Data Dictionary - EServices

For an eServices project, we require a variety of tables to manage users, services, requests, transactions, and other relevant information. Here are some common types of tables and their importance:

1. Users Table

- **Purpose:** Stores information about users of the eServices platform.
- **Fields:**
  - `user_id`: Unique identifier for the user.
  - `username`: Username chosen by the user.
  - `email`: User's email address.
  - `password`: Hashed password for the user.
  - `full_name`: User's full name.
  - `phone_number`: User's phone number.
  - `city`: User's city of residence.
  - `created_at`: Timestamp when the account was created.
- **Importance:** Essential for identifying and managing user accounts, providing personalized services, and ensuring effective communication.

2. Admins Table

- **Purpose:** Stores information about administrators who manage the platform.
- **Fields:**
  - `admin_id`: Unique identifier for the admin.
  - `username`: Admin's username.
  - `email`: Admin's email address.
  - `password`: Hashed password for the admin.
  - `role`: Role of the admin (e.g., super admin, support admin).
  - `created_at`: Timestamp when the admin account was created.
- **Importance:** Necessary for managing admin roles and permissions.

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3. Services Table

- **Purpose:** Contains details about the various services offered on the platform.
- **Fields:**
  - `service_id`: Unique identifier for the service.
  - `name`: Name of the service.
  - `category`: Category of the service (e.g., cleaning, repair).
  - `description`: Detailed description of the service.
  - `price`: Price of the service.
- **Importance:** Helps in organizing and presenting the services to users.

4. ServiceRequest Table

- **Purpose:** Tracks requests made by users for different services.
- **Fields:**
  - `request_id`: Unique identifier for the request.
  - `user_id`: Identifier for the user who made the request.
  - `service_id`: Identifier for the requested service.
  - `request_date`: Date when the request was made.
  - `status`: Status of the request (e.g., pending, completed).
  - `description`: Additional details about the request.
  - `admin_id`: Identifier for the admin handling the request.
- **Importance:** Important for managing and tracking service requests.

5. Transactions Table

- **Purpose:** Records all financial transactions related to the services.
- **Fields:**
  - `transaction_id`: Unique identifier for the transaction.
  - `user_id`: Identifier for the user making the transaction.

    - `request_id`: Identifier for the service request related to the transaction.
    - `transaction_date`: Date of the transaction.
    - `amount`: Amount of the transaction.
    - `payment_method`: Method of payment (e.g., credit card, PayPal).
- **Importance:** Critical for financial tracking and reporting.

6. Feedback Table

- **Purpose:** Captures user feedback on the services they received.
- **Fields:**
    - `feedback_id`: Unique identifier for the feedback.
    - `user_id`: Identifier for the user providing feedback.
    - `service_id`: Identifier for the service being reviewed.
    - `feedback`: Textual feedback provided by the user.
    - `rating`: Rating given by the user (e.g., 1-5 stars).
    - `date`: Date when the feedback was given.
- **Importance:** Useful for improving service quality based on user feedback.

7. Notifications Table

- **Purpose:** Manages notifications sent to users and admins.
- **Fields:**
    - `notification_id`: Unique identifier for the notification.
    - `user_id`: Identifier for the user receiving the notification.
    - `message`: Content of the notification.
    - `status`: Status of the notification (e.g., read, unread).
    - `created_at`: Timestamp when the notification was created.
- **Importance:** Ensures users and admins are informed about important updates.

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8. Logs Table

- **Purpose:** Keeps track of important activities and events on the platform.
- **Fields:**
  - `log_id`: Unique identifier for the log entry.
  - `user_id`: Identifier for the user associated with the activity.
  - `action`: Description of the action performed.
  - `timestamp`: Timestamp when the action occurred.
  - `details`: Additional details about the activity.
- **Importance:** Useful for auditing and troubleshooting.

9. Roles Table

- **Purpose:** Defines different roles and their permissions within the platform.
- **Fields:**
  - `role_id`: Unique identifier for the role.
  - `role_name`: Name of the role (e.g., admin, user).
  - `permissions`: List of permissions associated with the role.

Importance: Helps in managing access control and security.

10. Settings Table

- **Purpose:** Stores configuration settings for the platform.
- **Fields:**
  - `setting_id`: Unique identifier for the setting.
  - `name`: Name of the setting.
  - `value`: Value of the setting.
- **Importance:** Allows for dynamic configuration without code changes.

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These tables provide a solid foundation for an eServices project, ensuring that you can efficiently manage users, services, requests, transactions, feedback, and other critical aspects of the platform.

