Coding Challenge - Loan Management System

NAME : HARSHA K

Problem Statement:

Create SQL Schema from the customer and loan class, use the class attributes for table column names.

1. Define a `Customer` class with the following confidential attributes:

a. Customer ID

b. Name

c. Email Address

d. Phone Number

e. Address

f. creditScore

Code:

```
class Customer:
    def __init__(self, customer_id, name, email, phone, address, credit_score):
        self.__customer_id = customer_id
        self.__name = name
        self.__email = email
        self.__phone = phone
        self.__address = address
        self.__credit_score = credit_score
```

Sql Schema:

```
CREATE TABLE customer (
    customer_id INT PRIMARY KEY AUTO_INCREMENT,
    name VARCHAR(100),
    email VARCHAR(100) UNIQUE,
    phone VARCHAR(15),
    address VARCHAR(255),
    credit_score INT);
```

2. Define a base class `Loan` with the following attributes:

a. loanId

b. customer (reference of customer class)

c. principalAmount

d. interestRate

e. loanTerm (Loan Tenure in months)

f. loanType (CarLoan, HomeLoan)

g. loanStatus (Pending, Approved)

Code:

```
from .customer import Customer
class Loan:
    def __init__(self, loan_id, customer: Customer, principal_amount, interest_rate, loan_term,
loan_type, loan_status):
        self.__loan_id = loan_id
        self.__customer = customer
        self.__principal_amount = principal_amount
        self.__interest_rate = interest_rate
        self.__loan_term = loan_term
        self.__loan_type = loan_type
        self.__loan_status = loan_status
```

Sql Schema:

```
CREATE TABLE loan (
    loan_id INT PRIMARY KEY AUTO_INCREMENT,
    customer_id INT,
    principal_amount DECIMAL(12,2),
    interest_rate DECIMAL(5,2),
    loan_term INT,
    loan_type ENUM('CarLoan', 'HomeLoan'),
    loan_status ENUM('Pending', 'Approved'),
    FOREIGN KEY (customer_id) REFERENCES customer(customer_id));
```

3. Create two subclasses: `HomeLoan` and `CarLoan`. These subclasses should inherit from the Loan class and add attributes specific to their loan types. For example:

a. HomeLoan should have a propertyAddress (String) and propertyValue (int) attribute.

Code:

```
from entity.loan import Loan
class HomeLoan(Loan):
    def __init__(self, loan_id, customer, principal_amount, interest_rate, loan_term, loan_type, loan_status, property_address, property_value):
        super().__init__(loan_id, customer, principal_amount, interest_rate, loan_term, loan_type, loan_status)
        self.__property_address = property_address
        self.__property_value = property_value
```

b. CarLoan should have a carModel (String) and carValue (int) attribute.

Code:

```
from entity.loan import Loan
class CarLoan(Loan):
    def __init__(self, loan_id, customer, principal_amount, interest_rate, loan_term, loan_type, loan_status, car_model, car_value):
        super().__init__(loan_id, customer, principal_amount, interest_rate, loan_term, loan_type, loan_status)
        self.__car_model = car_model
        self.__car_value = car_value
```

4. Implement the following for all classes.

a. Write default constructors and overload the constructor with parameters, generate getter and setter, (print all information of attribute) methods for the attributes.

Customer code:

```
# Getter setter
    def get_customer_id(self): return self.__customer_id
    def set_customer_id(self, customer_id): self.__customer_id = customer_id

    def get_name(self): return self.__name
    def set_name(self, name): self.__name = name

    def get_email(self): return self.__email
    def set_email(self, email): self.__email = email

    def get_phone(self): return self.__phone
    def set_phone(self, phone): self.__phone = phone

    def get_address(self): return self.__address
    def set_address(self, address): self.__address = address

    def get_credit_score(self): return self.__credit_score
    def set_credit_score(self, credit_score): self.__credit_score = credit_score

    # Print
    def display_info(self):
        print(f"Customer ID: {self.__customer_id}")
        print(f"Name: {self.__name}")
        print(f"Email: {self.__email}")
        print(f"Phone: {self.__phone}")
        print(f"Address: {self.__address}")
        print(f"Credit Score: {self.__credit_score}")
```

Loan Code:

```
def get_loan_id(self): return self.__loan_id
    def set_loan_id(self, loan_id): self.__loan_id = loan_id

    def get_customer(self): return self.__customer
    def set_customer(self, customer): self.__customer = customer

    def get_principal_amount(self): return self.__principal_amount
    def set_principal_amount(self, amount): self.__principal_amount = amount

    def get_interest_rate(self): return self.__interest_rate
    def set_interest_rate(self, rate): self.__interest_rate = rate

    def get_loan_term(self): return self.__loan_term
    def set_loan_term(self, term): self.__loan_term = term

    def get_loan_type(self): return self.__loan_type
    def set_loan_type(self, loan_type): self.__loan_type = loan_type

    def get_loan_status(self): return self.__loan_status
    def set_loan_status(self, loan_status): self.__loan_status = loan_status

    def display_info(self):
        print(f"Loan ID: {self.__loan_id}")
        print(f"Customer: {self.__customer}")
        print(f"Principal Amount: {self.__principal_amount}")
        print(f"Interest Rate: {self.__interest_rate}")
        print(f"Loan Term: {self.__loan_term} months")
        print(f"Loan Type: {self.__loan_type}")
        print(f"Loan Status: {self.__loan_status}")
```

