development. This journey involves overcoming the challenge of finding an appropriate platform for creative expression while simultaneously fostering growth in both personal and career dimensions.

Issue 4: Constricted Personal Branding

Real-Life Problem: Crafting a distinctive online identity proves to be a hurdle, particularly when conventional text-based platforms impose limitations on personal branding.

LinkedIn's Resolution:
LinkedIn empowers users to construct comprehensive professional profiles that encompass a profile picture, professional headline, summary, featured content, and endorsements. This platform provides individuals with the space to showcase their skills, achievements, and personal brand within a professional context, effectively overcoming the constraints of limited personal branding on traditional platforms.

Conclusion:
LinkedIn's dedication to fostering professional networking and personal branding is evident in its user-focused strategy. By providing a space for users to develop and promote their professional identities, LinkedIn successfully addresses the issue of restricted personal branding, enabling individuals to distinguish themselves in the professional landscape. This case study underscores LinkedIn's position as a leader in professional networking and personal branding, shaping the landscape for how professionals connect and build their online careers.

Top Features of Linkedin:

LinkedIn is a business-oriented social media platform with over 740 million members. Some of its top features include:

- **Showcase page**: A key feature for businesses with multiple target audiences
- **Name pronunciation**: Users can record an audio clip of how to pronounce their name and add it to their profile
- **Save posts**: Users can save job searches, posts, and LinkedIn learning programs

- **Private messaging**: Users can access private messaging and groups
- **Alumni search**: Users can search for alumni
- **Keywords**: Users can use keywords
- **Activity**: Sharing relevant content with your network
- **Hashtag**: LinkedIn hashtags are **terms with a "#" symbol before keywords**. They are used in posts, comments, and add descriptions to increase reach. Hashtags can also help people connect with like-minded people on the platform.

Schema Description:

The schema for LinkedIn involves multiple entities that represent different aspects of the platform. These entities include Profile, Posts, Comments, Likes, Followers, Hashtags, and more. Each entity has specific attributes that describe its properties and relationships with other entities.

Entities:

Profile:
Description: The Profile entity serves as the central repository for information pertaining to each LinkedIn user. It encompasses essential details such as user identifiers, contact information, professional summary, skills, connection count, and the date the user joined LinkedIn.

- **UserID** (integer, Primary Key): A unique identifier crucial for individual user identification.
- **User_name** (string, varying up to 50 characters): The first name of the user, providing a basic identification tag.
- **Full_Name** (string, varying up to 100 characters): The complete name of the user, encompassing both first and last names.
- **Headline** (string, varying up to 120 characters): A professional summary that succinctly outlines the user's expertise or current role.
- **Email** (string, varying up to 100 characters): The user's designated email address for professional communication.
- **Summary** (string up to 200 characters): A brief yet comprehensive professional summary or bio providing insights into the user's background and skills.
- **Profile_Date** (timestamp with time zone): The date indicating when the user joined LinkedIn, offering a temporal reference for their professional journey.

Post:
Description: The Post entity enables users to share professional updates and insights. It links back to the Profile entity through the UserID foreign key, connecting each post to the respective user. Key attributes include a unique post identifier, content, associated image URLs, and the timestamp of the post's creation.

- **PostID** (integer, Primary Key): A unique identifier crucial for individual post identification.
- **UserID** (integer, Foreign Key referencing User Entity): Links to the User entity, indicating the user who authored the post.
- **Content** (text): The textual or media content shared in the post, providing information or insights to the LinkedIn community.
- **Image_URL** (string, varying up to 255 characters): The URL pointing to any attached images or media within the post, enriching the post with visual content.
- **Post_Date** (timestamp with time zone): The date when the post was created, offering a temporal reference for the post's timeline.

Comment:

Description: The Comment entity facilitates user engagement by allowing comments on posts. Similar to the Post entity, it establishes connections with both the Profile and Post entities through foreign keys. Key attributes include a unique comment identifier, the post being commented on, the user posting the comment, comment text, and the timestamp of the comment.

