**Case and Assistance Management System Documentation**

**1. Introduction**

This documentation outlines the structure and functionality of a database system designed to manage cases and assistance for individuals and families in need. The system supports various types of assistance, including monthly aid, rent, food, marriage support, debt repayment, surgeries, and medication. Additionally, it facilitates assistance distribution during specific seasons like Ramadan, Eid Al-Adha, and the winter season.

**2. System Structure**

The system comprises several key modules:

* **Case Management:** Allows adding, editing, and deleting case records.
* **Assistance Management:** Enables the addition and tracking of various forms of assistance.
* **Seasonal Management:** Manages assistance distribution during designated seasons.
* **Reports and Statistics:** Provides insights into cases and assistance provided.
* **Audit and Tracking:** Monitors and logs changes to case and assistance records.
* **User Management:** Facilitates role-based access control if multiple users manage the system.

**3. Database Structure (MySQL)**

**3.1 Main Tables**

**People Table**

Stores details about individuals or families receiving assistance, including personal information, case type, and additional notes.

**Key Fields:**

* Unique identifier for the person (ID)
* Name, address, phone number, special location (المنطقة)
* Gender (character F is female | M is male)
* Case type (e.g., widow, divorced, etc.)
* GID (length is 14 character )
* Notes
* Record creation and update timestamps

**Functions:**

* **Search** 
  + **By id (return only one)**
  + **By name (return one or more)**
  + **By nickname (return one or more)**
  + **By gender (return one or more)**
  + **Bu GID (return only one)**
  + **By** phone number **(return only one)**
  + **By special location (return one or more)**
  + **By location (return one or more)**
  + **By join date (return one or more)**
  + **By case type (return one or more)**
* **Add** 
  + **Add person**
* **Delete** 
  + **Delete person**
* **Update** 
  + **Update id**
  + **Update name**
  + **Update nickname**
  + **Update gender**
  + **Update GID**
  + **Update phone number**
  + **Update special location**
  + **Update location**
  + **Update case type**
* **Select**
  + **Get all**
  + **Get special**

**Assistance Table**

Maintains records of assistance provided, including financial and material support.

**Key Fields:**

* Unique identifier for assistance records (ID)
* Associated person ID (reference from ID field in people table)
* Type of assistance (e.g., monthly, rent, food, medication)
* Assistance value (if financial)
* Date of assistance
* Notes

**Functions:**

* **Search**
  + **By ID**
  + **By Peron ID**
  + **By Person name**
  + **By type of assistance**
  + **By assistance value**
  + **By Date of assistance**
  + **By special date**
* **Add** 
  + **Add assistance**
* **Delete**
  + **Delete assistance**
* **Update** 
  + **Update type of assistance by person id or assistance id**
  + **Update assistance value by person id or assistance id**
  + **Update Date of assistance by person id or assistance id**
* **Select** 
  + **Get all**
  + **Get special assistance**

**Family table**

This table store info about people families like number of males and number of females

Key fields:

* ID
* Number of males
* Number of females
* People\_ID (reference from ID field in people table )

**Seasons Table**

Tracks seasonal assistance distribution periods such as Ramadan and Eid Al-Adha.

**Key Fields:**

* Unique season identifier
* Season name
* Start and end dates
* Record creation and update timestamps

**Season Distribution Table**

Links seasonal distributions to assistance records.

**Key Fields:**

* Unique distribution identifier
* Associated season and assistance records
* Record creation and update timestamps

**Audit Log Table**

Maintains a record of all modifications to case and assistance data for transparency and tracking.

**Key Fields:**

* Unique log identifier
* Table name being modified
* Record ID of the modified entry
* Type of modification (Insert, Update, Delete)
* User responsible for modification
* Modification timestamp
* Old and new values for updated records

**3.2 Additional Enhancements**

* **Indexes** on frequently searched fields (e.g., names and assistance types) to improve performance.
* **Normalization** to eliminate redundancy and optimize data storage.
* **Constraints:** Ensuring unique values for specific fields (e.g., phone numbers).
* **Foreign Key Constraints:** To maintain data integrity across related tables.

**3.3 User Management**

If multiple users manage the system, a user management module can be added with roles and access control.

**Key Fields:**

* Unique user identifier
* Username and password
* User role (e.g., Admin, Regular User)
* Record creation and update timestamps

**4. Development Details**

**4.1 Technologies Used**

* **Programming Language:** Java
* **Database:** MySQL
* **Framework:** Spring Boot (optional)
* **Database Interaction:** JDBC or Hibernate
* **User Interface:** JavaFX or Spring Boot with Thymeleaf

**5. User Interfaces**

**5.1 Add New Case Interface**

* **Fields Required:** Name, address, phone number, family size, case type, notes
* **Action:** Save new case details in the People table

**5.2 Add Assistance Interface**

* **Fields Required:** Assistance type, amount, date, associated case, notes
* **Action:** Save assistance details in the Assistance table

**5.3 Seasons Management Interface**

* **Fields Required:** Season name, start date, end date
* **Action:** Register new season details in the Seasons table

**5.4 Assistance Distribution Interface**

* **Fields Required:** Season, case, assistance type, amount, date
* **Action:** Link assistance to a seasonal distribution record

**5.5 Reports and Statistics Interface**

* **Statistics:** Number of cases, total assistance provided, assistance distribution breakdown
* **Reports:** Assistance history and seasonal distributions

**6. Conclusion**

This documentation outlines a structured approach to managing cases and assistance efficiently. The system includes key features such as case management, seasonal assistance tracking, and an audit log for transparency. Future extensions may include advanced reporting, expanded user management, and integration with external services.

**7. Notes**

* The **Birthdate** field has been added for better case profiling.
* **Timestamps** are included to track data modifications.
* An **Audit Log** ensures accountability and tracking of all data changes.