Home_loan:

```
 def get_property_address(self): return self.__property_address
    def set_property_address(self, address): self.__property_address = address

    def get_property_value(self): return self.__property_value
    def set_property_value(self, value): self.__property_value = value

    def display_info(self):
        super().display_info()
        print(f"Property Address: {self.__property_address}")
        print(f"Property Value: {self.__property_value}")
```

Car loan:

```
 def get_car_model(self): return self.__car_model
    def set_car_model(self, model): self.__car_model = model

    def get_car_value(self): return self.__car_value
    def set_car_value(self, value): self.__car_value = value

    def display_info(self):
        super().display_info()
        print(f"Car Model: {self.__car_model}")
        print(f"Car Value: {self.__car_value}")
```

5. Define ILoanRepository interface/abstract class with following methods to interact with database.

Interface code :

```
from abc import ABC, abstractmethod
class ILoanRepository(ABC):
    @abstractmethod
    def apply_loan(self, loan):
        pass
    @abstractmethod
    def calculate_interest(self, loan_id):
        pass
    @abstractmethod
    def calculate_interest_manual(self, principal, rate, term):
        pass
    @abstractmethod
    def loan_status(self, loan_id):
        pas
    @abstractmethod
    def calculate_emi(self, loan_id):
        pas
    @abstractmethod
    def calculate_emi_manual(self, principal, rate, term):
        pass
    @abstractmethod
    def loan_repayment(self, loan_id, amount):
        pass
    @abstractmethod
    def get_all_loans(self):
        pass
    @abstractmethod
    def get_loan_by_id(self, loan_id):
        pass
```

a.applyLoan(loan Loan): pass appropriate parameters for creating loan. Initially loan status is pending and stored in database. before storing in database get confirmation from the user as Yes/No

Code:

```
import mysql.connector
from dao.interface.i_loan_repository import ILoanRepository
from exception.invalid_loan_exception import InvalidLoanException
from util.db_conn_util import DBConnUtil
from entity.loan import Loan


class LoanRepositoryImpl(ILoanRepository):


    def apply_loan(self, loan):
        try:
            confirm = input("Do you want to apply for the loan? (Yes/No): ").strip().lower()
            if confirm != 'yes':
                print("Loan application cancelled.")
                return


            conn = DBConnUtil.get_connection()
            cursor = conn.cursor()
            query = """
                INSERT INTO loan (customer_id, principal_amount, interest_rate, loan_term, loan_type,
loan_status)
                VALUES (%s, %s, %s, %s, %s, %s)
            """
            values = (
                loan.get_customer().get_customer_id(),
                loan.get_principal_amount(),
                loan.get_interest_rate(),
                loan.get_loan_term(),
                loan.get_loan_type(),
                'Pending'
            )
            cursor.execute(query, values)
            conn.commit()
            print(" Loan application submitted successfully.")
        except Exception as e:
            print(" Error applying loan:", e)
        finally:
            cursor.close()
            conn.close()
```

b. calculateInterest(loanId): This method should calculate and return the interest amount for the loan. Loan should be retrieved from database and calculate the interest amount if loan not found generate InvalidLoanException.

i. Overload the same method with required parameters to calculate the loan interest amount. It is used to calculate the loan interest while creating loan.

ii. Interest = (Principal Amount * Interest Rate * Loan Tenure) / 12

Code:

```
  def calculate_interest(self, loan_id):
    try:
        conn = DBConnUtil.get_connection()
        cursor = conn.cursor()
        cursor.execute("SELECT principal_amount, interest_rate, loan_term FROM loan WHERE
loan_id = %s", (loan_id,))
        row = cursor.fetchone()
        if row:
            principal, rate, term = row
            interest = (principal * rate * term) / 1200
            print(f"Interest for Loan ID {loan_id}: ₹{interest:.2f}")
            return interest
        else:
            raise InvalidLoanException("Loan not found for ID: " + str(loan_id))
    except InvalidLoanException as e:
        print("X", e)
    finally:
        cursor.close()
        conn.close()

    def calculate_interest_manual(self, principal, rate, term):
        interest = (principal * rate * term) / 1200
        print(f"Manual Interest: ₹{interest:.2f}")
        return interest
```

c. loanStatus(loanId): This method should display a message indicating that the loan is approved or rejected based on credit score, if credit score above 650 loan approved else rejected and should update in database.

