**Assignment: Banking System with Complex Operations**

**Scenario:**

In this assignment, you will build a banking system that handles different types of bank accounts and implements complex financial operations. The system will use abstract classes, interfaces, and overridden methods to manage accounts and transactions for different types of customers, such as RegularCustomer and PremiumCustomer. Additionally, it will simulate banking features like withdrawals, deposits, and loan applications, with distinct rules for each customer type.

**Requirements:**

1. **Abstract Class BankAccount**:
   * Define a base BankAccount abstract class that has common properties like accountNumber, balance, and accountHolder.
   * Include abstract methods withdraw(double amount), deposit(double amount), and calculateInterest(), which will be implemented by subclasses.
2. **Interface LoanEligibility**:
   * Define an interface LoanEligibility with a method checkLoanEligibility() to determine if an account holder qualifies for a loan.
   * checkLoanEligibility() should take into account the account balance and transaction history.
3. **RegularCustomerAccount** (subclass of BankAccount):
   * Implement the withdrawal method with a daily withdrawal limit of 50,000.
   * Calculate interest with a 3% rate per annum for balances below 100,000 and 4% for balances above.
   * Implement checkLoanEligibility() with a minimum balance condition (e.g., balance over 75,000).
4. **PremiumCustomerAccount** (subclass of BankAccount):
   * Implement the withdrawal method with no daily limit but add a 1% fee on withdrawals above 1,00,000.
   * Calculate interest with a 5% rate per annum for balances below 500,000 and 6% for higher balances.
   * Implement checkLoanEligibility() with additional conditions, such as high balance and frequent deposits.
5. **Transaction History**:
   * Each account should maintain a history of transactions (deposits and withdrawals) stored in an array.
6. **Main Class**:
   * Create instances of both account types, perform various operations (deposit, withdraw, calculate interest, and check loan eligibility), and display the results.