

Embassy Management System (CMPS 244 MWF @8:00)

Group Name and Members:

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Introduction

A database is a collection of data that is organized and maintained electronically. The purpose of this project is to develop a database system to store and manage information related to an Embassy. The system will be designed to meet the needs of the embassy employees and to ensure that the data is well stored, maintained, and accessed efficiently without the hassle of purchasing multiple softwares to run the embassy operations. It is mainly a hub that contains all necessary information to run the embassy from any desktop.

Entities and Relationships

The following entities will be maintained in the database system:

1. **Employees:** The Employees entity represents the different employees of the embassy. they will be divided into the following types: Ambassador, Diplomats, Foreign Service Officer, Security guards, and Translators.
2. **Citizens:** Citizens represent the people having the citizenship of the country the embassy is representing.
3. **Residents:** the residents of the host country who apply for a visa at the embassy.
4. **Visas:** The visa entity represents the different types of visas that the embassy offers to the host country citizens; they will be divided into the following types: Work Visa, Student Visa, Travel (Tourism) Visa and visa number, visa holder, expiry date, date of issuance.

5. **Addresses:** Each citizen has an address.
6. **Departments:** the Department entity set represents the operating departments at the embassy.
7. **Properties:** are the possessions of the citizens. Attributes include type, size, address,...

The relationships between these entities are as follows:

- A citizen has one address or more
- A department is managed by an employee
- A citizen should have one visa
- A resident should have an address
- A citizen may have one or more property
- A resident may have one or more property

Constraints

The following constraints will apply to the entities and relationships in the database system:

- The employee phone number must be unique
- The citizen phone number must be unique.
- The visa number must be unique.
- Resident visa application number must be unique
- Address real-estate property number is unique
- Properties owner and number is unique
- Departments name is unique
- Departments should be managed by one employee
- A department will not exist if no employees work in it,

Example Queries

The following are examples of information that will likely be retrieved from the database:

- List of all citizens in the country and their addresses.
- All the employees working in a specific department.
- Citizens living in a specific area of the country
- List of all pending visas application
- List of all properties owned by a citizens

Conclusion

In conclusion, the database system described in this document will store and manage information related to an embassy. The system will maintain information about the citizens, residents, addresses, visas etc, and the relationships between these entities. The database will be designed to meet the needs of the embassy, and the data will be stored, maintained, and retrieved efficiently. The constraints and example queries described in this document will provide guidance on how to use the database system to meet the needs of the embassy.