

NORMALISATION

TABLES BEFORE NORMALISATION:

- 1) ADMINISTRATOR (Emp_id, Emp_firstName, Emp_lastName, Emp_Gender, Emp_DOB, Emp_Designation, Hired_date, Emp_workingStatus)
- 2) CUSTOMER (Customer_id, AccountID, Customer_firstName, Customer_lastName, Customer_Gender, DOB, State, City, Customer_Address, Zip_code, Email_Id, Mobile_no1, Mobile_no2, UserLoginID)
- 3) ACCOUNT-DETAILS (AccountID, CurrentBalance, AccountType, AccountStatus, SavingsInterestRate)
- 4) REGISTRATION (RegisterID, UserName, UserLoginID, Password, Email_Id, Mobile_no1)
- 5) LOGIN-ACCOUNT (UserLoginID, AccountID)
- 6) USERLOGINS (UserLoginID, UserName, Password)
- 7) SecurityAnswers (UserLoginID, Security_Ans, Security_QuestID)
- 8) SecurityQuestions (Security_QuestID, Security_Questions)
- 9) TRANSACTION (TransactionID, TransactionDate, TransactionTime, TransactionType, TransactionAmount, NewBalance, AccountID, Customer_id, UserLoginID, WithdrawalCount, DepositCount)
- 10) LOAN-DETAILS (LoanNumber, AccountID, LoanAmount, InterestRate, LoanApprovalDate)
- 11) CARD-DETAILS (AccountID, CardHolder, CardType, CCV, ExpiryDate)
- 12) BILL-PAYMENTS (BillPayment_no, PaymentType, PaymentConfirmation, PaymentAmount, Customer_id)
- 13) FailedTransactionLog (FailedTransaction_errorType, FailedTransactionID)

MASTER SCHEMA:

BANK(Emp_id, Emp_firstName, Emp_lastName, Emp_Gender, Emp_DOB, Emp_Designation, Hired_date, Emp_workingStatus, Emp_Mobile, Customer_id, AccountID, Customer_firstName, Customer_lastName, Customer_Gender, DOB, State, City, Customer_Address, Zip_code, Email_Id, Mobile_no, UserLoginID, AccountID, CurrentBalance, AccountType, AccountStatus, SavingsInterestRate, RegisterID, UserName, Password, Security_Ans, Security_QuestID, Security_Questions, TransactionID, TransactionDate, TransactionTime, TransactionType, TransactionAmount, NewBalance, WithdrawalCount, DepositCount, LoanNumber, LoanAmount, InterestRate, LoanApprovalDate, CardHolder, CardType, CCV, ExpiryDate, BillPayment_no, PaymentType, PaymentConfirmation, PaymentAmount, FailedTransaction_errorType, FailedTransactionID)

1 NF:

Multivariable attributes: TransactionID, Mobile_no, Emp_Mobile, LoanNumber, BillPayment_no.

Table 1:

BANK(Emp_id, Emp_firstName, Emp_lastName, Emp_Gender, Emp_DOB, Emp_Designation, Hired_date, Emp_workingStatus, Customer_id, AccountID, Customer_firstName, Customer_lastName, Customer_Gender, DOB, State, City, Customer_Address, Zip_code, Email_Id, UserLoginID, AccountID, CurrentBalance, AccountType, AccountStatus, SavingsInterestRate, RegisterID, UserName, Password, Security_Ans, Security_QuestID, Security_Questions, TransactionID, TransactionDate, TransactionTime, TransactionType, TransactionAmount, NewBalance, WithdrawalCount, DepositCount, LoanNumber, LoanAmount, InterestRate, LoanApprovalDate, CardHolder, CardType, CCV, ExpirtDate, BillPayment_no, PaymentType, PaymentConfirmation, PaymentAmount, FailedTransaction_errorType, FailedTransactionID)

Table 2:

Cus_Mobile (Customer_id, Mobile_no)

Table 3:

Emp_Mob(Emp_id, Emp_Mobile)

Table 4:

Loan_num(Customer_id, LoanNumber)

Table 5:

Transact (AccountID, TransactionID)

Table 6:

Bill (AccountID, Bill_payment_no)

2 NF:

Master Schema is decomposed and all the partial dependencies are identified,

1) ADMINISTRATOR (Emp_id, Emp_firstName, Emp_lastName, Emp_Gender, Emp_DOB, Emp_Designation, Hired_date, Emp_workingStatus)

Functional Dependencies:

(Emp_id) → (Emp_firstName, Emp_lastName, Emp_Gender, Emp_DOB, Emp_Designation, Emp_workingStatus, Hired_date)

2) CUSTOMER (Customer_id, AccountID, UserLoginID, Customer_firstName, Customer_lastName, Customer_Gender, DOB, State, City, Customer_Address, Zip_code, Email_Id, Mobile_no)

Functional Dependencies:

(Customer_id) → (AccountID, UserLoginID, Customer_firstName, Customer_lastName, Customer_Gender, DOB, State, City, Customer_Address, Zip_code, Email_Id)

3) ACCOUNT-DETAILS (AccountID, CurrentBalance, AccountType, AccountStatus, SavingsInterestRate)

Functional Dependencies:

(AccountID) → (CurrentBalance, AccountType, AccountStatus, SavingsInterestRate)

4) REGISTRATION (RegisterID, UserName, UserLoginID, Password, Email_Id, Mobile)

Functional Dependencies:

(RegisterID, UserLoginID) → (UserName, Password, Email_Id, Mobile)

5) TRANSACTION (TransactionID, TransactionDate, TransactionTime, TransactionType, TransactionAmount, NewBalance, WithdrawalCount, DepositCount)

Functional Dependencies:

(TransactionID) → (TransactionDate, TransactionTime, TransactionType, TransactionAmount, NewBalance, WithdrawalCount, DepositCount)

6) LOAN-DETAILS (LoanNumber, LoanAmount, InterestRate, LoanApprovalDate, LoanType)

Functional Dependencies:

(LoanNumber) → (LoanAmount, InterestRate, LoanApprovalDate, LoanType)

7) CARD-DETAILS (CardNumber, CardHolder, CardType, CCV, ExpirtDate)

Functional Dependencies:

(CardNumber) → (CardHolder, CardType, CCV, ExpirtDate)

8) BILL-PAYMENTS (BillPayment_no, PaymentType, PaymentConfirmation, PaymentAmount)

Functional Dependencies:

(BillPayment_no) → (PaymentType, PaymentConfirmation, PaymentAmount)

9) FailedTransactionLog (FailedTransaction_errorType, FailedTransactionID)

Functional Dependencies:

(FailedTransactionID) → (FailedTransaction_errorType)

10) USERLOGINS (UserLoginID, UserName, Password)

Functional Dependencies:

(UserLoginID) → (Username, Password)

PARTIAL DEPENDENCY:

11a) Security_Anss (UserLoginID, Security_QuestID, Security_Ans)

Functional Dependencies:

(UserLoginID, Security_QuestID) → (Security_Ans)

11b) Security_Quest (Security_QuestID, Security_Questions)

Functional Dependencies:

(Security_QuestID) → (Security_Questions)

3 NF:

Further the decomposed master schema should be segregated on the basis of transitive dependency.