Code:

```
    def loan_status(self, loan_id):
        try:
            conn = DBConnUtil.get_connection()
            cursor = conn.cursor()
            cursor.execute("""
                SELECT c.credit_score FROM loan l
                JOIN customer c ON l.customer_id = c.customer_id
                WHERE l.loan_id = %s
            """, (loan_id,))
            row = cursor.fetchone()
            if row:
                credit_score = row[0]

                status = "Approved" if credit_score > 650 else "Rejected"

                cursor.execute("UPDATE loan SET loan_status = %s WHERE loan_id = %s", (status,
loan_id))

                conn.commit()

                print(f" Loan Status for Loan ID {loan_id}: {status}")

            else:

                raise InvalidLoanException("Loan not found for ID: " + str(loan_id))

        except InvalidLoanException as e:

            print("X", e)

        finally:

            cursor.close()

            conn.close()
```

d. calculateEMI(loanId): This method will calculate the emi amount for a month to repayment. Loan should be retrieved from database and calculate the interest amount, if loan not found generate InvalidLoanException.

i. Overload the same method with required parameters to calculate the loan EMI amount. It is used to calculate the loan EMI while creating loan.

ii.EMI = [P * R * (1+R)^N] / [(1+R)^N-1]

1. EMI: The Equated Monthly Installment.

2. P: Principal Amount (Loan Amount).

3. R: Monthly Interest Rate (Annual Interest Rate / 12 / 100).

4. N: Loan Tenure in months.

Code:

```
  def calculate_emi(self, loan_id):

        try:

            conn = DBConnUtil.get_connection()

            cursor = conn.cursor()

            cursor.execute("SELECT principal_amount, interest_rate, loan_term FROM loan WHERE
loan_id = %s", (loan_id,))
```

```
            row = cursor.fetchone()
            if row:
                P, R_annual, N = row
                R = R_annual / (12 * 100)  # monthly rate
                emi = (P * R * (1 + R) ** N) / ((1 + R) ** N - 1)
                print(f" EMI for Loan ID {loan_id}: ₹{emi:.2f}")
                return emi
            else:
                raise InvalidLoanException("Loan not found for ID: " + str(loan_id))
        except InvalidLoanException as e:
            print("X", e)
        finally:
            cursor.close()
            conn.close()

    def calculate_emi_manual(self, principal, rate, term):
        R = rate / (12 * 100)
        emi = (principal * R * (1 + R) ** term) / ((1 + R) ** term - 1)
        print(f" Manual EMI: ₹{emi:.2f}")
        return emi
```

e. loanRepayment(loanId, amount): calculate the noOfEmi can be paid from the amount if the amount is less than single emi reject the payment or pay the emi in whole number and update the variable.

Code:

```
def loan_repayment(self, loan_id, amount):
        try:
            emi = self.calculate_emi(loan_id)
            if emi is None:
                return
            if amount < emi:
                print(" Payment amount is less than single EMI. Payment rejected.")
                return
            num_emis = int(amount // emi)
            print(f" Payment of ₹{amount:.2f} will cover {num_emis} EMI(s).")
        except Exception as e:
            print(" Error in repayment:", e)
```

f. getAllLoan(): get all loan as list and print the details.

Code:

```
    def get_all_loans(self):
        try:
            conn = DBConnUtil.get_connection()
            cursor = conn.cursor()
            cursor.execute("SELECT * FROM loan")
            rows = cursor.fetchall()
            print(" All Loans:")
            for row in rows:
                print(row)
        except Exception as e:
            print(" Error fetching loans:", e)
        finally:
            cursor.close()
            conn.close()
```

g. getLoanById(loanId): get loan and print the details, if loan not found generate InvalidLoanException.

Code:

```
def get_loan_by_id(self, loan_id):
    try:
        conn = DBConnUtil.get_connection()
        cursor = conn.cursor()
        cursor.execute("SELECT * FROM loan WHERE loan_id = %s", (loan_id,))
        row = cursor.fetchone()
        if row:
            print(f" Loan Details for ID {loan_id}:")
            print(row)
            return row
        else:
            raise InvalidLoanException("Loan not found for ID: " + str(loan_id))
    except InvalidLoanException as e:
        print("X", e)
    finally:
        cursor.close()
        conn.close()
```

6. Define ILoanRepositoryImpl class and implement the ILoanRepository interface and provide implementation of all methods.

