

UPI MANAGEMENT SYSTEM

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PROBLEM STATEMENT:

As our nation is moving towards being a digital nation, hence the aim of our project is to make a database for a UPI payment system so that the transactions are carried out digitally and henceforth in an easier way.

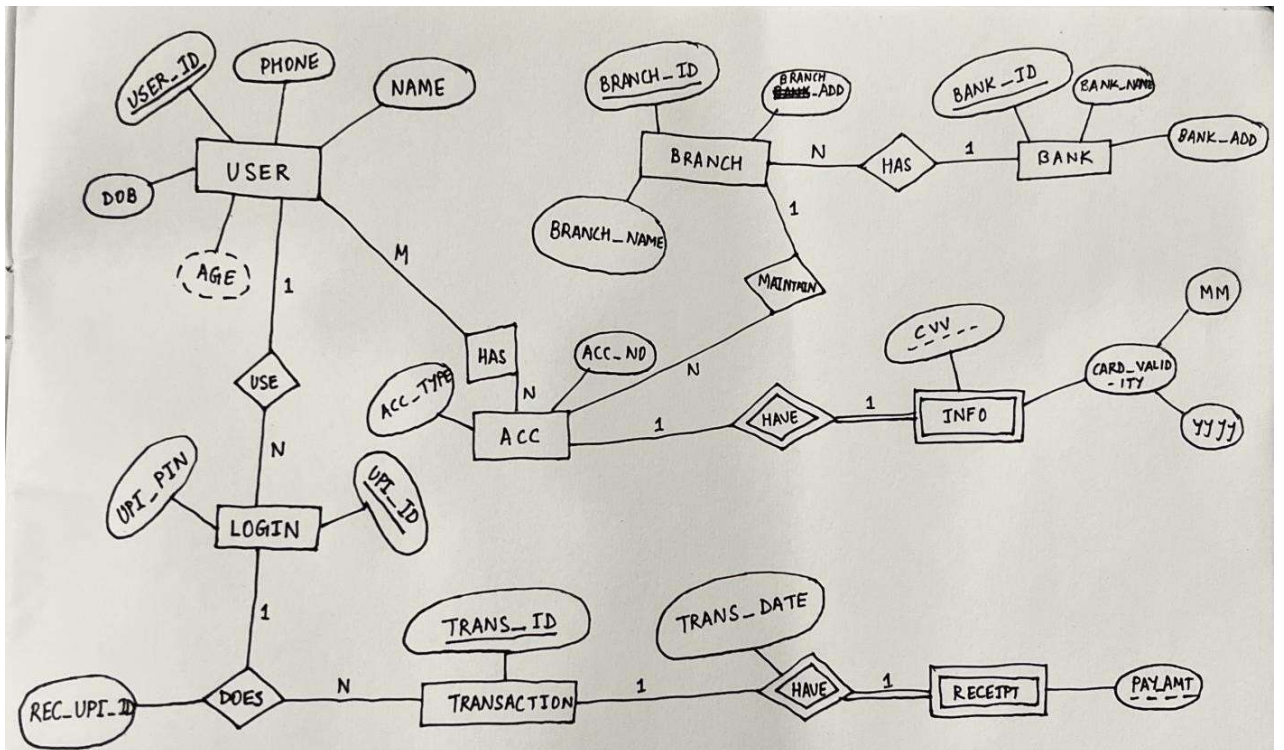
ENTITIES:

1. USER
2. BANK
3. BRANCH
4. ACC
5. LOGIN
6. INFO
7. TRANSACTION
8. RECEIPT

RELATIONSHIPS:

1. USE:
One is to many between USER and LOGIN
2. DOES:
One is to many between LOGIN and TRANSACTION
3. HAVE
One is to one between TRANSACTION and RECEIPT
4. HAS
Many is to many between USER AND ACC
5. MAINTAIN
Many is to one between ACC and BRANCH
6. HAS
Many is to one between BRANCH and BANK
7. HAVE
One is to one between ACC and INFO

ER-DIAGRAM:



ER Diagram.

