User Manual for Load Posting and Bidding System

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1. Introduction

The **Load Posting and Bidding System** is a platform designed to connect **shippers** and **truckers** efficiently.

- **Shippers** can post load details such as pickup and drop-off locations, weight, type, and deadlines.
- **Truckers** can browse available loads, bid on them, and transport the goods based on their preferences.
- The system uses a **bidding mechanism** where the **lowest bid wins**, ensuring fair competition.

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2. System Requirements

For Web Users (Shippers & Truckers)

- A device with **internet access** (PC, laptop, tablet, or smartphone).

- A modern **web browser** (Google Chrome, Mozilla Firefox, Safari, Edge).

For Backend Setup (Developers & Administrators)

- **Operating System:** Windows, macOS, or Linux
- **Database:** MongoDB
- **Frameworks:** MERN + Next.js

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3. Installation and Setup

For Developers (Backend Installation)

1. Clone the Repository

```
git clone https://github.com/YOUR_USERNAME/your-private-repo.git
cd your-private-repo
```

2. Install Dependencies

```
npm install
```

3. Set Up Environment Variables

- Create a `.env` file using the provided `.env.example` template.
- Add required **MongoDB URI.**

4. Run the Application

In frontend:
```
npm run dev
```
In Backend:
```
nodemon server.js
```

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4. Using the System

For Shippers

1. **Sign up/Login** to the system.

2. **Post a Load** by providing details such as:
    - Pickup and Drop-off locations
    - Load type (e.g., perishable, fragile, general cargo)
    - Weight and dimensions
    - Deadline for delivery
3. **View Truckers' Bids** on your load.
4. **Select the Winning Bid** (lowest bid automatically wins).

For Truckers

1. **Sign up/Login** to the system.
2. **Browse Available Loads** using filters like route, time, and load type.
3. **Place Bids** on suitable loads.
4. **Win the Bid** if your price is the lowest and meets eligibility criteria.
5. **Confirm Load Pickup and Delivery** to complete the process.

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5. Bidding Process

1. **Truckers view loads** posted by shippers.
2. **They place a bid** (lowest bid wins).
3. **The system verifies trucker eligibility** before allowing the bid.
4. **The shipper reviews and accepts the bid** (automated selection for lowest bid).
5. **The trucker is notified** and can begin the delivery.

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6. Trucker Eligibility Criteria

To ensure **security and reliability**, truckers must meet these requirements:
✅ No history of **accidents**.
✅ No **theft complaints**.
✅ Truck should be **less than 5 years old**.
✅ Driver's license held for **more than 5 years**.
✅ Must pass **relevant safety and compliance checks**.

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7. Security Features

🔒 **Authentication:** Secure login using **JWT-based authentication**.
🔒 **Data Protection:** Encrypted storage for sensitive information.

🔒 **Fraud Prevention:** Verification of truckers and shippers before transactions.
🔒 **Access Control:** Only eligible truckers can place bids.

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8. Troubleshooting

Issue	Solution
Unable to log in	Reset your password or contact support.
Load not appearing	Check your filters and refresh the page.
Cannot place a bid	Ensure you meet the **eligibility criteria**.
Payment issue	Verify your **payment method and account details**.

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9. Frequently Asked Questions (FAQs)

Q1: How do I register as a shipper or trucker?

- Visit the **registration page** and sign up using your **email and phone number**.

Q2: Can I edit my posted load details?

- Yes, before any bids are placed. Once bidding starts, **editing is restricted**.

Q3: How are payments handled?

- Payments are securely processed through **third-party payment gateways**.

Q4: Can I track my shipment?

- Yes, real-time tracking is available for shippers and truckers.

Q5: What happens if my bid is not selected?

- You can **adjust your bid** or bid on another load.

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10. Support and Contact Information

For **technical support** or **general inquiries**, reach out to:
✉ **Email:** payal@ch.iitr.ac.in

This user manual provides **step-by-step guidance** on using the **Load Posting and Bidding System**. If you encounter any issues, refer to the **Troubleshooting** section or contact **Support**. 🚛📦