1) ADMINISTRATOR (Emp_id, Emp_firstName, Emp_lastName, Emp_Gender, Emp_DOB, Emp_Designation, Hired_date, Emp_workingStatus)

Functional Dependencies:

(Emp_id) → (Emp_firstName, Emp_lastName, Emp_Gender, Emp_DOB, Emp_Designation, Emp_workingStatus, Hired_date)

2) ACCOUNT-DETAILS (AccountID, CurrentBalance, AccountType, AccountStatus, SavingsInterestRate)

Functional Dependencies:

(AccountID) → (CurrentBalance, AccountType, AccountStatus, SavingsInterestRate)

3) REGISTRATION (RegisterID, UserName, UserLoginID, Password, Email_Id, Mobile)

Functional Dependencies:

(RegisterID, UserLoginID) → (UserName, Password, Email_Id, Mobile)

4) Security_Anss (UserLoginID, Security_QuestID, Security_Ans)

Functional Dependencies:

(UserLoginID, Security_QuestID) → (Security_Ans)

5) Security_Quest (Security_QuestID, Security_Questions)

Functional Dependencies:

(Security_QuestID) → (Security_Questions)

6) TRANSACTION (TransactionID, TransactionDate, TransactionTime, TransactionType, TransactionAmount, NewBalance, WithdrawalCount, DepositCount, OldBalance)

Functional Dependencies:

(TransactionID) → (TransactionDate, TransactionTime, TransactionType, TransactionAmount, NewBalance, WithdrawalCount, DepositCount, OldBalance)

7) CARD-DETAILS (CardNumber, CardHolder, CardType, CCV, ExpirtDate)

Functional Dependencies:

(CardNumber) → (CardHolder, CardType, CCV, ExpirtDate)

8) BILL-PAYMENTS (BillPayment_no, PaymentType, PaymentConfirmation, PaymentAmount)

Functional Dependencies:

(BillPayment_no) → (PaymentType, PaymentConfirmation, PaymentAmount)

9) FailedTransactionLog (FailedTransaction_errorType, FailedTransactionID)

Functional Dependencies:

(FailedTransactionID) → (FailedTransaction_errorType)

10) USERLOGINS (UserLoginID, UserName, password)

TRANSITIVE DEPENDENCY:

11a) LOANTYPE (Loan_Type, InterestRate)

Functional Dependencies:

(Loan_Type) → (InterestRate)

11b) LOAN-DETAILS (LoanNumber, LoanAmount, LoanApprovalDate, LoanType)

Functional Dependencies:

(LoanNumber) → (LoanAmount, LoanApprovalDate, LoanType)

12a) CUSTOMER (Customer_id, AccountID, UserLoginID, Customer_firstName, Customer_lastName, Customer_Gender, DOB, Customer_Address, Email_Id, Mobile_no)

Functional Dependencies:

(Customer_id) → (AccountID, UserLoginID, Customer_firstName, Customer_lastName, Customer_Gender, DOB, Customer_Address, Email_Id, Zip_code)

12b) State_city(City,State)

Functional Dependencies:

(City) → (State)

12c) Zip (Zip_code, City)

Functional Dependencies:

(Zip_code) → (City)

BCNF:

All the tables are in BCNF.

FINALIZED TABLES:

- 1) ADMINISTRATOR (Emp_id, Emp_firstName, Emp_lastName, Emp_Gender, Emp_DOB, Emp_Designation, Hired_date, Emp_workingStatus)
- 2) CUSTOMER (Customer_id, AccountID, UserLoginID, Customer_firstName, Customer_lastName, Customer_Gender, DOB, Customer_Address, Zip_code, Email_Id, Mobile_no)
- 3) ACCOUNT_DETAILS (AccountID, CurrentBalance, AccountType, AccountStatus, SavingsInterestRate)
- 4) REGISTRATION (RegisterID, UserName, UserLoginID, Password, Email_Id, Mobile)
- 5) SECURITY_ANSS (UserLoginID, Security_QuestID, Security_Ans)
- 6) SECURITY_QUEST (Security_QuestID, Security_Questions)
- 7) TRANSACTION (TransactionID, TransactionDate, TransactionTime, TransactionType, TransactionAmount, NewBalance, WithdrawalCount, DepositCount, OldBalance)
- 8) State_city (City, State)
- 9) Zip (Zip_code, City)
- 10) LOANTYPE (Loan_Type, InterestRate)
- 11) LOAN_DETAILS (LoanNumber, LoanAmount, LoanApprovalDate, LoanType)
- 12) CARD_DETAILS (CardNumber, CardHolder, CardType, CCV, ExpirtDate)
- 13) BILL_PAYMENTS (BillPayment_no, PaymentType, PaymentConfirmation, PaymentAmount)
- 14) FailedTransactionLog (FailedTransaction_errorType, FailedTransactionID)
- 15) USERLOGINS (UserLoginID, UserName, password)

- 16) Cus_Mobile (Customer_id, Mobile_no)
- 17) Emp_Mob (Emp_id, Emp_Mobile)
- 18) Loan_num (Customer_id, LoanNumber)
- 19) Transact (AccountID, TransactionID)
- 20) Bill (AccountID, Bill_payment_no)

CREATION OF TABLES AND INSERTION OF RECORDS:

TABLE 1:

Create TABLE ADMINISTRATOR (Emp_id varchar (10) PRIMARY KEY, Emp_firstName varchar (30), Emp_lastName varchar (30), Emp_Gender char (1), Emp_DOB date, Emp_Designation varchar2(20), Hired_date date, Emp_workingStatus varchar2(20));

Insert into ADMINISTRATOR values ('AMAR0001','AMAR','S','M', date '1987-09-21','Manager', date '2015-08-09','Employeeed');

Insert into ADMINISTRATOR values ('SARA0002','SARA','PAL','F', date '1995-05-01','Assistant', date '2021-06-20','Employeeed');

Insert into ADMINISTRATOR values ('AMAL0004','AMALA','FAZIL','F', date '1988-09-26','Cashier', date '2020-08-29','Employeeed');

Insert into ADMINISTRATOR values ('MICH0005','MICHAEL','B','M', date '1999-11-01','Credit Analyst', date '2018-02-15','Employeeed');

Insert into ADMINISTRATOR values ('DANI0007','DANIEL','PAUL','M', date '1989-02-28','Credit Analyst', date '2017-09-03','Employeeed');

Insert into ADMINISTRATOR values ('JOSH0003','JOSHUA','RAJ','M', date '1995-10-11','Loan Processor', date '2017-01-04','Employeeed');

Insert into ADMINISTRATOR values ('BETT0009','BETTY','COOPER','F', date '1995-05-05','Assistant', date '2017-09-07','Employeeed');

Insert into ADMINISTRATOR values ('SHAR0011','SHARON','BIANCA','F', date '1987-08-18','Financial Analyst', date '2019-04-19','Employeeed');

Insert into ADMINISTRATOR values ('EMIL0015','EMILA','CLARKE','F', date '1991-08-29','Auditor', date '2019-03-12','Resigned');

Insert into ADMINISTRATOR values ('RYAN0010','RYAN','GARY','M', date '1996-07-01','Auditor', date '2020-01-13','Employeeed');