Code:

```
import mysql.connector

from dao.interface.i_loan_repository import ILoanRepository

from exception.invalid_loan_exception import InvalidLoanException

from util.db_conn_util import DBConnUtil

from entity.loan import Loan


class LoanRepositoryImpl(ILoanRepository):

    def apply_loan(self, loan):

        try:

            confirm = input("Do you want to apply for the loan? (Yes/No): ").strip().lower()

            if confirm != 'yes':

                print("Loan application cancelled.")

                return


            conn = DBConnUtil.get_connection()

            cursor = conn.cursor()

            query = """

                INSERT INTO loan (customer_id, principal_amount, interest_rate, loan_term, loan_type,
loan_status)

                VALUES (%s, %s, %s, %s, %s, %s)

            """

            values = (

                loan.get_customer().get_customer_id(),

                loan.get_principal_amount(),

                loan.get_interest_rate(),

                loan.get_loan_term(),

                loan.get_loan_type(),

                'Pending'
            )
            cursor.execute(query, values)
            conn.commit()
            print(" Loan application submitted successfully.")
        except Exception as e:
            print("X Error applying loan:", e)
        finally:
            cursor.close()
            conn.close()

    def calculate_interest(self, loan_id):
        try:
            conn = DBConnUtil.get_connection()
            cursor = conn.cursor()
            cursor.execute("SELECT principal_amount, interest_rate, loan_term FROM loan WHERE
loan_id = %s", (loan_id,))
            row = cursor.fetchone()
            if row:
                principal, rate, term = row
                interest = (principal * rate * term) / 1200
                print(f" Interest for Loan ID {loan_id}: ₹{interest:.2f}")
                return interest
            else:
                raise InvalidLoanException("Loan not found for ID: " + str(loan_id))
        except InvalidLoanException as e:
            print("X", e)
        finally:
            cursor.close()
            conn.close()

        def calculate_interest_manual(self, principal, rate, term):
```

```
        interest = (principal * rate * term) / 1200
        print(f" Manual Interest: ₹{interest:.2f}")
        return interest

    def loan_status(self, loan_id):
        try:
            conn = DBConnUtil.get_connection()
            cursor = conn.cursor()
            cursor.execute("""
                SELECT c.credit_score FROM loan l
                JOIN customer c ON l.customer_id = c.customer_id
                WHERE l.loan_id = %s
            """, (loan_id,))
            row = cursor.fetchone()
            if row:
                credit_score = row[0]
                status = "Approved" if credit_score > 650 else "Rejected"
                cursor.execute("UPDATE loan SET loan_status = %s WHERE loan_id = %s", (status,
loan_id))
                conn.commit()
                print(f" Loan Status for Loan ID {loan_id}: {status}")
            else:
                raise InvalidLoanException("Loan not found for ID: " + str(loan_id))
        except InvalidLoanException as e:
            print("X", e)
        finally:
            cursor.close()
            conn.close()

    def calculate_emi(self, loan_id):
        try:
            conn = DBConnUtil.get_connection()

            cursor = conn.cursor()

            cursor.execute("SELECT principal_amount, interest_rate, loan_term FROM loan WHERE
loan_id = %s", (loan_id,))

            row = cursor.fetchone()

            if row:

                P, R_annual, N = row

                R = R_annual / (12 * 100)  # monthly rate

                emi = (P * R * (1 + R) ** N) / ((1 + R) ** N - 1)

                print(f" EMI for Loan ID {loan_id}: ₹{emi:.2f}")

                return emi

            else:

                raise InvalidLoanException("Loan not found for ID: " + str(loan_id))

        except InvalidLoanException as e:

            print("X", e)

        finally:

            cursor.close()

            conn.close()


    def calculate_emi_manual(self, principal, rate, term):

        R = rate / (12 * 100)

        emi = (principal * R * (1 + R) ** term) / ((1 + R) ** term - 1)

        print(f" Manual EMI: ₹{emi:.2f}")

        return emi


    def loan_repayment(self, loan_id, amount):

        try:

            emi = self.calculate_emi(loan_id)

            if emi is None:

                return

            if amount < emi:
```

```
            print("Payment amount is less than single EMI. Payment rejected.")
            return
        num_emis = int(amount // emi)
        print(f" Payment of ₹{amount:.2f} will cover {num_emis} EMI(s).")
    except Exception as e:
        print("X Error in repayment:", e)

def get_all_loans(self):
    try:
        conn = DBConnUtil.get_connection()
        cursor = conn.cursor()
        cursor.execute("SELECT * FROM loan")
        rows = cursor.fetchall()
        print(" All Loans:")
        for row in rows:
            print(row)
    except Exception as e:
        print("X Error fetching loans:", e)
    finally:
        cursor.close()
        conn.close()

def get_loan_by_id(self, loan_id):
    try:
            conn = DBConnUtil.get_connection()
            cursor = conn.cursor()
            cursor.execute("SELECT * FROM loan WHERE loan_id = %s", (loan_id,))
            row = cursor.fetchone()
            if row:
                print(f" Loan Details for ID {loan_id}:")
                print(row)
                return row
            else:
                raise InvalidLoanException("Loan not found for ID: " + str(loan_id))
    except InvalidLoanException as e:
        print("X", e)
    finally:
        cursor.close()
        conn.close()
```

7. Create DBUtil class and add the following method.

a. static getDBConn():Connection Establish a connection to the database and return Connection reference

Code:

```
import mysql.connector
from util.db_property_util import DBPropertyUtil


class DBUtil:
    @staticmethod
    def getDBConn():
        conn_details = DBPropertyUtil.get_connection_string('db.properties.ini')
        connection = mysql.connector.connect(**conn_details)
        return connection
```