1.Users

Field Name	Data Type	Description	Constraints	Default Value
user_id	INTEGER	Unique identifier for users	PRIMARY KEY	AUTO_INCREMENT
username	VARCHAR	Username chosen by the user	NOT NULL	-
email	VARCHAR	User's email address	NOT NULL	-
password	VARCHAR	Hashed password	NOT NULL	-
created_at	TIMESTAMP	Record creation timestamp	NOT NULL	CURRENT_TIMESTAMP

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2. Admins Table

Field Name	Data Type	Description	Constraints	Default Value
admin_id	INTEGER	Unique identifier for admins	PRIMARY KEY	AUTO_INCREMENT
username	VARCHAR	Admin's username	NOT NULL	-
email	VARCHAR	Admin's email address	NOT NULL	-
password	VARCHAR	Hashed password	NOT NULL	-
role	VARCHAR	Admin role(e.g., superadmin, moderator)	NOT NULL	-
created_at	TIMESTAMP	Record creation timestamp	NOT NULL	CURRENT_TIMESTAMP

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3. Services Table

Field Name	Data Type	Description	Constraints	Default Value
admin_id	INTEGER	Unique identifier for admins	PRIMARY KEY	AUTO_INCREMENT
name	VARCHAR	Name of the service	NOT NULL	-
category	VARCHAR	Categoy of the service	-	-
description	VARCHAR	Description of the service	-	-
price	DECIMAL	Price of the service	NOT NULL	-

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4.ServiceRequest Table

Field Name	Data Type	Description	Constraints	Default Value
request_id	INTEGER	Unique identifier for service requests	PRIMARY KEY	AUTO_INCREMENT
user_id	INTEGER	ID of the user making request	FOREIGN KEY	-
service_id	INTEGER	ID of the requested service	FOREIGN KEY	-
requested_date	DATE	Date the request was made	NOT NULL	CURRENT_DATE
status	VARCHAR	Current status of the request	NOT NULL	‘pending’
Description	TEXT	Description of the request	-	-
admin_id	INTEGER	ID of the admin handling the request	FOREIGN KEY	-

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5. Transaction Table

Field Name	Data Type	Description	Constraints	Default Value
transaction_id	INTEGER	Unique identifier for service transactions	PRIMARY KEY	AUTO_INCREMENT
user_id	INTEGER	ID of the user making the transaction	FOREIGN KEY	-
request_id	INTEGER	ID of the related service request	FOREIGN KEY	-
transaction_date	TIMESTAMP	Timestamp of the transaction	NOT NULL	CURRENT_TIMESTAMP
amount	DECIMAL	Transaction amount	NOT NULL	-
payment_method	VARCHAR	Method of payment	NOT NULL	-

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6. feedback Table

Field Name	Data Type	Description	Constraints	Default Value
feedback_id	INTEGER	Unique identifier for feedback	PRIMARY KEY	AUTO_INCREMENT
user_id	INTEGER	ID of the user providing feedback	FOREIGN KEY	-
service_id	INTEGER	ID of the related service	FOREIGN KEY	-
feedback	TEXT	User feedback	NOT NULL	-
rating	INTEGER	Rating given by the user(1-5)	NOT NULL	-
date	TIMESTAMP	Date and time the feedback was given	NOT NULL	CURRENT_TIMESTAMP

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7. Notifications Table

Field Name	Data Type	Description	Constraints	Default Value
notification_id	INTEGER	Unique identifier for notifications	PRIMARY KEY	AUTO_INCREMENT
user_id	INTEGER	ID of the user receiving the notification	FOREIGN KEY	-
message	TEXT	Notification message	NOT NULL	-
status	VARCHAR	Notification status(read/unread)	NOT NULL	'unread'
created_at	TIMESTAMP	Date and time the notification was created	NOT NULL	CURRENT_TIMESTAMP

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8. Logs Table

Field Name	Data Type	Description	Constraints	Default Value
log_id	INTEGER	Unique identifier for logs	PRIMARY KEY	AUTO_INCREMENT
user_id	INTEGER	ID of the user related to the action	FOREIGN KEY	-
action	VARCHAR	Action performed	NOT NULL	-
Timestamp	TIMESTAMP	Time of the action	NOT NULL	CURRENT_TIMESTAMP
details	TEXT	Additional details about the action	-	-

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9. Roles Table

Field Name	Data Type	Description	Constraints	Default Value
role_id	INTEGER	Unique identifier for roles	PRIMARY KEY	AUTO_INCREMENT
role_name	VARCHAR	Name of the role	NOT NULL	-
permissions	TEXT	Permissions associated with the role	NOT NULL	-

10.Settings Table

Field Name	Data Type	Description	Constraints	Default Value
setting_id	INTEGER	Unique identifier for settings	PRIMARY KEY	AUTO_INCREMENT
name	VARCHAR	Name of the setting	NOT NULL	-
value	TEXT	Value of the setting	NOT NULL	-