TABLE DESCRIPTION:

1. USER

This entity contains in itself the user's information. Here the attribute "USER_ID" acts as the primary key which is used to identify each user's name, his/her phone number and their DOB. The attribute "Age" is a derived attribute from the attribute "DOB" and hence is not being reflected in the relationship schema.

2. BANK

This entity is used for the information of the banks and has an attribute called "Bank_Id" which is a primary key and is used to identify each bank which have the attributes called "Bank_Name" for bank's name and "Bank_Add" for bank's address.

3. BRANCH

This entity is used for the information of the branches and this is identified uniquely by "Branch_Id" attribute which acts like a primary key and the have remaining non primary attributes "Branch_Name" for branch's name and "Branch_Add" for branch's address.

4. ACC

This entity is used for the information of all accounts and its attribute are "Acc_No" which is a primary key and uniquely identifies each account and has another attribute called "Acc_Type" for account type.

5.LOGIN

This entity will have the information of the login details of a user doing payments via UPI and have the attributes called “Upi_Id” for the UPI id which acts like a username and “Upi_Pin” which acts like a password for the username of a user.

6.INFO

This entity is used for extra information of “ACC” entity and has the attribute called “CVV” and which alone can’t be a primary key and this entity is a dependent entity and has another attribute which is a composite attribute, namely “Card_Validity” which has “MM”

and “YYYY” attributes which is utilised for expiry date of a card.

7.TRANSACTION

This entity has the “Trans_Id” attribute which is a primary key and is used for uniquely identifying a transaction. It also has a relation having the descriptive relational attribute “Rec_UPI_Id” and this is included in the transaction table while converting it into a table.

8.RECEIPT

This is a dependent entity and has the “Pay_AMT” attribute which alone can’t work as a primary key and the primary key is attained when we convert the ER model into relational schema. And the “Pay_AMT” is the amount paid and this entity is used

as an extra information of the “TRANSACTION” entity having ‘have’ as a relation between them and this relation has the attribute of “Trans_Date” which is used for the date of transaction and this is included in the “RECEIPT” entity when we convert ER model into relationship schema.

RELATIONAL SCHEMA:

CREATION OF TABLE

```
CREATE TABLE USER (  
  USER_ID INT PRIMARY KEY,  
  NAME VARCHAR(20),  
  PHONE BIGINT(10),  
  DOB DATE  
);  
  
CREATE TABLE BANK (  
  BANK_ID INT PRIMARY KEY,  
  BANK_NAME VARCHAR(20),  
  BANK_ADD VARCHAR(20)  
);  
  
CREATE TABLE BRANCH (  
  BRANCH_ID INT PRIMARY KEY,  
  BRANCH_NAME VARCHAR(20),  
  BANK_ID INT,  
  BRANCH_ADD VARCHAR(20),  
  FOREIGN KEY(BANK_ID) REFERENCES BANK(BANK_ID)  
);  
  
CREATE TABLE ACC (  
  ACC_NO INT PRIMARY KEY,  
  ACC_TYPE VARCHAR(20),  
  BRANCH_ID INT,  
  FOREIGN KEY(BRANCH_ID) REFERENCES BRANCH(BRANCH_ID)  
);  
  
CREATE TABLE INFO (  
  CVV INT,  
  MM INT,  
  YYYY INT,  
  ACC_NO INT,  
  FOREIGN KEY(ACC_NO) REFERENCES ACC(ACC_NO),
```

```
PRIMARY KEY(CVV,ACC_NO)
);
CREATE TABLE USER_ACC ( #HAS
USER_ID INT,
ACC_NO INT,
FOREIGN KEY(USER_ID) REFERENCES USER(USER_ID),
FOREIGN KEY(ACC_NO) REFERENCES ACC(ACC_NO)
);
CREATE TABLE LOGIN (
UPI_ID VARCHAR(20) PRIMARY KEY,
UPI_PIN INT,
USER_ID INT,
FOREIGN KEY(USER_ID) REFERENCES USER(USER_ID)
);
CREATE TABLE TRANSACTION (
TRANS_ID INT PRIMARY KEY,
PAY_UPI_ID VARCHAR(20),
REC_UPI_ID VARCHAR(20),
FOREIGN KEY(PAY_UPI_ID) REFERENCES LOGIN(UPI_ID),
FOREIGN KEY(REC_UPI_ID) REFERENCES LOGIN(UPI_ID)
);
CREATE TABLE RECEIPT (
PAY_AMT INT,
TRANS_ID INT,
TRANS_DATE DATE,
FOREIGN KEY(TRANS_ID) REFERENCES TRANSACTION(TRANS_ID),
PRIMARY KEY(PAY_AMT,TRANS_ID)
);
```