8. Create LoanManagement main class and perform following operation:

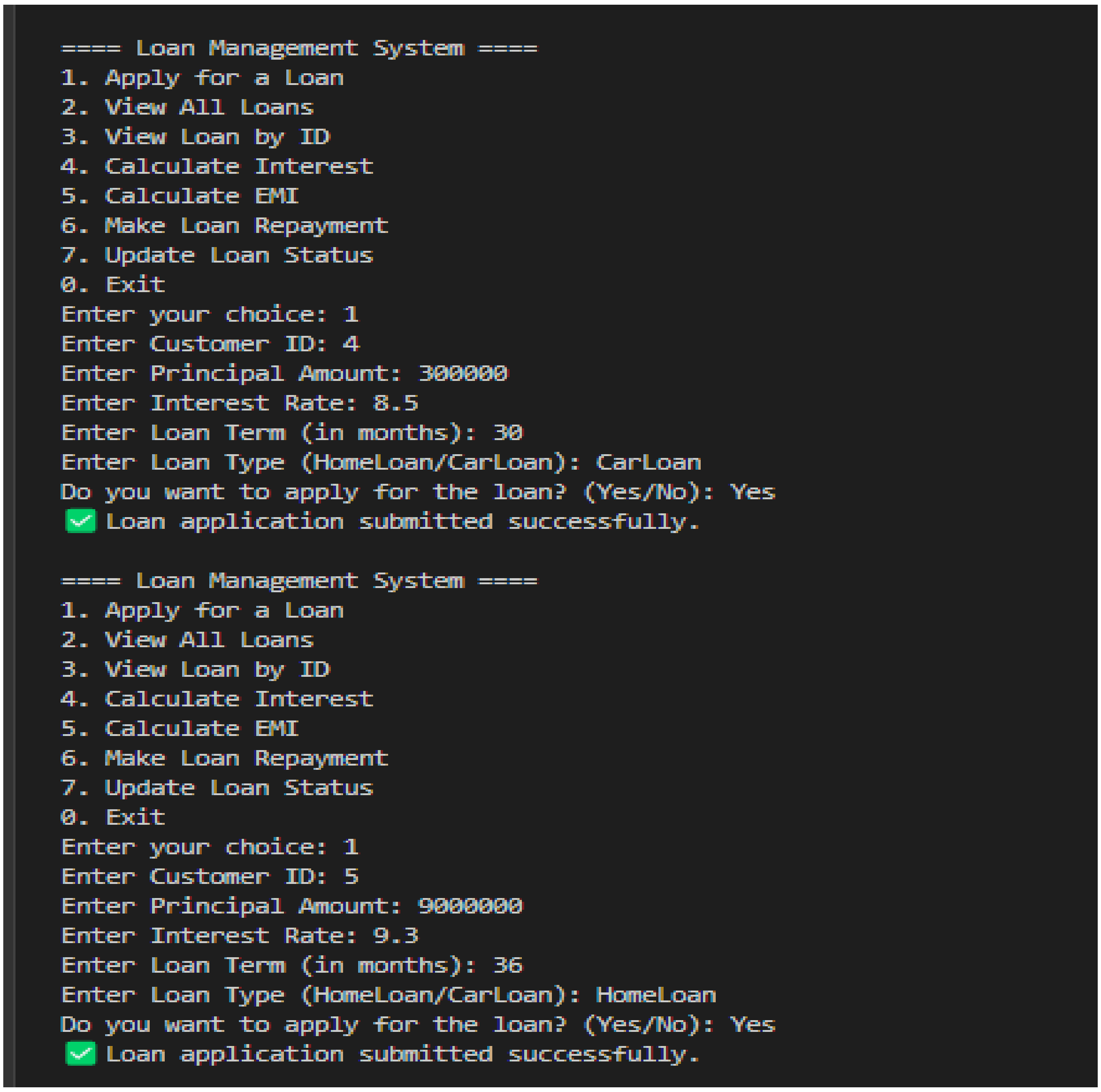
a. main method to simulate the loan management system. Allow the user to interact with the system by entering choice from menu such as "applyLoan", "getAllLoan", "getLoan", "loanRepayment", "exit."