- **CommentID** (integer, Primary Key): A unique identifier crucial for individual comment identification.
- **PostID** (integer, Foreign Key referencing Post Entity): Links to the Post entity, specifying the post being commented on.
- **UserID** (integer, Foreign Key referencing User Entity): Links to the User entity, identifying the user who posted the comment.
- **Text** (string, varying up to 500 characters): The textual content of the comment, representing the user's input in the ongoing discussion.
- **Comment_Date** (timestamp with time zone): The date when the comment was posted, providing a chronological order to the comments and discussions.

Like:

Description: Likes represent user appreciation for posts.

- **LikeID** (integer, Primary Key): A unique identifier for each like, crucial for individual like identification.
- **PostID** (integer, Foreign Key referencing Post Entity): Links to the Post entity, specifying the post being liked.
- **UserID** (integer, Foreign Key referencing User Entity): Links to the User entity, identifying the user who liked the post.
- **Like_Date** (timestamp with time zone): The date when the like was registered, providing a temporal reference for the appreciation.

Follower:

Description: Followers establish professional connections between users.

- **FollowerID** (integer, Primary Key): A unique identifier for each follower relationship, crucial for individual follower identification.
- **FollowingUserID** (integer, Foreign Key referencing User Entity): Links to the User entity, specifying the user who is being followed.
- **FollowerUserID** (integer, Foreign Key referencing User Entity): Links to the User entity, specifying the user who is following.

- **Follow_Date** (timestamp with time zone): The date when the following relationship was initiated, marking the beginning of the professional connection.

Hashtag:
Description: Hashtags categorize and group content based on professional topics.

- **HashtagID** (integer, Primary Key): A unique identifier for each hashtag, crucial for individual hashtag identification.
- **Tag** (string): The actual text of the hashtag, representing the keyword or phrase used for content categorization.

PostHashtag:
Description: Associates posts with hashtags.

- **PostHashtagID** (integer, Primary Key): A unique identifier for each association, crucial for individual post-hashtag association identification.
- **PostID** (integer, Foreign Key referencing Post Entity): Links to the Post entity, specifying the post associated with the hashtag.
- **HashtagID** (integer, Foreign Key referencing Hashtag Entity): Links to the Hashtag entity, specifying the hashtag associated with the post.
- **Tag**: The actual text of the hashtag.

Relationships are:

1.Users create Posts:

- Each user on LinkedIn can create multiple posts.
- Each post is created by one user.

2.Users comment on Posts:

- Users on LinkedIn can comment on multiple posts.
- Each post can have multiple comments.
- Each comment is made by one user.

3.Users like Posts:

- LinkedIn users can like multiple posts.
- Each post can have multiple likes.
- Each like is registered by one user.

4.Users connect with other Users:

LinkedIn users can connect with multiple other users.

- Each user can be connected with multiple users.
- The connection relationship is reciprocal – if User A connects with User B, it implies that User B is also connected with User A.

5.Users follow Company Pages:

- LinkedIn users can follow multiple company pages.
- Each company page can be followed by multiple users.

6.Users endorse Skills on Profiles:

- LinkedIn users can endorse multiple skills on the profiles of other users.
- Each skill on a user's profile can be endorsed by multiple users.

7.Users join and participate in Groups:

- LinkedIn users can join multiple groups.
- Each group can have multiple members.
- Users can participate in discussions within these groups.

8.Users send and receive Messages:

- LinkedIn users can send messages to multiple other users.
- Each message is sent by one user and received by another user.

9.Users post and share Articles:

