

Lab Assignment 1 - Introduction to Databases

Instructions

1. Answer the below question in the boxes.
2. Please submit the assignment through TalentLabs Learning System.

Database 101

1. Suggest 3 applications/software/apps which can utilize Database.

- 1) PayPal
- 2) Twitter
- 3) Facebook

2. Consider a payment application (Like PayPal or a banking app). How would a database play a role in the payment system? Can you mention 2 user operations that rely on the database of a payment application?

- 1) **Account Management** - Users have the ability to create, modify, or remove their accounts via the application. The database securely holds essential information, such as personal details (name, email, address), banking information, and credit card data. This functionality enables users to efficiently manage their profiles, ensuring their payment methods and personal information are always up-to-date and protected.
- 2) **Transaction History** - Users can initiate transactions, including payments and transfers. Each transaction is documented in the database, noting details such as the amount, date, recipient, and status. This allows users to access their transaction history, helping them monitor their spending, confirm payments, and effectively manage their finances.

Database Concept

Consider a movie rating website. The website is able to display movie details e.g. movie name, directors, actors etc. Also, users can rank and review the movies.

1. Suggest 3 data tables for the website.

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- 1) Users Table
- 2) Movies Table
- 3) Ratings Table

2. Suggest 5 data fields that should be available on the database.

- 1) user_id
- 2) movie_title
- 3) release_date
- 4) user_rating
- 5) user_review

Types of Databases

1. Name 2 Relational Database Software.

- 1) MySQL
- 2) SQLite

Roles of Database in Detail

Consider a user registering an account on a social media website (e.g. Twitter). Describe the role of the below elements when the user pressed the “Register” button.

1. App / Website

The app or website is responsible for capturing the user’s input, validating it, securely sending the data to the database, handling the database response, and providing a smooth and secure registration experience.

2. Database

The database’s role in the registration process includes storing user information securely, validating and enforcing data integrity, and ensuring the security of sensitive.

- End of Assignment -