PRIMARY KEY(CVV, ACC_NO)

);

INSERTION OF VALUES IN TABLES:

USER TABLE:-

```
insert into USER values(1915817892,'vikas',7987657890,'2001-09-17');
insert into USER values(1589644852,'ramesh',6358669720,'2002-08-19');
insert into USER values(1256698457,'ram',9989654832,'1999-07-23');
insert into USER values(1235698865,'naveen',8554769253,'2001-06-21');
insert into USER values(1998575569,'rajesh',9574486777,'2004-09-15');
insert into USER values(1558569568,'sita',9951118123,'2005-09-12');
insert into USER values(1210025483,'sneha',8554288935,'2006-06-23');
insert into USER values(1985567356,'nandan',9954788912,'2003-08-19');
insert into USER values(1558769245,'priya',9447785486,'2005-09-15');
insert into USER values(1225867923,'kiran',8985868789,'1997-08-14');
```

BANK TABLE:-

```
insert into BANK values(191,'yesbank','Banglore');
insert into BANK values(158,'icici','Hyderabad');
insert into BANK values(125,'sbi','Vijayawada');
insert into BANK values(123,'sbi','Chennai');
insert into BANK values(199,'yesbank','Delhi');
insert into BANK values(155,'icici','Vijayawada');
insert into BANK values(121,'sbi','Banglore');
insert into BANK values(198,'yesbank','Hyderabad');
insert into BANK values(122,'sbi','Mumbai');
```

BRANCH TABLE:-

```
insert into BRANCH values(1581,'SBIEASTBNG',191,'EASTBANGLORE');
insert into BRANCH values(8964,'ICICIMADHAPUR',158,'MADHAPUR');
insert into BRANCH values(5669,'SBIBCIRCLEVD',125,'BENZCIRCLE');
insert into BRANCH values(3569,'SBIKALATHUR',123,'KATANKALATHUR');
insert into BRANCH values(9857,'SBINORTHDLI',199,'NORTHDELHI');
insert into BRANCH values(5856,'ICICINAGARVD',155,'CURRENCYNAGAR');
insert into BRANCH values(1002,'SBIEASTBNG',121,'EASTBANGLORE');
insert into BRANCH values(8556,'YESBANKSRNAGARHYD',198,'SRNAGAR');
```


insert into BRANCH values(5876,'ICICIBIRCLEVJD',155,'BENZCIRCLE');

insert into BRANCH values(2586,'SBIOLDBMBI',122,'OLDBOMBAY');

ACC TABLE:-

insert into ACC values(5817892,'savings',1581);

insert into ACC values(9644852,'FD',8964);

insert into ACC values(6698457,'FD',5669);

insert into ACC values(5698865,'savings',3569);

insert into ACC values(8575569,'FD',9857);

insert into ACC values(8569568,'savings',5856);

insert into ACC values(0025483,'FD',1002);

insert into ACC values(5567356,'savings',8556);

insert into ACC values(8769245,'savings',5876);

insert into ACC values(5867923,'FD',2586);