CUSTOMER_ID	ACCOUNTID	USERLOGINID	CUSTOMER_FIRSTNAME	CUSTOMER_LASTNAME	CUSTOMER_GENDER	DOB	CUSTOMER_ADDRESS	ZIP_CODE	EMAIL_ID
900001	13520010018315	315001	Nick	Santa	M	01-JAN-00	81,West beach Road	600002	nicksanta01@gmail.com
900005	13520010018005	315006	Andrew	Donald	M	10-JAN-01	47, Model Town	600001	andrewdonald@gmail.com
900031	13520010018458	315100	Sandra	Joe	F	07-FEB-00	90/7A,Anna Road H O	600002	sandrajoe01@gmail.com
900002	13520010018489	315101	Carol	Amy	F	31-AUG-03	Near Ariyalur Cement Factory	621704	carolamy5601@gmail.com
900099	13520010018629	315016	Donna	Kelly	F	13-MAR-98	No.4, West MadaStreet	600107	donnakelly01@gmail.com
900035	13520010018541	315086	Tyler	Frank	M	14-APR-99	No.88, Mayor Ramanathan Salai	600034	tylerfrank01@gmail.com
900050	13520010018111	315098	Alice	Cooper	F	15-MAY-99	No.370,Corporation Zone Office,Anna Salai	600015	alicecooper01@gmail.com
900008	13520010018125	315019	Jancy	Ann	F	16-JUN-00	No.62, Basin Bridge Road	600079	jancyann01@gmail.com
900011	13520010018567	315028	Billy	Bruce	M	17-JUL-00	No.5, Anderson Road	600023	billybruce01@gmail.com
900012	13520010018507	315045	Carl	Terry	M	18-AUG-03	No.33, Arcot Road	600087	carlterry01@gmail.com
900088	13520010019007	315047	Julia	Amber	F	19-SEP-02	MMDA 2nd Main Street	600087	juliaamber01@gmail.com
900076	13520010018606	315011	Nick	Andrews	M	20-OCT-99	No.51, E.H.Road	621704	nickandrews01@gmail.com
900109	13520010018300	315012	Joffery	San	M	21-NOV-99	No.6,New street	600085	jofferysan01@gmail.com
900054	13520010018290	315033	John	Luck	M	22-DEC-90	sastri nagar,8th cross street	600020	johnluck6701@gmail.com
900004	13520010018261	315041	Rikky	Pant	M	23-JAN-87	No.10,Panchayat Road	600107	rikkypant01@gmail.com
900034	13520010018654	315050	Nancy	Drew	F	24-FEB-80	New MGR 1st Street	600107	nancydrew01@gmail.com
900059	13520010018126	315002	Ronnie	Lodge	F	25-MAR-94	No.78,Seven Wells Street	600034	ronnielodge01@gmail.com
900019	13520010018008	315009	Martha	Jose	F	26-APR-94	500/1, Mint Street, Near Govt. Press	600023	marthajose01@gmail.com
900010	13520010018112	315009	Rose	Michael	F	27-MAY-86	No.27, 61st street,10th sector	600085	rosemichael01@gmail.com

TABLE 2:

Create Table CUSTOMER (Customer_id int PRIMARY KEY, AccountID varchar (20), UserLoginID int, Customer_firstName varchar (30), Customer_lastName varchar (30), Customer_Gender char (1), DOB date, Customer_Address varchar2(100), Zip_code int, Email_Id varchar (30));

Insert into CUSTOMER values (900001,'13520010018315',315001,'Nick','Santa','M', date '2000-01-01','81, West beach Road',625543, 'nicksanta01@gmail.com');

Insert into CUSTOMER values (900005,'13520010018005',315006,'Andrew','Donald','M', date '2001-01-10','47, Model Town',600001, 'andrewdonald@gmail.com');

Insert into CUSTOMER values (900023,'13520010018888',315049,'Eric','C','M', date '2001-11-21','A/2, Bunder Road, Sewri (east)', 600001, 'ericc00901@gmail.com');

Insert into CUSTOMER values (900031,'13520010018458',315100,'Sandra','Joe','F', date '2000-02-07','90/7A, Anna Road H O',600002, 'sandrajoe01@gmail.com');

Insert into CUSTOMER values (900002,'13520010018489',315101,'Carol','Amy','F', date '2003-08-31','Near Ariyalur Cement Factory',621704,'carolamy5601@gmail.com');

Insert into CUSTOMER values(900099,'13520010018629',315016,'Donna','Kelly','F',date '1998-03-13','No.4, West MadaStreet',600107,'donnakelly01@gmail.com');

Insert into CUSTOMER values(900035,'13520010018541',315086,'Tyler','Frank','M',date '1999-04-14','No.88, Mayor Ramanathan Salai',600034,'tylerfrank01@gmail.com');

Insert into CUSTOMER values(900050,'13520010018111',315098,'Alice','Cooper','F',date '1999-05-15','No.370,Corporation Zone Office,Anna Salai',600015,'alicecooper01@gmail.com');

Insert into CUSTOMER values(900008,'13520010018125',315019,'Jancy','Ann','F',date '2000-06-16','No.62, Basin Bridge Road', 600079,'jancyann01@gmail.com');

Insert into CUSTOMER values(900011,'13520010018567',315028,'Billy','Bruce','M',date '2000-07-17','No.5, Anderson Road',600023,'billybruce01@gmail.com');

Insert into CUSTOMER values(900012,'13520010018507',315045,'Carl','Terry','M',date '2003-08-18','No.33, Arcot Road',600087,'carlterry01@gmail.com');

Insert into CUSTOMER values(900088,'13520010019007',315047,'Julia','Amber','F',date '2002-09-19','MMDA 2nd Main Street',600087,'juliaamber01@gmail.com');

Insert into CUSTOMER values(900076,'13520010018606',315011,'Nick','Andrews','M',date '1999-10-20','No.51, E.H.Road',621704,'nickandrews01@gmail.com');

Insert into CUSTOMER values(900109,'13520010018300',315012,'Joffery','San','M',date '1999-11-21','No.6,New street',600085,'jofferysan01@gmail.com');


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Insert into CUSTOMER values(900054,'13520010018290',315033,'John','Luck','M',date
'1990-12-22','sastri nagar,8th cross street',600020,'johnluck6701@gmail.com');
Insert into CUSTOMER values(900004,'13520010018261',315041,'Rikky','Pant','M',date
'1987-01-23','No.10,Panchayat Road',600107,'rikkypant01@gmail.com');
Insert into CUSTOMER values(900034,'13520010018654',315050,'Nancy','Drew','F',date
'1980-02-24','New MGR 1st Street',600107,'nancydrew01@gmail.com');
Insert into CUSTOMER values(900059,'13520010018126',315002,'Ronnie','Lodge','F',date
'1994-03-25','No.78,Seven Wells Street',600034,'ronnielodge01@gmail.com');
Insert into CUSTOMER values(900019,'13520010018008',315099,'Martha','Jose','F',date
'1994-04-26','508/1, Mint Street, Near Govt. Press',600023,'marthajose01@gmail.com');
Insert into CUSTOMER values(900010,'13520010018112',315009,'Rose','Michael','F',date
'1986-05-27','No.27, 61st street,10th sector',600085,'rosemichael01@gmail.com');
--select * from CUSTOMER;
--drop table CUSTOMER;

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EMP_ID	EMP_FIRSTNAME	EMP_LASTNAME	EMP_GENDER	EMP_DOB	EMP_DESIGNATION	HIRED_DATE	EMP_WORKINGSTATUS
AMAR0001	AMAR	S	M	21-SEP-87	Manager	09-AUG-15	Employeeed
SARA0002	SARA	PAL	F	01-MAY-95	Assistant	20-JUN-21	Employeeed
AMAL0004	AMALA	FAZIL	F	26-SEP-88	Cashier	29-AUG-20	Employeeed
MICH0005	MICHAEL	B	M	01-NOV-99	Credit Analyst	15-FEB-18	Employeeed
DANI0007	DANIEL	PAUL	M	28-FEB-89	Credit Analyst	03-SEP-17	Employeeed
BETT0009	BETTY	COOPER	F	05-MAY-95	Assistant	07-SEP-17	Employeeed
SHAR0011	SHARON	BIANCA	F	18-AUG-87	Financial Analyst	19-APR-19	Employeeed
EMIL0015	EMILA	CLARKE	F	29-AUG-91	Auditor	12-MAR-19	Resigned
RYAN0010	RYAN	GARY	M	01-JUL-96	Auditor	13-JAN-20	Employeeed
JOSH0003	JOSHUA	RAJ	M	11-OCT-95	Loan Processor	04-JAN-17	Employeeed

TABLE 3:

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Create Table ACCOUNT_DETAILS (AccountID varchar(20) PRIMARY KEY,
CurrentBalance float, AccountType varchar2(20), AccountStatus varchar2(20),
SavingsInterestRate float);
Insert into ACCOUNT_DETAILS values('13520010018315',3500.0,'Savings','Current',3.5);
Insert into ACCOUNT_DETAILS values('13520010018888',48000.0,'Salary','Current',4.0);
Insert into ACCOUNT_DETAILS values('13520010018005',33490.0,'Savings','Inactive',0);
Insert into ACCOUNT_DETAILS values('13520010018458',35209.0,'Savings','Current',3.5);
Insert into ACCOUNT_DETAILS values('13520010018111',350.0,'Savings','Current',3.5);
Insert into ACCOUNT_DETAILS values('13520010018567',2098.0,'Savings','Current',3.5);
Insert into ACCOUNT_DETAILS values('13520010018507',10089.0,'Salary','Current',4.0);
Insert into ACCOUNT_DETAILS values('13520010018606',1008.0,'Salary','Current',4.0);
Insert into ACCOUNT_DETAILS values('13520010019007',90065.0,'Savings','Current',3.5);
Insert into ACCOUNT_DETAILS values('13520010018489',900.0,'Salary','Current',4.0);
Insert into ACCOUNT_DETAILS values('13520010018629',1098.80,'Savings','Current',3.5);
Insert into ACCOUNT_DETAILS values('13520010018541',5768.30,'FD','Current',3.9);
Insert into ACCOUNT_DETAILS values('13520010018125',2747.90,'Savings','Current',3.5);
Insert into ACCOUNT_DETAILS values('13520010018300',12893.0,'FD','Inactive',0);
Insert into ACCOUNT_DETAILS values('13520010018654',87872.0,'Salary','Current',4.0);

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Insert into ACCOUNT_DETAILS values('13520010018290',890.0,'Salary','Current',4.0);
 Insert into ACCOUNT_DETAILS values('13520010018112',4777.0,'FD','Current',3.9);
 Insert into ACCOUNT_DETAILS values('13520010018008',9989.0,'Savings','Current',3.5);
 Insert into ACCOUNT_DETAILS values('13520010018126',99978.0,'Savings','Current',3.5);
 Insert into ACCOUNT_DETAILS values('13520010018261',8988.34,'Salary','Current',4.0);

ACCOUNTID	CURRENTBALANCE	ACCOUNTTYPE	ACCOUNTSTATUS	SAVINGSINTERESTRATE
13520010018315	3500	Savings	Current	3.5
13520010018888	48000	Salary	Current	4
13520010018005	33490	Savings	Inactive	0
13520010018458	35209	Savings	Current	3.5
13520010018111	350	Savings	Current	3.5
13520010018567	2098	Savings	Current	3.5
13520010018507	10089	Salary	Current	4
13520010018606	1008	Salary	Current	4
13520010019007	90065	Savings	Current	3.5
13520010018489	900	Salary	Current	4
13520010018629	1098.8	Savings	Current	3.5
13520010018541	5768.3	FD	Current	3.9
13520010018300	12893	FD	Inactive	0
13520010018654	87872	Salary	Current	4
13520010018290	890	Salary	Current	4
13520010018112	4777	FD	Current	3.9
13520010018008	9989	Savings	Current	3.5
13520010018126	99978	Savings	Current	3.5
13520010018261	8988.34	Salary	Current	4

TABLE 4:

Create table REGISTRATION (RegisterID int PRIMARY KEY, UserName varchar(20), UserLoginID int, Password varchar(12), Email_Id varchar(30), Mobile_no1 number(10));
 Insert into REGISTRATION values(250001,'NickSanta',315001,'abcdefghijkl','nicksanta01@gmail.com',9087685649);
 Insert into REGISTRATION values(250002,'CarolAmy',315101,'mskxhdnzjsnd','carolamy5601@gmail.com',8084383948);
 ;
 Insert into REGISTRATION values(250003,'DonnaKelly',315016,'abcdebkzdnkx','donnaakelly01@gmail.com',9902746392);
 Insert into REGISTRATION values(250004,'JuliaAmber',315047,'abdkecxjfbd','juliaamber01@gmail.com',9027492678);
 Insert into REGISTRATION values(250005,'BillyBruce',315028,'iskfjddkzuql','nicksanta01@gmail.com',8818384927);

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Insert into REGISTRATION
values(250006,'TylerFrank',315086,'weguyqoitjkl','billybruce01@gmail.com',9018375026);
Insert into REGISTRATION
values(250007,'AliceCooper',315098,'aaypletcuirl','alicecooper01@gmail.com',7189356792);
Insert into REGISTRATION
values(250008,'NickAndrews',315011,'auielodtyupl','nickandrews01@gmail.com',728450926
7);
Insert into REGISTRATION
values(250009,'CarlTerry',315045,'abcdaiporylo','carlterry01@gmail.com',8820947389);
Insert into REGISTRATION
values(250010,'MarthaJose',315099,'ndpoeyuprnzl','marthajose01@gmail.com',9289383900);
Insert into REGISTRATION
values(250011,'RonnieLodge',315002,'bamkywkoeudj','ronnielodge01@gmail.com',8209340
923);
Insert into REGISTRATION
values(250012,'JofferySan',315012,'pwormxtjsilk','jofferysan01@gmail.com',9092830234);

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REGISTERID	USERNAME	USERLOGINID	PASSWORD	EMAIL_ID	MOBILE_NO1
250002	CarolAmy	315101	mskxhdnzjsnd	carolamy5601@gmail.com	8084383948
250003	DonnaKelly	315016	abcdebkzdnkx	donnakelly01@gmail.com	9902746392
250004	JuliaAmber	315047	abdkecxjfbf	juliaamber01@gmail.com	9027492678
250005	BillyBruce	315028	iskfjddkzuql	nicksanta01@gmail.com	8818384927
250006	TylerFrank	315086	weguyqoitjkl	billybruce01@gmail.com	9018375026
250007	AliceCooper	315098	aaypletcuirl	alicecooper01@gmail.com	7189356792
250008	NickAndrews	315011	auielodtyupl	nickandrews01@gmail.com	7284509267
250009	CarlTerry	315045	abcdaiporylo	carlterry01@gmail.com	8820947389
250010	MarthaJose	315099	ndpoeyuprnzl	marthajose01@gmail.com	9289383900
250011	RonnieLodge	315002	bamkywkoeudj	ronnielodge01@gmail.com	8209340923
250012	JofferySan	315012	pwormxtjsilk	jofferysan01@gmail.com	9092830234
250001	NickSanta	315001	abcdefghijkl	nicksanta01@gmail.com	9087685649

TABLE 5:

```

Create Table SECURITY_ANSS (UserLoginID int PRIMARY KEY, Security_QuestID
varchar(3), Security_Ans varchar(20));
Insert into SECURITY_ANSS values(315001,'#03','Fanta');
Insert into SECURITY_ANSS values(315012,'#01','Surya');
Insert into SECURITY_ANSS values(315002,'#01','Samantha');
Insert into SECURITY_ANSS values(315099,'#02','Chetan Bhagat');
Insert into SECURITY_ANSS values(315045,'#08','Jurassic park');
Insert into SECURITY_ANSS values(315011,'#07','Mercedes Benz');
Insert into SECURITY_ANSS values(315098,'#08','Twilight');
Insert into SECURITY_ANSS values(315101,'#05','Mrs.Manjusha');
Insert into SECURITY_ANSS values(315028,'#03','Sky Blue');
Insert into SECURITY_ANSS values(315086,'#01','Emma Watson');
Insert into SECURITY_ANSS values(315047,'#04','Amrita High School');
Insert into SECURITY_ANSS values(315016,'#06','Reading Books');

```

USERLOGINID	SECURITY_QUESTIONID	SECURITY_ANS
315001	#03	Fanta
315012	#01	Surya
315002	#01	Samantha
315045	#08	Jurassic park
315011	#07	Mercedes Benz
315098	#08	Twilight
315101	#05	Mrs.Manjusha
315028	#03	Sky Blue
315086	#01	Emma Watson
315047	#04	Amrita High School
315016	#06	Reading Books
315099	#02	Chetan Bhagat

TABLE 6:

