Online Payment Platform - Database Design

1. Users Table (Registration & Login)

Column Name	Data Type	Constraints	Description
UserID	INT (AUTO_INCREMENT)	PRIMARY KEY	Unique user identifier.
Username	VARCHAR(50)	UNIQUE, NOT NULL	User's unique name.
Email	VARCHAR(100)	UNIQUE, NOT NULL	User's email address.
Password	VARCHAR(255)	NOT NULL	Hashed password for security.
PhoneNumber	VARCHAR(15)	UNIQUE, NOT NULL	User's contact number.
Role	ENUM('User', 'Admin')	NOT NULL	Defines access level.
CreatedAt	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP	Account creation date.

2. Login Attempts Table

Column Name	Data Type	Constraints	Description
LoginID	INT (AUTO_INCREMENT)	PRIMARY KEY	Unique login ID.
UserID	INT	FOREIGN KEY (Users) NOT NULL	References Users table.

Column Name	Data Type	Constraints	Description
LoginTime	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP	Timestamp of login attempt.
Status	ENUM('Success', 'Failed')	NOT NULL	Login status.

3. Accounts Table (Add/Remove Bank Accounts)

Column Name	Data Type	Constraints	Description
AccountID	INT (AUTO_INCREMENT)	PRIMARY KEY	Unique account ID.
UserID	INT	FOREIGN KEY (Users) NOT NULL	References Users table.
BankName	VARCHAR(100)	NOT NULL	Name of the bank.
AccountNumber	VARCHAR(20)	UNIQUE, NOT NULL	User's bank account number.
IFSC_Code	VARCHAR(11)	NOT NULL	Bank IFSC code.
Status	ENUM('Active', 'Inactive')	NOT NULL	Account status.
Upi id.	Varchar(10)	PRIMARY KEY,NOT NULL	Unique

4. Payments Table

Column Name	Data Type	Constraints	Description
PaymentID	INT (AUTO_INCREMENT)	PRIMARY KEY	Unique payment ID.

Column Name	Data Type	Constraints	Description
UserID	INT	FOREIGN KEY (Users) NOT NULL	References Users table.
AccountID	INT	FOREIGN KEY (Accounts) NOT NULL	References Accounts table.
Amount	DECIMAL(10,2)	CHECK (Amount > 0)	Payment amount.
PaymentDate	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP	Date and time of payment.
Status	ENUM('Pending', 'Completed', 'Failed')	NOT NULL	Payment status.

5. Profile Table (Update Profile)

Column Name	Data Type	Constraints	Description
ProfileID	INT (AUTO_INCREMENT)	PRIMARY KEY	Unique profile ID.
UserID	INT	FOREIGN KEY (Users) NOT NULL	References Users table.
FullName	VARCHAR(100)	NOT NULL	User's full name.
Address	TEXT	NULL	User's address.
DOB	DATE	NULL	Date of birth.
ProfilePic	VARCHAR(255)	NULL	Profile picture URL.

6. Bonus Table

Column Name	Data Type	Constraints	Description
BonusID	INT (AUTO_INCREMENT)	PRIMARY KEY	Unique bonus ID.
UserID	INT	FOREIGN KEY (Users) NOT NULL	References Users table.
BonusAmount	DECIMAL(10,2)	CHECK (BonusAmount > 0)	Bonus amount.
BonusDate	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP	Date of bonus allocation.
BonusType	ENUM('Referral', 'Cashback', 'Promo')	NOT NULL	Type of bonus.

7. Transaction History & Bank Balance Table

Column Name	Data Type	Constraints	Description
TransactionID	INT (AUTO_INCREMENT)	PRIMARY KEY	Unique transaction ID.
UserID	INT	FOREIGN KEY (Users) NOT NULL	References Users table.
AccountID	INT	FOREIGN KEY (Accounts) NOT NULL	References Accounts table.
Type	ENUM('Credit', 'Debit')	NOT NULL	Transaction type.
Amount	DECIMAL(10,2)	CHECK (Amount > 0)	Transaction amount.
Balance	DECIMAL(10,2)	CHECK (Balance >= 0)	Updated bank balance.

Column Name	Data Type	Constraints	Description
TransactionDate TIMESTAMP		DEFAULT CURRENT_TIMESTAMP	Date of transaction.

8. Security Table

Column Name	Data Type	Constraints	Description
SecurityID	INT (AUTO_INCREMENT)	PRIMARY KEY	Unique security setting ID.
UserID	INT	FOREIGN KEY (Users) NOT NULL	References Users table.
TwoFactorAuth BOOLEAN		DEFAULT FALSE	2FA enabled or not.

9. Feedback & Customer Support Table

Column Name	Data Type	Constraints	Description
FeedbackID	INT (AUTO_INCREMENT)	PRIMARY KEY	Unique feedback ID.
UserID	INT	FOREIGN KEY (Users) NOT NULL	References Users table.
Message	TEXT	NOT NULL	User's feedback or complaint.
Response	TEXT	NULL	Admin's response.
Status	ENUM('Open', 'Closed')	DEFAULT 'Open'	Ticket status.
CreatedAt	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP	Date of submission.

10. Admin Table

Column Name	Data Type	Constraints	Description
AdminID	INT (AUTO_INCREMENT)	PRIMARY KEY	Unique admin ID.
Username	VARCHAR(50)	UNIQUE, NOT NULL	Admin's username.
Email	VARCHAR(100)	UNIQUE, NOT NULL	Admin's email.
Password	VARCHAR(255)	NOT NULL	Encrypted password.
Role	ENUM('SuperAdmin', Admin	NOT NULL	Admin role.