Code:

```
import sys

import os

sys.path.append(os.path.abspath(os.path.join(os.path.dirname(__file__), '..')))


from dao.impl.loan_repository_impl import LoanRepositoryImpl

from entity.loan import Loan

from entity.customer import Customer


def show_menu():

    print("\n==== Loan Management System ====")

    print("1. Apply for a Loan")

    print("2. View All Loans")

    print("3. View Loan by ID")

    print("4. Calculate Interest")

    print("5. Calculate EMI")

    print("6. Make Loan Repayment")

    print("7. Update Loan Status")

    print("0. Exit")

    return input("Enter your choice: ")


def main():

    repo = LoanRepositoryImpl()


    while True:

        choice = show_menu()
        if choice == '1':
            customer_id = input("Enter Customer ID: ")
            principal = float(input("Enter Principal Amount: "))
            rate = float(input("Enter Interest Rate: "))
            term = int(input("Enter Loan Term (in months): "))
            loan_type = input("Enter Loan Type (HomeLoan/CarLoan): ")

            # Basic customer object just for relation
            customer = Customer(customer_id=customer_id, name="", email="", phone="", address="",
credit_score=700)
            loan = Loan(loan_id=None, customer=customer, principal_amount=principal,
                        interest_rate=rate, loan_term=term, loan_type=loan_type, loan_status="Pending")

            repo.apply_loan(loan)

        elif choice == '2':
            repo.get_all_loans()

        elif choice == '3':
            loan_id = input("Enter Loan ID: ")
            repo.get_loan_by_id(loan_id)

        elif choice == '4':
            loan_id = input("Enter Loan ID: ")
            repo.calculate_interest(loan_id)

        elif choice == '5':
            loan_id = input("Enter Loan ID: ")
            repo.calculate_emi(loan_id)
        elif choice == '6':
            loan_id = input("Enter Loan ID: ")
            amount = float(input("Enter Repayment Amount: "))
            repo.loan_repayment(loan_id, amount)

        elif choice == '7':
            loan_id = input("Enter Loan ID to update status: ")
            repo.loan_status(loan_id)

        elif choice == '0':
            print(" Exiting Loan Management System.")
           break
        else:
            print(" Invalid choice. Please try again.")
if __name__ == "__main__":
    main()
```

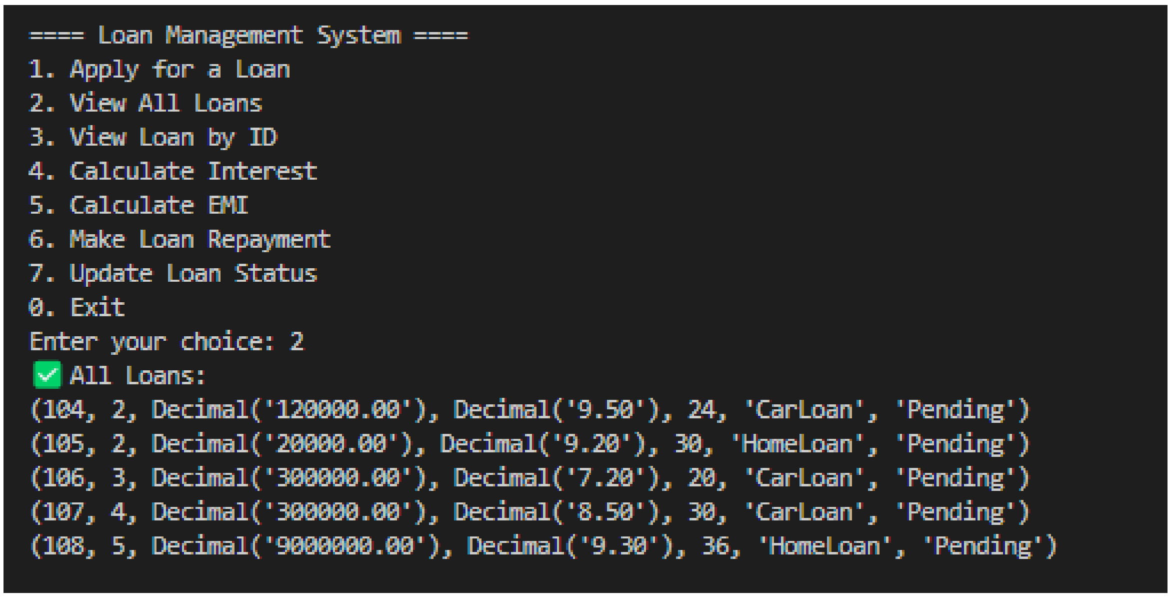
OUTPUT:

1.APPLY FOR A LOAN



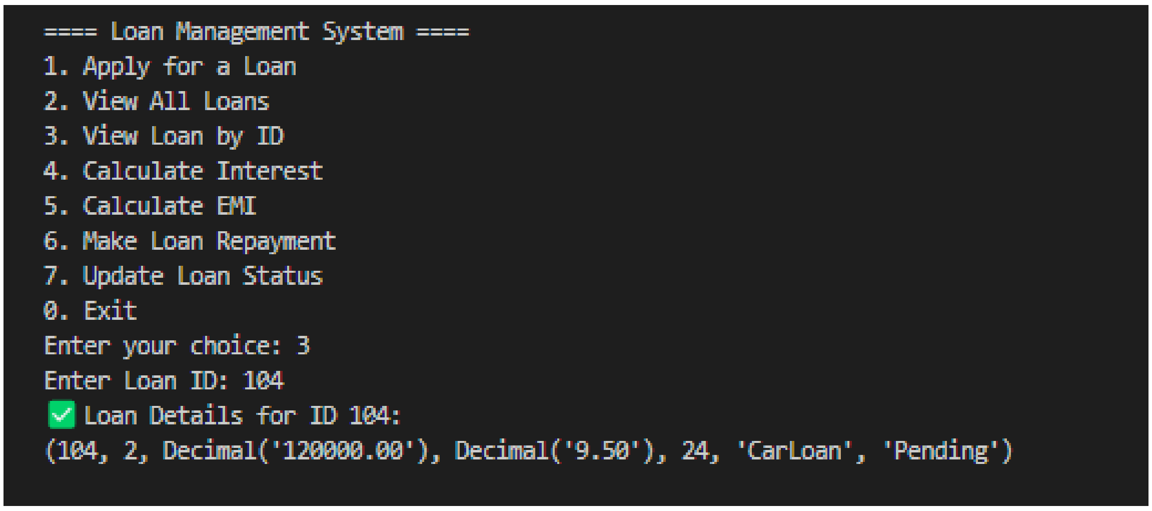
```
==== Loan Management System ====
1. Apply for a Loan
2. View All Loans
3. View Loan by ID
4. Calculate Interest
5. Calculate EMI
6. Make Loan Repayment
7. Update Loan Status
0. Exit
Enter your choice: 1
Enter Customer ID: 4
Enter Principal Amount: 300000
Enter Interest Rate: 8.5
Enter Loan Term (in months): 30
Enter Loan Type (HomeLoan/CarLoan): CarLoan
Do you want to apply for the loan? (Yes/No): Yes
✅ Loan application submitted successfully.

==== Loan Management System ====
1. Apply for a Loan
2. View All Loans
3. View Loan by ID
4. Calculate Interest
5. Calculate EMI
6. Make Loan Repayment
7. Update Loan Status
0. Exit
Enter your choice: 1
Enter Customer ID: 5
Enter Principal Amount: 9000000
Enter Interest Rate: 9.3
Enter Loan Term (in months): 36
Enter Loan Type (HomeLoan/CarLoan): HomeLoan
Do you want to apply for the loan? (Yes/No): Yes
✅ Loan application submitted successfully.
```

2. VIEW ALL LOANS



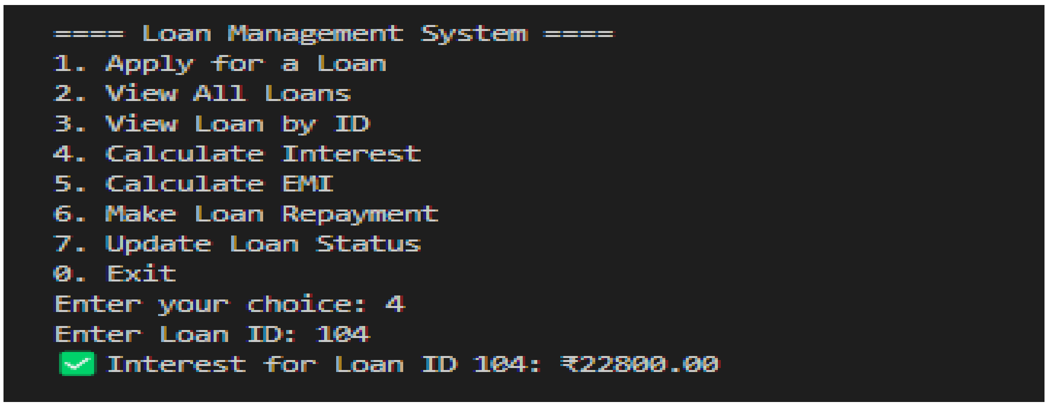
```
==== Loan Management System ====
1. Apply for a Loan
2. View All Loans
3. View Loan by ID
4. Calculate Interest
5. Calculate EMI
6. Make Loan Repayment
7. Update Loan Status
0. Exit
Enter your choice: 2
✅ All Loans:
(104, 2, Decimal('120000.00'), Decimal('9.50'), 24, 'CarLoan', 'Pending')
(105, 2, Decimal('20000.00'), Decimal('9.20'), 30, 'HomeLoan', 'Pending')
(106, 3, Decimal('300000.00'), Decimal('7.20'), 20, 'CarLoan', 'Pending')
(107, 4, Decimal('300000.00'), Decimal('8.50'), 30, 'CarLoan', 'Pending')
(108, 5, Decimal('9000000.00'), Decimal('9.30'), 36, 'HomeLoan', 'Pending')
```

3. VIEW LOAN BY ID



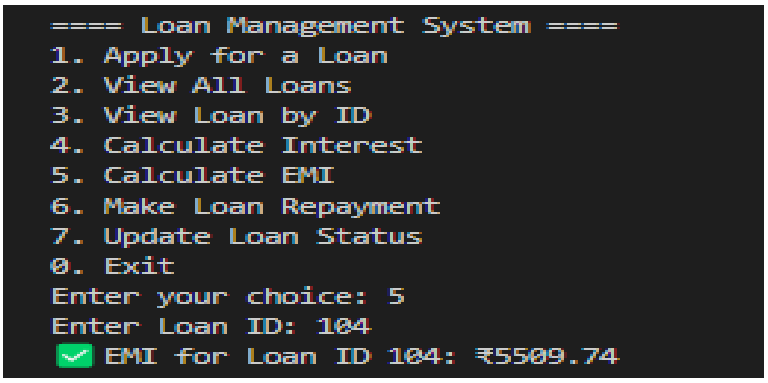
```
==== Loan Management System ====
1. Apply for a Loan
2. View All Loans
3. View Loan by ID
4. Calculate Interest
5. Calculate EMI
6. Make Loan Repayment
7. Update Loan Status
0. Exit
Enter your choice: 3
Enter Loan ID: 104
✅ Loan Details for ID 104:
(104, 2, Decimal('120000.00'), Decimal('9.50'), 24, 'CarLoan', 'Pending')
```

