Project Proposal: Token Trade System

1. Project Overview: The Token Trade System is a Python-based application designed to help the buying and selling of meal tokens among multiple users. This system allows users to log in, sell tokens for specific meals (lunch or dinner) in designated halls, and enables other users to buy these tokens.The system ensures seamless interaction between buyers and sellers by providing necessary contact details and keeping data saved through file storage.

2. Objectives:

- To create a platform for students or individuals to trade meal tokens efficiently.
- To provide transparency and user-friendly functionality for token availability in specific halls.

3. Key Features:

- **User Authentication:**
  - Users log in with a username, roll number, and mobile number.
  - New users are automatically registered during their first login.
- **Sell Tokens:**
  - Sellers specify the hall, number of tokens, and meal type (lunch or dinner).
  - Tokens are stored in a hall-specific database, including seller details for reference.
- **Buy Tokens:**
  - Buyers can view available tokens categorized by halls.
  - Buyers select a seller, and the application provides the seller's roll number and mobile number for direct contact.

4. Target Audience: The system is aimed at communities where meal tokens are commonly used, such as students in university hostels or employees in corporate cafeterias.

5. Expected Benefits:

- Simplifies the process of buying and selling meal tokens.
- Promotes resource optimization by allowing unused tokens to be traded.
- Ensures transparency and easy access to token availability.

6. Future Enhancements:

- **Web or Mobile Interface:** Develop a graphical user interface (GUI) or a web-based version for better usability.
- **Real-Time Notifications:** Notify buyers and sellers about token availability and requests.
- **Advanced Security:** Implement password protection or OTP verification for login.
- **Detailed Analytics:** Provide insights on token trading patterns, most active users, and hall-specific trends.