Department of Computer Science

CS 353 – Database Systems

Project Proposal for Local Events Application

Team 6

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Overview

Our proposed database project is an Eventbrite-like local events application. In this report, our project will be explained under the headings such as the need for a database, functional and non-functional requirements, limitations, and entity relationship diagram in order to provide a better visualization of the relationships between entities and attributes.

Our aim in this project is to design a database system which enables users to use the social network application in an optimum manner. During the design process of the system, in addition to the entities and attributes for the expected minimum requirements, we tried to include additional promising features to expand our project. These include the verification system which differentiates users according to their clearance (unverified people are not allowed to create events), and the event staff feature which allows for the identification and categorization of staff that attends the event. The categorization, specifically, allows for other entities to exist. One of these entities is emergency_report which is created in relation to a security member and a user. And another one is the meet_up entity which allows for users to meet with their favorite artists during event time.

The Necessity of a Database System

A social network application which is responsible for managing local events and tickets sales to multiple users consists of a vast array of information including a great deal of user accounts, ongoing/upcoming events, location details, and also authorization regarding data privacy due to some features such as details of some events should only be edited by the user who created them. Therefore, we have decided that a database, which is an organized collection of structured information and data, is absolutely necessary. Hence, we have drawn an entity relation diagram, and with the help of the relations in the diagram, we aimed to facilitate the implementation process of our project. Moreover, the stored important information will be preserved and will not be lost thanks to the database implementation.

Requirements

In this section requirements will be explained in two categories, which are functional and non-functional requirements, respectively.

Functional Requirements

- Users will be able to create password protected accounts which have three types: admin, verified user, unverified user.
- Users will be able to create local events.
- Only certain users who provided adequate information about themselves (verified users) will be allowed to create local events.
- The amount of days a user stays unverified is tracked for statistical purposes.
- Users who create local events will be able to edit the details of the event.
- Users who did not create a specific event will not be able to edit the details of that event.
- Users will be able to join local events.
- Users will be able to search for an event.
- Users will be able to categorize the local events as concerts, games, gatherings, art and more.
- Users will be able to see the nearby events based on their location information and their proximity to the event.
- The database will support some search restrictions, such as the types of events and age restrictions of the local events.
- Event organizing users will be able to register tickets to the system and specify their final purchase date.
- Users will be able to buy tickets from the system.
- Users will be able to purchase items from the gift shop.
- Users will be able to befriend each other via the like feature.
- Users will be able to follow specific local events.
- Event staff information will be assigned to the relevant events. Staff will be categorized under three titles: security, artist, other staff.
- Users will be able to report emergencies with a member of the security and have access to security contact information.
- Users will be able to meet up with artists during events.
- Admins will be given jurisdictions to separate workload.
- The admin user will be able to create system reports such as finding the most popular events on a specific month with respect to the number of the attendees.
- The admin user will be able to search for and view old reports according to their creation date.

Non-Functional Requirements

- **Response Time and Scalability:**
  System has to respond to a user request in less than two seconds.
- **Reliability and Maintainability:**
  System has to ensure coherence during database manipulations.
- **Robustness and Security:**
  System has to ensure that no data loss will occur in case of system failures.
- **Performance:**
  System has to be able to serve at least 500 users at the same time.
- **Compatibility:**
  System has to be able to run on different operating systems and browsers.
- **Usability:**
  The user interface of the system has to be user-friendly.

Limitations

- Events can only be created by verified users.
- Events can only be edited by creators of the event.
- Gift items can only be added by creators of the event.
- Civilians can only like other civilians.
- Civilians can only follow events.
- Only a member of the security can issue an emergency report.
- Only an artist can organize a meet-up.
- Only the admin user is able to create and view system reports.