4. CALCULATE INTEREST



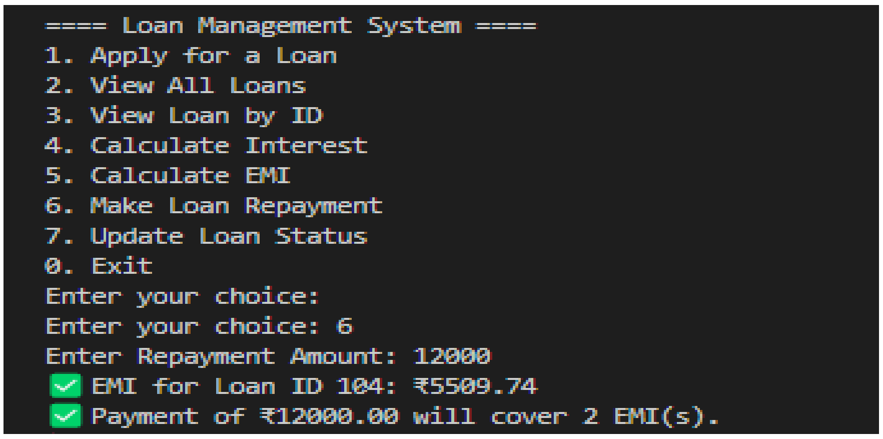
```
==== Loan Management System ====
1. Apply for a Loan
2. View All Loans
3. View Loan by ID
4. Calculate Interest
5. Calculate EMI
6. Make Loan Repayment
7. Update Loan Status
0. Exit
Enter your choice: 4
Enter Loan ID: 104
✅ Interest for Loan ID 104: ₹22800.00
```

5. CALCULATE EMI



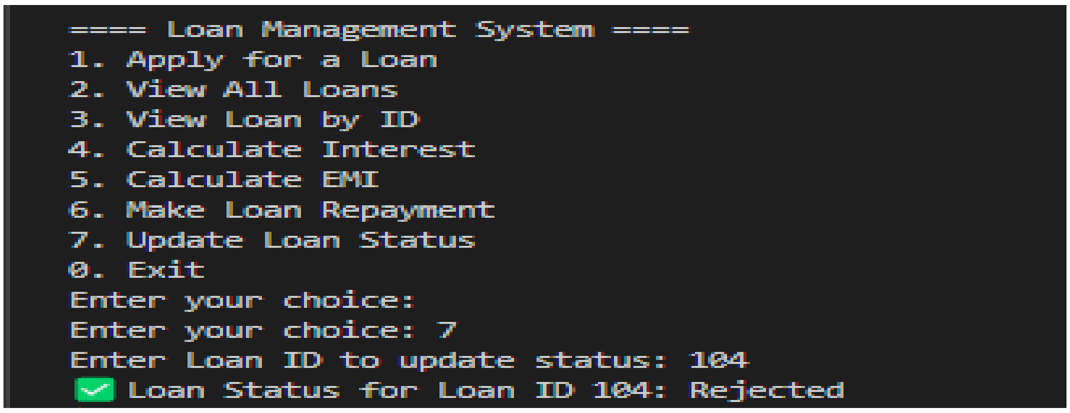
```
==== Loan Management System ====
1. Apply for a Loan
2. View All Loans
3. View Loan by ID
4. Calculate Interest
5. Calculate EMI
6. Make Loan Repayment
7. Update Loan Status
0. Exit
Enter your choice: 5
Enter Loan ID: 104
✅ EMI for Loan ID 104: ₹5509.74
```

6. LOAN REPAYMENT



```
==== Loan Management System ====
1. Apply for a Loan
2. View All Loans
3. View Loan by ID
4. Calculate Interest
5. Calculate EMI
6. Make Loan Repayment
7. Update Loan Status
0. Exit
Enter your choice:
Enter your choice: 6
Enter Repayment Amount: 12000
✅ EMI for Loan ID 104: ₹5509.74
✅ Payment of ₹12000.00 will cover 2 EMI(s).
```

7.UPDATE LOAN STATUS



```
==== Loan Management System ====
1. Apply for a Loan
2. View All Loans
3. View Loan by ID
4. Calculate Interest
5. Calculate EMI
6. Make Loan Repayment
7. Update Loan Status
0. Exit
Enter your choice:
Enter your choice: 7
Enter Loan ID to update status: 104
✅ Loan Status for Loan ID 104: Rejected
```