Create Table SECURITY_QUESTION (Security_QuestionID varchar(3) PRIMARY KEY, Security_Questions varchar(50));
 Insert into SECURITY_QUESTION values('#01','Your Favourite Actor/Actress');
 Insert into SECURITY_QUESTION values('#02','Your Favourite Book Author');
 Insert into SECURITY_QUESTION values('#03','Your Favourite Colour');
 Insert into SECURITY_QUESTION values('#04','Your Favourite School that you studied');
 Insert into SECURITY_QUESTION values('#05','Your Favourite Teacher from childhood');
 Insert into SECURITY_QUESTION values('#06','Your Hobby');
 Insert into SECURITY_QUESTION values('#07','Your Favourite Car Brand');
 Insert into SECURITY_QUESTION values('#08','Your Favourite Movie');

SECURITY_QUESTIONID	SECURITY_QUESTIONS
#01	Your Favourite Actor/Actress
#02	Your Favourite Book Author
#03	Your Favourite Colour
#04	Your Favourite School that you studied
#05	Your Favourite Teacher from childhood
#06	Your Hobby
#07	Your Favourite Car Brand
#08	Your Favourite Movie

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8 rows selected

TABLE 7:

```

Create table TRANSACTION (TransactionID varchar(15) PRIMARY KEY, TransactionDate
timestamp, TransactionType varchar(20), TransactionAmount float, NewBalance float,
WithdrawalCount int, DepositCount int, OldBalance float);
Insert into TRANSACTION values('2101001831501',timestamp '2019-01-21
11:30:19','Deposit','25000','28500',0,1,3500);
Insert into TRANSACTION values('2101001800501',timestamp '2020-04-12
09:30:19','Withdraw','3000','25500',1,1,28500);
Insert into TRANSACTION values('2101001888801',timestamp '2019-06-13
11:55:20','Withdraw','2000','23500',2,1,25000);
Insert into TRANSACTION values('2101001845801',timestamp '2019-08-14
10:30:15','Withdraw','2000','22500',3,1,23500);
Insert into TRANSACTION values('2101001888802',timestamp '2020-02-24
12:33:16','Deposit','5000','27500',3,2,22500);
Insert into TRANSACTION values('2101001888803',timestamp '2019-04-25
17:21:12','Deposit','3000','30500',3,3,27500);
Insert into TRANSACTION values('2101001848901',timestamp '2020-05-26
18:15:13','Deposit','10000','40500',3,4,30500);
Insert into TRANSACTION values('2101001848902',timestamp '2019-09-08
10:16:24','Deposit','15500','56000',3,5,40500);
Insert into TRANSACTION values('2101001862901',timestamp '2021-07-02
04:12:32','Deposit','20000','76000',3,6,56000);
Insert into TRANSACTION values('2101001831502',timestamp '2019-06-15
03:07:45','Deposit','24000','100000',3,7,76000);
Insert into TRANSACTION values('2101001888804',timestamp '2018-04-06
00:08:56','Withdraw','30000','70000',4,7,100000);
Insert into TRANSACTION values('2101001850701',timestamp '2020-05-08
05:09:06','Withdraw','2000','68000',5,7,70000);
Insert into TRANSACTION values('2101001811101',timestamp '2019-03-07
15:30:23','Withdraw','10000','58000',6,7,68000);
Insert into TRANSACTION values('2101001856701',timestamp '2019-03-03
19:02:04','Deposit','14000','72000',6,8,5800);
Insert into TRANSACTION values('2101001811102',timestamp '2020-03-02
20:15:06','Deposit','18000','90000',6,9,72000);
Insert into TRANSACTION values('2101001811103',timestamp '2020-08-01
23:22:08','Withdraw','40000','50000',7,9,90000);
Insert into TRANSACTION values('2101001854101',timestamp '2021-09-05
03:24:10','Deposit','3000','53000',7,10,50000);
Insert into TRANSACTION values('2101001900701',timestamp '2019-05-16
07:48:12','Withdraw','20000','33000',8,10,53000);
Insert into TRANSACTION values('2101001812501',timestamp '2020-07-18
09:58:14','Deposit','100000','133000',8,11,33000);
Insert into TRANSACTION values('2101001812502',timestamp '2019-06-20
10:33:23','Withdraw','50000','50000',9,11,133000);
Insert into TRANSACTION values('2101001845802',timestamp '2020-04-21
11:36:25','Deposit','30000','80000',9,12,50000);
Insert into TRANSACTION values('2101001860601',timestamp '2019-04-22
12:39:28','Deposit','20000','100000',9,13,80000);
Insert into TRANSACTION values('2101001830001',timestamp '2019-08-24
13:44:19','Deposit','30000','130000',9,14,100000);

```

Insert into TRANSACTION values('2101001829001',timestamp '2019-09-26 05:46:36','Withdraw','15000','115000',10,14,130000);

Insert into TRANSACTION values('2101001826101',timestamp '2021-04-28 04:48:42','Withdraw','10000','105000',11,14,115000);

Insert into TRANSACTION values('2101001865401',timestamp '2019-01-18 21:28:45','Deposit','20000','125000',11,15,105000);

Insert into TRANSACTION values('2101001865402',timestamp '2021-05-19 22:18:56','Deposit','5000','130000',11,16,125000);

Insert into TRANSACTION values('2101001800801',timestamp '2020-01-21 04:28:26','Withdraw','10000','120000',12,16,130000);

Insert into TRANSACTION values('2101001811201',timestamp '2020-05-20 09:06:32','Withdraw','15000','105000',13,16,105000);

Insert into TRANSACTION values('2101001800802',timestamp '2020-01-16 11:09:35','Withdraw','3000','102000',14,16,105000);

TRANSACTIONID	TRANSACTIONDATE	TRANSACTIONTYPE	TRANSACTIONAMOUNT	NEMBALANCE	WITHDRAWALCOUNT	DEPOSITCOUNT	OLDBALANCE
2101001831501	21-JAN-19 11.30.19.000000 AM	Deposit	25000	28500	0	1	3500
2101001800501	12-APR-20 09.30.19.000000 AM	Withdraw	3000	25500	1	1	28500
2101001888801	13-JUN-19 11.55.20.000000 AM	Withdraw	2000	23500	2	1	25000
2101001845801	14-AUG-19 10.30.15.000000 AM	Withdraw	2000	22500	3	1	23500
2101001888802	24-FEB-20 12.33.16.000000 PM	Deposit	5000	27500	3	2	22500
2101001888803	25-APR-19 05.21.12.000000 PM	Deposit	3000	30500	3	3	27500
2101001848901	26-MAY-20 06.15.13.000000 PM	Deposit	10000	40500	3	4	30500
2101001848902	08-SEP-19 10.16.24.000000 AM	Deposit	15500	56000	3	5	40500
2101001862901	02-JUL-21 04.12.32.000000 AM	Deposit	20000	76000	3	6	56000
2101001831502	15-JUN-19 03.07.45.000000 AM	Deposit	24000	100000	3	7	76000
2101001888804	06-APR-18 12.08.56.000000 AM	Withdraw	30000	70000	4	7	100000
2101001850701	08-MAY-20 05.09.06.000000 AM	Withdraw	2000	68000	5	7	70000
2101001811101	07-MAR-19 03.30.23.000000 PM	Withdraw	10000	58000	6	7	68000
2101001856701	03-MAR-19 07.02.04.000000 PM	Deposit	14000	72000	6	8	5800
2101001811102	02-MAR-20 08.15.06.000000 PM	Deposit	18000	90000	6	9	72000
2101001811103	01-AUG-20 11.22.08.000000 PM	Withdraw	40000	50000	7	9	90000
2101001854101	05-SEP-21 03.24.10.000000 AM	Deposit	3000	53000	7	10	50000
2101001900701	16-MAY-19 07.48.12.000000 AM	Withdraw	20000	33000	8	10	53000
2101001812501	18-JUL-20 09.58.14.000000 AM	Deposit	100000	133000	8	11	33000
2101001812502	20-JUN-19 10.33.23.000000 AM	Withdraw	50000	50000	9	11	133000
2101001845802	21-APR-20 11.36.25.000000 AM	Deposit	30000	80000	9	12	50000
2101001860601	22-APR-19 12.39.28.000000 PM	Deposit	20000	100000	9	13	80000
2101001830001	24-AUG-19 01.44.19.000000 PM	Deposit	30000	130000	9	14	100000
2101001829001	26-SEP-19 05.46.36.000000 AM	Withdraw	15000	115000	10	14	130000
2101001826101	28-APR-21 04.48.42.000000 AM	Withdraw	10000	105000	11	14	115000
2101001865401	18-JAN-19 09.28.45.000000 PM	Deposit	20000	125000	11	15	105000
2101001865402	19-MAY-21 10.18.56.000000 PM	Deposit	5000	130000	11	16	125000
2101001800801	21-JAN-20 04.28.26.000000 AM	Withdraw	10000	120000	12	16	130000
2101001811201	20-MAY-20 09.06.32.000000 AM	Withdraw	15000	105000	13	16	105000
2101001800802	16-JAN-20 11.09.35.000000 AM	Withdraw	3000	102000	14	16	105000

