**Database**

**PBL**

**Project Proposal**



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**Projects Topics**

* **IMDB Database (First Priority)**

**Project Description**

The IMDb Database is made to store and manage information about movies, actors, and users, like IMDb. This project will create an easy-to-use database that shows important details about movies, TV shows, users interaction with the IMDb database like having a favourite movie or watch list. People can look at movie information, see cast and crew, write reviews, and rate movies.

**Functionalities**

1. **Movie Details**
   * Each movie will have a detailed page including attributes such as title, release date, duration, genre, language, budget, box office figures etc.
2. **Cast and Crew Management**
   * In Database we will have list of directors, actors, producers and other crew management teams profile linked to the work they’ve done.
3. **User Profiles**
   * Registered users can create profiles, leave reviews, rate movies, add movies to watch lists or favourites, and follow other users or actors/directors.
4. **Review and Rating System**
   * Users can write reviews for each movie, assign ratings, and engage with others’ reviews through comments and likes.
5. **Search and Filter Functionality**
   * We can search and filter the data by genre, release year, rating, language, and keywords, allowing users to find specific content quickly.
6. **Watch list and Favorites Management**
   * Users can save movies to a watch list or mark them as favorites for easy access and viewing history.

* **FoodFusion (Second Priority)**

**Description:**

We will design and maintain a database for a food ordering application like foodpanda. The main purpose of this project is to explore and analyze all aspects related to database of food application. At the end of this project we will have a fully structured database that is inter-related with each other and data can be retrieved, stored and deleted easily without any redundancy or data leakage.

**Functionalities**

1. **User Profiles Management**

Users can create profiles, manage personal information, and access role-specific features. Verification will be performed to ensure secure logins for customers, admins, and restaurant partners.

1. **Restaurant and Menu Management**

The database maintains detailed restaurant profiles, menu items, and categories. Each item includes details like name, price, description, and availability status.

1. **Order Processing and Payment Management**

Orders track user, restaurant, and item details. Supports multiple payment methods with transaction history.

1. **Ratings, Reviews, and Feedback**

Users can rate and review restaurants, food, and delivery service.

1. **Search, Filter, and Favorites**

Users search and filter restaurants by cuisine, rating, price, and availability. Favorites will be used for quick ordering.

1. **Promotions, Discounts, and Offers**

Manages active discounts, coupons, and promotional offers. Redeemed discounts and coupons will be tracked.

* **Fast Pak (Third Priority)**

**Description:**

We will design and maintain a database for a charity works all around Pakistan. The database will have all the data about the volunteers, charity organization, affected people of calamities. Furthermore this will also integrate hospitals data to inform volunteers about the emergency situations so that they can help make Pakistan a better place.

**Functionalities**

**1. Volunteer Profiles Management**

Database stores volunteer profiles, contact details, and availability. Volunteers will be assigned roles for their specific virtue.

**2. Charity Organization Details**

Maintains profiles of charity organizations, detailing their missions, locations, and ongoing projects. Each project includes specific objectives, timelines, and resource needs.

**3.** **Beneficiary and Affected People Tracking**

Data of people in need or aid of any kind from volunteers, charity organization or donors. Will contain their personal details, aid history and emergency aid status, location, and aid level.

**4. Emergency Response and Hospital Integration**

Integrates hospital data for real-time updates on emergencies, helping volunteers respond quickly. Tracks available volunteers, organizations matching blood groups for donations and locations.

**5. Donation Management**

Manages donations, including funds, supplies, and resources, with donor details and transaction history. Double Verification for resources.

**6.** **Communication System**

Communicate via task assignments, progress tracking, and updates to volunteers and staff. Includes a notification system for alerting volunteers about urgent needs and updates.

* **Online Event Management (Last Priority)**

**Description:** A database where we will manage and maintain our event details. We will manage all ticket purchasing, event announcements, locations, sell merchandise, and other details. The main task of this database is to complete the hectic cycle of event management in an organized and data driven way. This database can be used for organizing small and large scale events on different locations at the same time as well.

**Functionalities**

**1.** **Event and Scheduling**

Stores event details, types, and schedules, including session times, locations, and speaker information.

**2.** **Attendee and Registration**

Managing attendees details, registration statuses, and ticket purchases, including ticket types (VIP, regular).

**3.** **Organizer and Sponsor Coordination**

Storing and managing event organizers’ contact details, sponsors, contributions, and promotional rights. A system for managing collaborations and sponsorship details.

**4.** **Order Management**

Managing event-related merchandise, pricing, and orders placed by attendees. Availability and accessibility of merchandise is also managed in database.

**5.** **Feedback and Financial Issues**

Collects attendee feedback on events and tracks expenses related to venues, transport (logistics), and marketing.

**Workflow of Project (for any of the above):**

1. Analyzing Requirements
2. Identifying dependencies
3. Determining data types
4. Assign meaningful names
5. Design Tables
6. Relate all tables
7. Design ERD
8. Create Tables in DBMS
9. Relate Tables with Foreign key in DBMS
10. Insert Values into Tables
11. Test the dependencies
12. Test Database with Joins and Unions
13. Perform Validation
14. Finalize Project