CS353 - Fall 2021
Project Proposal
Group 12
“TripFellas“ Travel Agency App

Hami Mert Doğan - 21802550
Yaren Yılmaz - 21803561
Yusuf Mert Yıldırım - 21802848
Bora Fatih Kazancı - 21801753

Table of Contents

1.0 Introduction

This project proposal is for the travel agency app named TripFellas. In this proposal, a project description of the application will be made, following the reasons why a database is needed and how it will be used as a part of the application. After that, the functional requirements will be listed, as it is an obligatory step in designing a system. Then, non-functional requirements will be listed to clearly define the system's priorities in terms of non-functional requirements. In the following section, Limitations will be shown to define the boundaries of the system. Lastly, it will be finished by providing an Entity-Relationship model of the application our group is planning to realize.

2.0 Project Description

TripFellas is planned to be a travel agency website, featuring booking hotels and tours and reviewing them. It is intended to be used by the people who are traveling, hotel managers, guides, and tour companies. It will have similar features to TripAdvisor, which is a widely-used travel agency website.

Customers using this app can browse tours and hotels within a location, book hotel rooms, and make reservations for tours with several activities (such as sightseeing and extra activities) and guides. They can also make TripBuddies(TM) and comment on their profiles. Most importantly, they can give feedback to the tour, hotel, and tour guide, which all other users can see of the system.

TripFellas will feature guides, which are assigned to tours and guide the travelers on tour. Guides are given the freedom of accepting or declining an assignment about a tour, and after guiding a tour, they will also provide feedback for the tour like the customers.

Another user is TripFellas employees. They can assign guides to tours and make reservations or update reservation details for the customers.

3.0 Why/How a Database Is Needed

In this application, using a database is obligatory as persistent data management will be needed to provide the information entered by another user or the same user in a past time. For example, all users should have their accounts that persist after it is created, whose authentication details like password and username should be stored in a database. Moreover, the system will continuously fetch data entered by other users. Using a database will enable developers to fetch this data with ease.

The database will be used via a storage engine, which will have its methods for querying using SQL and JavaScript. This will enable a smooth transition between the user and the database, making the user feel optimized and fast.

4.0 Requirements

This section explains the functional and non-functional requirements for our website.

4.1 Functional Requirements

4.1.1 Signup & Login

Like many websites, TripFellas will have both signup and login functionalities. Users signing up to the website can choose if they are a traveler that searches for hotels and tours, a guide that guides customers in the tour, a tour or a hotel employee, and sign up with that role. After signing up, the users can log in with their chosen credentials and use the website based on their role.

4.1.2 Booking a Hotel & Making Reservation for a Tour

Because TripFellas is a travel agency app, booking and reserving functionalities are critical. While tour and hotel employees must be able to choose the limitations of the capacity, dates, and other details of the tour/hotel, customers should make these operations by themselves. Additionally, employees must be able to create a reservation or update an existing reservation to help the customers who cannot reserve or book as they want.

4.1.3 Assigning Guides

Another critical requirement is that employees should be able to assign available guides to the tours. This will enable the employees to choose the best-rated guides according to their budget. On the other hand, guides can accept or decline the tour assignment in freedom.

4.1.4 Reviewing Tours & Guides

After a tour, customers must be able to review both the guide and the tour. Additionally, guides must be able to give feedback about the tour too. This will enable choosing the best-reviewed tours for new customers, accepting or declining an assignment from a tour according to the feedback for guides, and improving their flaws for employees.

4.1.5 Assigning & Selecting Activities in Tours

Employees should be able to assign many activities to tours if the time is enough. On the other hand, customers may not want to participate in all of the events in a tour. This is why it is a requirement that customers should be able to choose which activities they wish to attend. This selection should not be too strict, though, as ideas about an activity can change at all times.

4.2 Non-Functional Requirements

4.2.1 Simplicity

Because this system will be used by people who may not be familiar with computers or websites, the user interface should be as simple and accessible as possible to reduce misunderstandings and improve the user experience. Because of this requirement, we believe that the colors and locations of the buttons and labels will be precise for at least 90% of the total users.

4.2.2 Security

Customers' and guides' whereabouts and activities will be stored in the application. Moreover, guides' fees for a tour will be shown to the tour employees. Additionally, customers can pay for tours to reserve their spots in the application. All this information should be kept private, and the system should be safe from attackers that try to steal the users' information. This will be realized by using HTTPS and other tools to keep the information of the users safe.

4.2.3 Maintainability

TripFellas will be built using OOP principles and various design patterns to make the developer's job easier when implementing a new feature or fixing a bug. This will enhance the program's maintainability, providing more effortless experiences for developers who see the legacy code the first time.