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TABLE 8:

Create Table State_city(City varchar2(20),State varchar2(20));

Insert into State_city values('GPO,Chennai','Tamil Nadu');


```

Insert into State_city values('Anna Road,Chennai','Tamil Nadu');
Insert into State_city values('Saidapet,Chennai','Tamil Nadu');
Insert into State_city values('Adyar,Chennai','Tamil Nadu');
Insert into State_city values('Sowcarpet,Chennai','Tamil Nadu');
Insert into State_city values('Perambur,Chennai','Tamil Nadu');
Insert into State_city values('Koyambedu,Chennai','Tamil Nadu');
Insert into State_city values('Kotturpuram,Chennai','Tamil Nadu');
Insert into State_city values('Thiruvallur','Tamil Nadu');
Insert into State_city values('Theni','Tamil Nadu');
Insert into State_city values('Nungambakkam,Chennai','Tamil Nadu');
Insert into State_city values('Ariyalur,Trichy','Tamil Nadu');

```

CITY	STATE
GPO,Chennai	Tamil Nadu
Anna Road,Chennai	Tamil Nadu
Saidapet,Chennai	Tamil Nadu
Adyar,Chennai	Tamil Nadu
Sowcarpet,Chennai	Tamil Nadu
Perambur,Chennai	Tamil Nadu
Koyambedu,Chennai	Tamil Nadu
Kotturpuram,Chennai	Tamil Nadu
Thiruvallur	Tamil Nadu
Theni	Tamil Nadu
Nungambakkam,Chennai	Tamil Nadu
Ariyalur,Trichy	Tamil Nadu

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TABLE 9:

```

Create table Zip (Zip_code int, City varchar2(20));
Insert into Zip values(625543,'Theni');
Insert into Zip values(600001,'GPO,Chennai');
Insert into Zip values(600002,'Anna Road,Chennai');
Insert into Zip values(621704,'Ariyalur,Trichy');
Insert into Zip values(600107,'Koyambedu,Chennai');
Insert into Zip values(600034,'Nungambakkam,Chennai');
Insert into Zip values(600015,'Saidapet,Chennai');
Insert into Zip values(600079,'Sowcarpet,Chennai');
Insert into Zip values(600023,'Perambur,Chennai');
Insert into Zip values(600087,'Thiruvallur');
Insert into Zip values(600085,'Kotturpuram,Chennai');
Insert into Zip values(600020,'Adyar,Chennai');

```

ZIP_CODE	CITY
625543	Theni
600001	GPO,Chennai
600002	Anna Road,Chennai
621704	Ariyalur,Trichy
600107	Koyambedu,Chennai
600034	Nungambakkam,Chennai
600015	Saidapet,Chennai
600079	Sowcarpet,Chennai
600023	Perambur,Chennai
600087	Thiruvallur
600085	Kotturpuram,Chennai
600020	Adyar,Chennai

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TABLE 10:

Create table LOANTYPE (Loan_Type varchar2(20) PRIMARY KEY, InterestRate float);
 Insert into LOANTYPE values('Gold Loan',0.5);
 Insert into LOANTYPE values('Housing Loan',6.7);
 Insert into LOANTYPE values('Personal Loan',3.8);
 Insert into LOANTYPE values('Vehicle Loan',7.25);
 Insert into LOANTYPE values('Education',1.2);

LOAN_TYPE	INTERESTRATE
Gold Loan	.5
Housing Loan	6.7
Personal Loan	3.8
Vehicle Loan	7.25
Education	1.2

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TABLE 11:

Create table LOAN_DETAILS (LoanNumber int PRIMARY KEY, LoanAmount float, LoanApprovalDate date, Loan_Type varchar2(20)) ;
 Insert into LOAN_DETAILS values(145, 90000, date '2021-09-01','Gold Loan');
 Insert into LOAN_DETAILS values(166, 500000, date '2020-08-16','Home Loan');
 Insert into LOAN_DETAILS values(116, 70999, date '2020-05-29','Gold Loan');
 Insert into LOAN_DETAILS values(118, 150000, date '2021-09-23','Educational Loan');
 Insert into LOAN_DETAILS values(365, 100000, date '2021-03-02','Personal Loan');
 Insert into LOAN_DETAILS values(256, 250000, date '2021-07-06','Vehicle Loan');

Insert into LOAN_DETAILS values(456, 55000, date '2020-08-12','Personal Loan');
 Insert into LOAN_DETAILS values(236, 89000, date '2020-02-17','Vehicle Loan');
 Insert into LOAN_DETAILS values(189, 600000, date '2020-01-22','Home Loan');
 Insert into LOAN_DETAILS values(555, 130000, date '2021-04-15','Educational Loan');

LOANNUMBER	LOANAMOUNT	LOANAPPROVALDATE	LOAN_TYPE
145	90000	01-SEP-21	Gold Loan
166	500000	16-AUG-20	Home Loan
116	70999	29-MAY-20	Gold Loan
118	150000	23-SEP-21	Educational Loan
365	100000	02-MAR-21	Personal Loan
256	250000	06-JUL-21	Vehicle Loan
456	55000	12-AUG-20	Personal Loan
236	89000	17-FEB-20	Vehicle Loan
189	600000	22-JAN-20	Home Loan
555	130000	15-APR-21	Educational Loan

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TABLE 12:

Create table CARD_DETAILS (CardNumber varchar(16) PRIMARY KEY, CardHolder varchar(20), CardType varchar(20), CCV number(3), ExpirtDate date) ;
 INSERT into CARD_DETAILS values('9987654309280098','Nick Santa','VISA',645, date '2023-06-17');
 INSERT into CARD_DETAILS values('7494654843154125','Andrew Donald','MASTERCARD',792, date '2024-05-14');
 INSERT into CARD_DETAILS values('6894651684546846','Eric C','DEBIT',413, date '2025-11-22');
 INSERT into CARD_DETAILS values('2354513546812851','Sandra Joe','CREDIT',135, date '2023-12-11');
 INSERT into CARD_DETAILS values('8466546841316412','Carol Amy','DEBIT',665, date '2022-11-09');
 INSERT into CARD_DETAILS values('4846516845165845','Donna Kelly','CREDIT',876, date '2026-01-07');
 INSERT into CARD_DETAILS values('3484656845684831','Tyler Frank','MASTERCARD',113, date '2025-05-05');
 INSERT into CARD_DETAILS values('8465484546875164','Alice Cooper','CREDIT',852, date '2024-07-15');
 INSERT into CARD_DETAILS values('7454684154984135','Janny Ann','CREDIT',845, date '2023-05-22');
 INSERT into CARD_DETAILS values('5981654681354651','Billy Bruce','DEBIT',796, date '2022-03-18');

```

INSERT into CARD_DETAILS values('5184656846516846','Carl
Terry','MASTERCARD',135, date '2026-08-21');
INSERT into CARD_DETAILS values('1846546841354685','Julie Amber','CREDIT',782,
date '2024-09-23');
INSERT into CARD_DETAILS values('2468449846549868','Nick
Andrews','MASTERCARD',624, date '2025-09-24');
INSERT into CARD_DETAILS values('5168746538465654','Joffery San','VISA',486, date
'2022-06-16');
INSERT into CARD_DETAILS values('3465168465498468','John
Luck','MASTERCARD',693, date '2024-05-18');
INSERT into CARD_DETAILS values('6465468415498413','Rikky Pant','DEBIT',741, date
'2026-04-08');
INSERT into CARD_DETAILS values('4651654313543232','Nancy Drew','CREDIT',153,
date '2025-03-09');
INSERT into CARD_DETAILS values('8768454684351684','Ronnie Lodge','DEBIT',482,
date '2024-02-07');
INSERT into CARD_DETAILS values('6684654156455465','Martha Jose','CREDIT',635,
date '2025-01-03');
INSERT into CARD_DETAILS values('8465465465354315','Rose Michael','VISA',979, date
'2023-12-04');