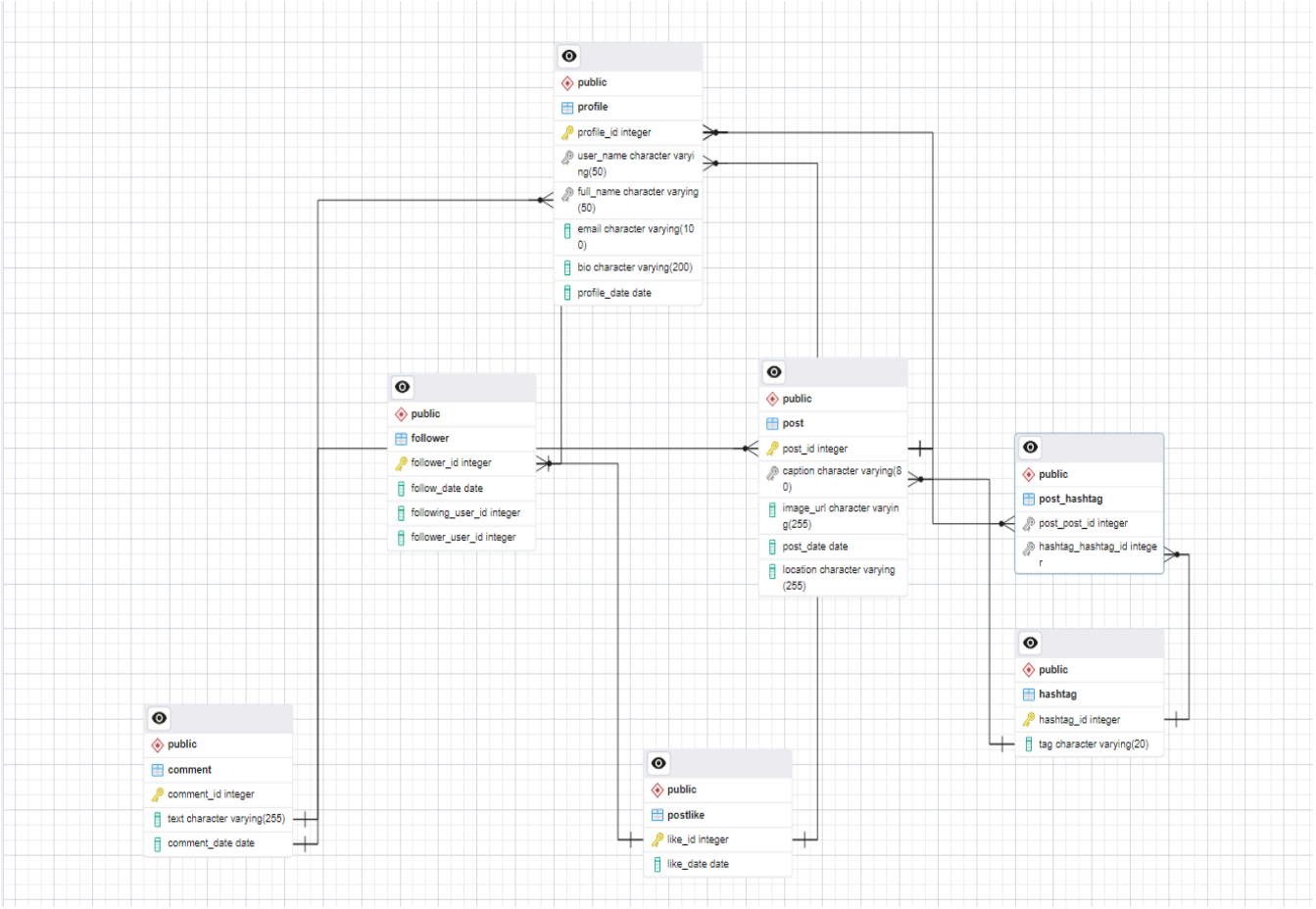
- LinkedIn users can post and share multiple articles.
- Each article is posted by one user.

10.Users recommend and get Recommendations:

- LinkedIn users can recommend multiple skills on the profiles of other users.
- Each skill on a user's profile can be recommended by multiple users.

ER Diagram Construction: We will now create an ER diagram to visually articulate the relationships and attributes inherent in the LinkedIn schema. This diagram serves as a graphical representation, offering insights into the essential components of the LinkedIn data

model. Utilizing this diagram will provide a comprehensive understanding of the complex interactions and connections that shape the dynamics of the platform.



Conclusion

In this case study, we delved into the design of Linkedin schema and Entity-Relationship diagram. Linkedin has revolutionised the way people share and engage with visual content, fostering connections and creative expression. The platform's intricate data model, consisting of entities like profiles, posts, comments, likes, followers, hashtags, and associations, forms the foundation for its seamless functionality. By understanding this schema, we gain insight into how Linkedin effectively manages the complexities of profiles interactions and content sharing, contributing to its widespread popularity and continued growth in the world of social media.