4.2.4 Performance

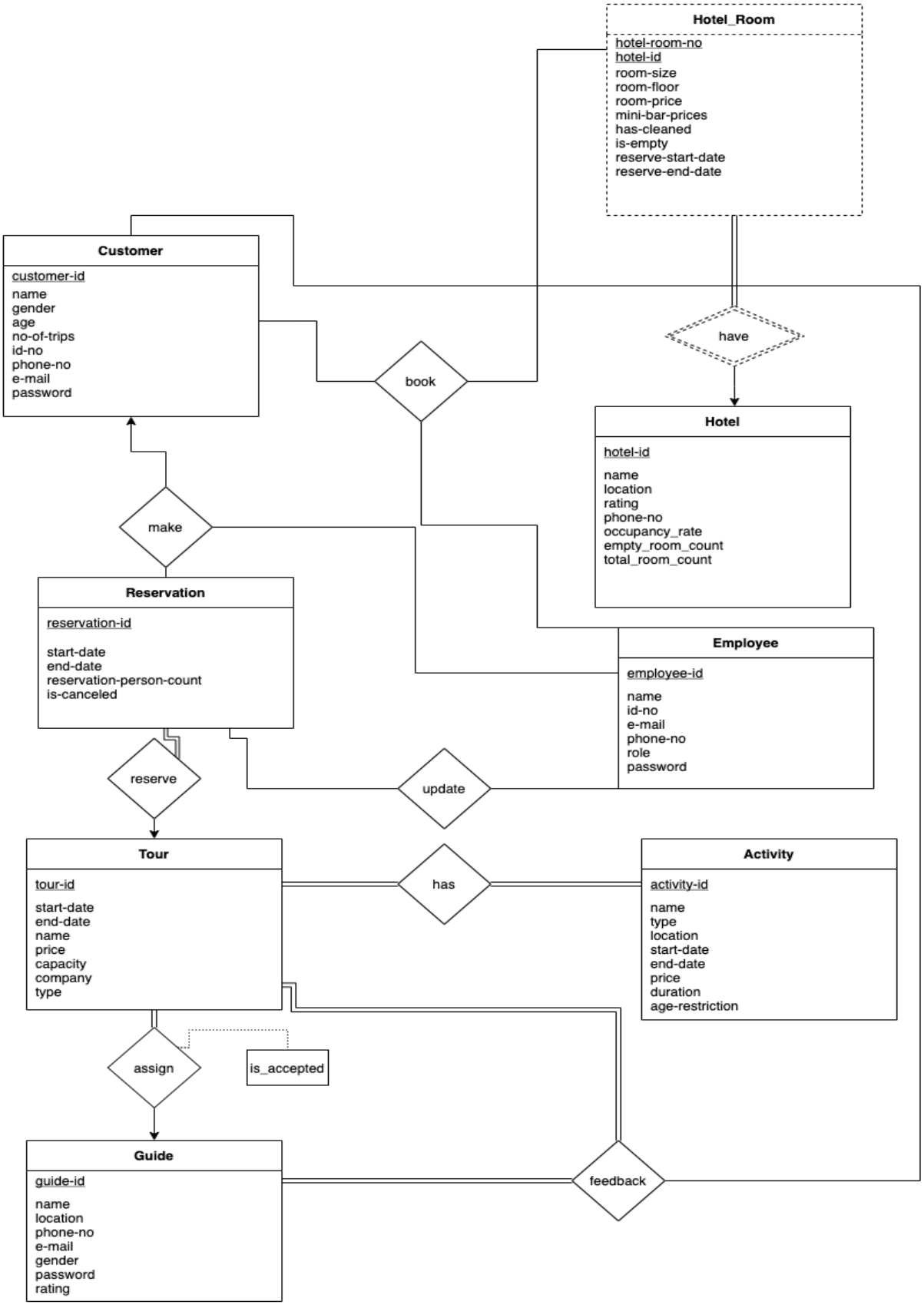
Because TripFellas will be a website with simple user interfaces, the minimum hardware requirement of the users will be very low. The website should be able to run on every browser that supports HTML5, which includes Microsoft Edge v.90, Internet Explorer v.11, Mozilla Firefox v.88, Google Chrome v.90, Opera v.63, and Safari v.12 [1]

Additionally, the website should have a score higher than 90 out of 100 from Google Lighthouse performance metrics in order to prove that it has high performance.

5.0 Limitations

- Users cannot change any other user's information.
- Users cannot add private profiles as a friend.
- Employees cannot reserve, book, or assign guides for themselves.
- Reviews or feedbacks cannot be deleted or edited by any other user.
- Customers and guides cannot edit or delete hotels.
- Customers cannot cancel a tour reservation when the employees determine it is left to the tour.
- Customers cannot reserve more than one tour on intersecting dates.
- Customers cannot review a tour more than once each tour.
- Guides cannot review guides.
- Guides cannot edit or make reservations for customers.

6.0 Entity-Relationship Model



References

[1] *Can I use… Support tables for HTML5, CSS3, etc.* [Online]. Available: https://caniuse.com/?cats=HTML5&statuses=all. [Accessed: 17-Oct-2021]