```

CARDNUMBER	CARDHOLDER	CARDTYPE	CCV	EXPIRTDATE
9987654309280098	Nick Santa	VISA	645	17-JUN-23
7494654843154125	Andrew Donald	MASTERCARD	792	14-MAY-24
6894651684546846	Eric C	DEBIT	413	22-NOV-25
2354513546812851	Sandra Joe	CREDIT	135	11-DEC-23
8466546841316412	Carol Amy	DEBIT	665	09-NOV-22
4846516845165845	Donna Kelly	CREDIT	876	07-JAN-26
3484656845684831	Tyler Frank	MASTERCARD	113	05-MAY-25
8465484546875164	Alice Cooper	CREDIT	852	15-JUL-24
7454684154984135	Janny Ann	CREDIT	845	22-MAY-23
5981654681354651	Billy Bruce	DEBIT	796	18-MAR-22
5184656846516846	Carl Terry	MASTERCARD	135	21-AUG-26
1846546841354685	Julie Amber	CREDIT	782	23-SEP-24
2468449846549868	Nick Andrews	MASTERCARD	624	24-SEP-25
5168746538465654	Joffery San	VISA	486	16-JUN-22
3465168465498468	John Luck	MASTERCARD	693	18-MAY-24
6465468415498413	Rikky Pant	DEBIT	741	08-APR-26
4651654313543232	Nancy Drew	CREDIT	153	09-MAR-25
8768454684351684	Ronnie Lodge	DEBIT	482	07-FEB-24

TABLE 13:

```

Create table BILL_PAYMENTS (BillPayment_no varchar(20) PRIMARY KEY,
PaymentType varchar(30),PaymentConfirmation varchar(15), PaymentAmount float);
Insert into BILL_PAYMENTS values('#ORID08267e256','Net banking','Confirmed',2500);
Insert into BILL_PAYMENTS values('#ORID08975d234','UPI','Not Confirmed',999);
Insert into BILL_PAYMENTS values('#ORID89652b657','Net banking','Confirmed',3599);
Insert into BILL_PAYMENTS values('#ORID74125t698','Net banking','Not
Confirmed',599);
Insert into BILL_PAYMENTS values('#ORID23654j258','Cheque','Not Confirmed',1040);
Insert into BILL_PAYMENTS values('#ORID56456p896','Credit card','Confirmed',259);
Insert into BILL_PAYMENTS values('#ORID71395a569','Net banking','Confirmed',1660);
Insert into BILL_PAYMENTS values('#ORID15968r256','Credit Card','Confirmed',2700);
Insert into BILL_PAYMENTS values('#ORID74265g789','Cheque','Confirmed',2578);
Insert into BILL_PAYMENTS values('#ORID25634k896','UPI','Confirmed',259);
Insert into BILL_PAYMENTS values('#ORID67235u842','Net banking','Confirmed',89);
Insert into BILL_PAYMENTS values('#ORID82148x789','UPI','Confirmed',250);
Insert into BILL_PAYMENTS values('#ORID52525j854','Debit Card','Not
Confirmed',2300);
Insert into BILL_PAYMENTS values('#ORID44664m458','Debit Card','Confirmed',4500);
Insert into BILL_PAYMENTS values('#ORID23322o564','UPI','Confirmed',2880);

```

BILLPAYMENT_NO	PAYMENTTYPE	PAYMENTCONFIRMATION	PAYMENTAMOUNT
#ORID08267e256	Net banking	Confirmed	2500
#ORID08975d234	UPI	Not Confirmed	999
#ORID89652b657	Net banking	Confirmed	3599
#ORID74125t698	Net banking	Not Confirmed	599
#ORID23654j258	Cheque	Not Confirmed	1040
#ORID56456p896	Credit card	Confirmed	259
#ORID71395a569	Net banking	Confirmed	1660
#ORID15968r256	Credit Card	Confirmed	2700
#ORID74265g789	Cheque	Confirmed	2578
#ORID25634k896	UPI	Confirmed	259
#ORID67235u842	Net banking	Confirmed	89
#ORID82148x789	UPI	Confirmed	250
#ORID52525j854	Debit Card	Not Confirmed	2300
#ORID44664m458	Debit Card	Confirmed	4500
#ORID23322o564	UPI	Confirmed	2880

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TABLE 14:

```

Create table FailedTransactionLog (FailedTransaction_errorType varchar(30),
FailedTransactionID varchar(15) PRIMARY KEY) ;
Insert into FailedTransactionLog values('Network','2101001831501');
Insert into FailedTransactionLog values('Network','2101001811103');

```

```

Insert into FailedTransactionLog values('Network','2101001860601');
Insert into FailedTransactionLog values('Network','2101001865402');
Insert into FailedTransactionLog values('Network','2101001888802');

```

FAILEDTRANSACTION_ERRORTYPE	FAILEDTRANSACTIONID
Network	2101001831501
Network	2101001811103
Network	2101001860601
Network	2101001865402
Network	2101001888802

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TABLE 15:

```

Create Table USERLOGINS (UserLoginID int PRIMARY KEY, UserName varchar(20),
password varchar(12));
Insert into USERLOGINS values(315001,'NickSanta','abcdefghijkl');
Insert into USERLOGINS values(315101,'CarolAmy','mskxhdnzjsnd');
Insert into USERLOGINS values(315016,'DonnaKelly','abcdebkzdnkx');
Insert into USERLOGINS values(315047,'JuliaAmber','abdkecxjfb');
Insert into USERLOGINS values(315028,'BillyBruce','iskfjddkzuql');
Insert into USERLOGINS values(315086,'TylerFrank','weguyqoitjkl');
Insert into USERLOGINS values(315098,'AliceCooper','aaypletcuirl');
Insert into USERLOGINS values(315011,'NickAndrews','auielodtyupl');
Insert into USERLOGINS values(315045,'CarlTerry','abcdaiporylo');
Insert into USERLOGINS values(315099,'MarthaJose','ndpoeyuprnzl');
Insert into USERLOGINS values(315002,'RonnieLodge','bamkywkoeudj');
Insert into USERLOGINS values(315012,'JofferySan','pwormxtjsilk');

```

USERLOGINID	USERNAME	PASSWORD
315001	NickSanta	abcdefghijkl
315101	CarolAmy	mskxhdnzjsnd
315016	DonnaKelly	abcdebkzdnkx
315047	JuliaAmber	abdkecxjfbd
315028	BillyBruce	iskfjddkzuql
315086	TylerFrank	weguyqoitjkl
315098	AliceCooper	aaypletcuihl
315011	NickAndrews	auielodtyupl
315045	CarlTerry	abcdaiporylo
315099	MarthaJose	ndpoeyuprnzl
315002	RonnieLodge	bamkywkoeudj
315012	JofferySan	pwormxtjsilk

TABLE 16:

Create table Cus_Mobile (Customer_id int, Mobile_no number(10),PRIMARY KEY (Customer_id,Mobile_no));