Entity Relationship Diagram

The entity relationship diagram of our project is below:

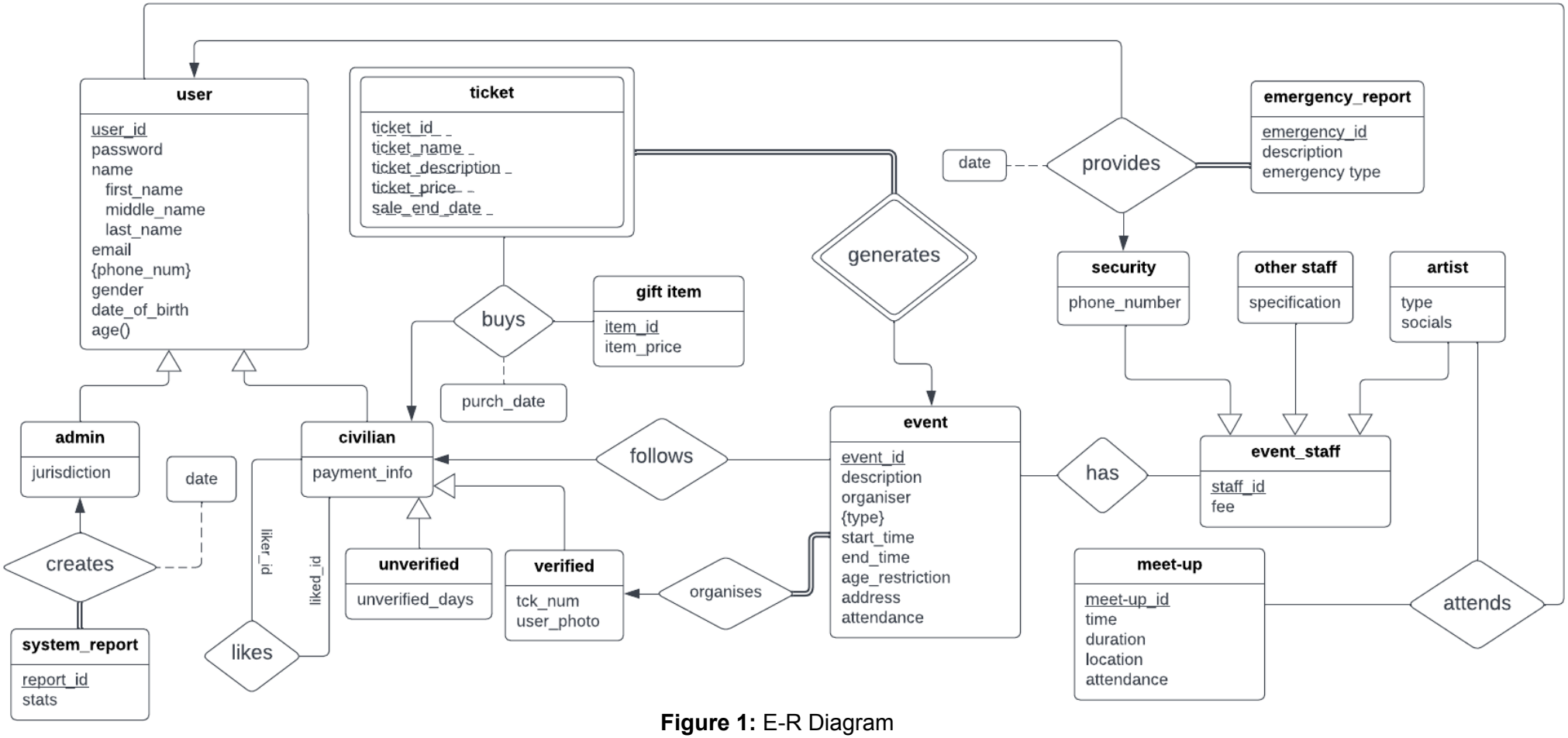

Figure 1: E-R Diagram

Link to Website

Our website can be accessed from the link below:
https://github.com/mehmet-ali-erol/CS353-Database-Project