

# Ticketing System Backend Models Documentation

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**Purpose:** For Dev2 (Controllers) & Dev3 (Routes & Middleware)

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## 1. Users

Column	Type	Description
_id	serial	Primary key
full_name	varchar	Full name of the user
email	varchar	Unique email
password	varchar	Password (hashed ideally)
role	enum	User role: admin, technician, normal_user
created_by	int	ID of the user who created this user
created_at	timestampz	Creation timestamp
updated_at	timestampz	Last update timestamp

### Relationships:

- One user can create many tickets (users.\_id → tickets.user\_id)
- One user can comment on many tickets (users.\_id → comments.commented\_by)
- One user can upload many attachments (users.\_id → attachments.uploaded\_by)
- One user can have many login logs (users.\_id → login\_logs.user\_id)

### Example Methods:

- createUser(userData)
- getAllUsers()
- getUserById(id)

## 2. Tickets

Column	Type	Description
_id	serial	Primary key
user_id	int	Creator user ID
assigned_to	int	Technician user ID
title	varchar	Ticket title
description	text	Ticket description
category	varchar	Ticket category
priority	varchar	Ticket priority (Low, Medium, High)
status	varchar	Ticket status (Open, In Progress, Closed)
created_at	timestampz	Creation timestamp
updated_at	timestampz	Last update timestamp

**Relationships:**

- A ticket can have many comments, attachments, and ticket logs.

**Example Methods:**

- createTicket(ticketData)
- getAllTickets()
- getTicketById(id)

### 3. Comments

Column	Type	Description
_id	serial	Primary key
ticket_id	int	Related ticket ID
commented_by	int	User ID who commented
comment_text	text	Comment content
commented_at	timestampz	Timestamp

**Example Methods:**

- addComment(commentData)
- getCommentsByTicket(ticketId)

### 4. Attachments

Column	Type	Description
_id	serial	Primary key
ticket_id	int	Related ticket ID
uploaded_by	int	User ID who uploaded
file_path	varchar	Path to the file
uploaded_at	timestampz	Timestamp

**Example Methods:**

- addAttachment(attachmentData)
- getAttachmentsByTicket(ticketId)

### 5. Ticket Logs

Column	Type	Description
_id	serial	Primary key
ticket_id	int	Related ticket ID
action_by	int	User ID who performed the action
action_type	varchar	Type of action (Created, Updated, Closed)
remarks	text	Optional notes

action_date	timestampz	Timestamp
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**Example Methods:**

- addTicketLog(logData)
- getLogsByTicket(ticketId)

## 6. Login Logs

Column	Type	Description
_id	serial	Primary key
user_id	int	User ID who logged in
login_time	timestampz	Login timestamp
logout_time	timestampz	Logout timestamp (nullable)
ip_address	varchar	IP address of login

**Example Methods:**

- addLoginLog(logData)
- getLogsByUser(userId)

## Notes for Dev2 & Dev3

1. All models are async functions returning data or throwing errors.
2. Field names in the database exactly match the model property names.
3. Timestamps are automatically generated (created\_at, updated\_at).
4. Controllers should call these methods with proper error handling and validation.
5. Routes can directly use controller methods for endpoints.