INFO TABLE:-

insert into INFO values(847,12,2024,5817892);

insert into INFO values(108,10,2022,9644852);

insert into INFO values(653,06,2022,6698457);

insert into INFO values(897,11,2021,5698865);

insert into INFO values(667,09,2023,8575569);

insert into INFO values(256,10,2021,8569568);

insert into INFO values(859,02,2023,0025483);

insert into INFO values(189,04,2023,5567356);

insert into INFO values(225,03,2023,8769245);

insert into INFO values(699,07,2022,5867923);

USER_ACC TABLE:-

insert into USER_ACC values(1915817892,5817892);

insert into USER_ACC values(1589644852,9644852);

insert into USER_ACC values(1256698457,6698457);

insert into USER_ACC values(1235698865,5698865);

insert into USER_ACC values(1998575569,8575569);

insert into USER_ACC values(1558569568,8569568);

```
insert into USER_ACC values(1210025483,0025483);
insert into USER_ACC values(1985567356,5567356);
insert into USER_ACC values(1558769245,8769245);
insert into USER_ACC values(1225867923,5867923);
```

LOGIN TABLE:-

```
insert into LOGIN values('vikas01@okicici',202120,1915817892);
insert into LOGIN values('ramesh@ybl',2025,1589644852);
insert into LOGIN values('ram21@okicici',965542,1256698457);
insert into LOGIN values('naveen34@oksbi',586497,1235698865);
insert into LOGIN values('rajesh@ybl',7448,1998575569);
insert into LOGIN values('sita@oksbi',085732,1558569568);
insert into LOGIN values('sneha@oksbi',256345,1210025483);
insert into LOGIN values('nandan@okicici',564564,1985567356);
insert into LOGIN values('priya@ybl',319045,1558769245);
insert into LOGIN values('kiran@ybl',665986,1225867923);
```

TRANSACTION TABLE:-

```
insert into TRANSACTION values(21202025,'vikas01@okicici','ramesh@ybl');
insert into TRANSACTION values(20256497,'ramesh@ybl','naveen34@oksbi');
insert into TRANSACTION values(55425732,'ram21@okicici','sita@oksbi');
insert into TRANSACTION values(64975986,'naveen34@oksbi','kiran@ybl');
insert into TRANSACTION values(74484564,'rajesh@ybl','nandan@okicici');
insert into TRANSACTION values(75329045,'sita@oksbi','priya@ybl');
insert into TRANSACTION values(63452025,'sneha@oksbi','vikas01@okicici');
insert into TRANSACTION values(45645542,'nandan@okicici','ram21@okicici');
insert into TRANSACTION values(90455986,'priya@ybl','kiran@ybl');
insert into TRANSACTION values(59869045,'kiran@ybl','priya@ybl');
insert into TRANSACTION values(21209045,'vikas01@okicici','priya@ybl');
insert into TRANSACTION values(20255986,'ramesh@ybl','kiran@ybl');
insert into TRANSACTION values(45647448,'nandan@okicici','rajesh@ybl');
insert into TRANSACTION values(55426345,'ram21@okicici','sneha@oksbi');
insert into TRANSACTION values(57324564,'sita@oksbi','naveen34@oksbi');
```

RECEIPT TABLE:-

```
insert into RECEIPT
values(200,21202025,'2020-08-11');
insert into RECEIPT
values(5000,20256497,'2021-09-15');
insert into RECEIPT
values(325,55425732,'2005-09-18');
insert into RECEIPT
values(4689,64975986,'2020-09-13');
insert into RECEIPT
values(5,74484564,'2021-09-17'); insert
into RECEIPT values(60,75329045,'2021-
08-18'); insert into RECEIPT
values(149,63452025,'2020-08-12');
insert into RECEIPT
values(266,45645542,'2021-09-14');
insert into RECEIPT
values(20000,90455986,'2020-07-15');
insert into RECEIPT
values(302,59869045,'2019-07-17');
insert into RECEIPT
values(66,21209045,'2021-08-17'); insert
into RECEIPT values(143,20255986,'2021-
09-12'); insert into RECEIPT
values(420,45647448,'2009-09-08');
insert into RECEIPT
values(798,55426345,'2007-09-07');
insert into RECEIPT
values(100,57324564,'2019-08-18');
```