Insert into Cus_Mobile values(900001,9087673450);

Insert into Cus_Mobile values(900002,9087410987);

Insert into Cus_Mobile values(900023,9087672098);

Insert into Cus_Mobile values(900031,9087436409);

Insert into Cus_Mobile values(900099,9087673412);

Insert into Cus_Mobile values(900035,9087436411);

Insert into Cus_Mobile values(900050,9087671094);

Insert into Cus_Mobile values(900008,9087410456);

Insert into Cus_Mobile values(900011,8803982056);

Insert into Cus_Mobile values(900012,9018409356);

Insert into Cus_Mobile values(900088,9087620856);

Insert into Cus_Mobile values(900076,9087104656);

Insert into Cus_Mobile values(900109,9087620956);

Insert into Cus_Mobile values(900054,9087416756);

Insert into Cus_Mobile values(900004,9081953456);

Insert into Cus_Mobile values(900034,9189436456);

Insert into Cus_Mobile values(900059,9087673107);

Insert into Cus_Mobile values(900019,9087410956);

Insert into Cus_Mobile values(900010,9030073456);

Insert into Cus_Mobile values(900005,9087676456);

CUSTOMER_ID	MOBILE_NO
900001	9087673450
900002	9087410987
900004	9081953456
900005	9087676456
900008	9087410456
900010	9030073456
900011	8803982056
900012	9018409356
900019	9087410956
900023	9087672098
900031	9087436409
900034	9189436456
900035	9087436411
900050	9087671094
900054	9087416756
900059	9087673107
900076	9087104656
900088	9087620856
900000	9087673450

TABLE 17:

Create table Emp_Mob(Emp_id varchar(10), Emp_Mobile number(10),PRIMARY KEY (Emp_id, Emp_Mobile));

Insert into Emp_Mob values('AMAR0001',7087673450);

Insert into Emp_Mob values('SARA0002',7187410987);

Insert into Emp_Mob values('AMAL0004',7287672098);

Insert into Emp_Mob values('MICH0005',7387436409);

Insert into Emp_Mob values('DANI0007',7487673412);

Insert into Emp_Mob values('JOSH0003',7587436411);

Insert into Emp_Mob values('BETT0009',7687671094);

Insert into Emp_Mob values('SHAR0011',7787410456);

Insert into Emp_Mob values('EMIL0015',7803982056);

Insert into Emp_Mob values('RYAN0010',7918409356);

EMP_ID	EMP_MOBILE
AMAL0004	7287672098
AMAR0001	7087673450
BETT0009	7687671094
DANI0007	7487673412
EMIL0015	7803982056
JOSH0003	7587436411
MICH0005	7387436409
RYAN0010	7918409356
SARA0002	7187410987
SHAR0011	7787410456

TABLE 18:

Create table Loan_num(Customer_id int, LoanNumber int,PRIMARY KEY (Customer_id,LoanNumber));

Insert into Loan_num values(900001,145);

Insert into Loan_num values(900001,166);

Insert into Loan_num values(900002,116);

Insert into Loan_num values(900023,118);

Insert into Loan_num values(900099,365);

Insert into Loan_num values(900010,256);

Insert into Loan_num values(900050,189);

Insert into Loan_num values(900010,555);

Insert into Loan_num values(900088,236);

Insert into Loan_num values(900050,456);

CUSTOMER_ID	LOANNUMBER
900001	145
900001	166
900002	116
900010	256
900010	555
900023	118
900050	189
900050	456
900088	236
900099	365

TABLE 19:

Create table Transact (AccountID varchar(20), TransactionID varchar(15), PRIMARY KEY (AccountID,TransactionID));

Insert into Transact values('13520010018315','2101001831501');
Insert into Transact values('13520010018315','2101001831502');
Insert into Transact values('13520010018005','2101001800501');
Insert into Transact values('13520010018888','2101001888801');
Insert into Transact values('13520010018888','2101001888802');
Insert into Transact values('13520010018888','2101001888803');
Insert into Transact values('13520010018888','2101001888804');
Insert into Transact values('13520010018458','2101001845801');
Insert into Transact values('13520010018458','2101001845802');
Insert into Transact values('13520010018489','2101001848901');
Insert into Transact values('13520010018489','2101001848902');
Insert into Transact values('13520010018629','2101001862901');
Insert into Transact values('13520010018507','2101001850701');
Insert into Transact values('13520010018111','2101001811103');
Insert into Transact values('13520010018111','2101001811101');
Insert into Transact values('13520010018111','2101001811102');
Insert into Transact values('13520010018567','2101001856701');
Insert into Transact values('13520010018541','2101001854101');
Insert into Transact values('13520010018007','2101001800701');
Insert into Transact values('13520010018125','2101001812501');
Insert into Transact values('13520010018125','2101001812502');
Insert into Transact values('13520010018606','2101001860601');
Insert into Transact values('13520010018300','2101001830001');
Insert into Transact values('13520010018290','2101001829001');
Insert into Transact values('13520010018261','2101001826101');
Insert into Transact values('13520010018654','2101001865401');
Insert into Transact values('13520010018654','2101001865402');
Insert into Transact values('13520010018008','2101001800802');
Insert into Transact values('13520010018112','2101001811201');
Insert into Transact values('13520010018008','2101001800801');

ACCOUNTID	TRANSACTIONID
13520010018005	2101001800501
13520010018007	2101001800701
13520010018008	2101001800801
13520010018008	2101001800802
13520010018111	2101001811101
13520010018111	2101001811102
13520010018111	2101001811103
13520010018112	2101001811201
13520010018125	2101001812501
13520010018125	2101001812502
13520010018261	2101001826101
13520010018290	2101001829001
13520010018300	2101001830001
13520010018315	2101001831501
13520010018315	2101001831502
13520010018458	2101001845801
13520010018458	2101001845802
13520010018489	2101001848901
13520010018489	2101001848902
13520010018507	2101001850701
13520010018541	2101001854101
13520010018567	2101001856701
13520010018606	2101001860601
13520010018629	2101001862901
13520010018654	2101001865401
13520010018654	2101001865402
13520010018888	2101001888801
13520010018888	2101001888802
13520010018888	2101001888803
13520010018888	2101001888804

TABLE 20:

Create table Bill (AccountID varchar(20), Billpayment_no varchar(20), PRIMARY KEY (AccountID,Billpayment_no));

Insert into Bill values('13520010018315','#ORID08267e256');

Insert into Bill values('13520010018007','#ORID08975d234');

```

Insert into Bill values('13520010018606','#ORID89652b657');
Insert into Bill values('13520010018261','#ORID74125t698');
Insert into Bill values('13520010018007','#ORID23654j258');
Insert into Bill values('13520010018300','#ORID56456p896');
Insert into Bill values('13520010018629','#ORID71395a569');
Insert into Bill values('13520010018606','#ORID74265g789');
Insert into Bill values('13520010018315','#ORID25634k896');
Insert into Bill values('13520010018606','#ORID67235u842');
Insert into Bill values('13520010018567','#ORID15968r256');
Insert into Bill values('13520010018112','#ORID82148x789');
Insert into Bill values('13520010018111','#ORID52525j854');
Insert into Bill values('13520010018458','#ORID44664m458');
Insert into Bill values('13520010018888','#ORID23322o564');
select * from Bill;

```

ACCOUNTID	BILLPAYMENT_NO
13520010018007	#ORID08975d234
13520010018007	#ORID23654j258
13520010018111	#ORID52525j854
13520010018112	#ORID82148x789
13520010018261	#ORID74125t698
13520010018300	#ORID56456p896
13520010018315	#ORID08267e256
13520010018315	#ORID25634k896
13520010018458	#ORID44664m458
13520010018567	#ORID15968r256
13520010018606	#ORID67235u842
13520010018606	#ORID74265g789
13520010018606	#ORID89652b657
13520010018629	#ORID71395a569
13520010018888	#ORID23322o564

