

Users (email, password ,PRIMARY KEY (email));

Client (name , address ,national_id ,job ,income ,email, isBlind
PRIMARY KEY (email),
FOREIGN KEY (email) REFERENCES Users(email));

Banker (name ,email,
PRIMARY KEY (email),
FOREIGN KEY (email) REFERENCES Users(email));

Admin (email,
PRIMARY KEY (email),
FOREIGN KEY (email) REFERENCES Users(email));

Transaction(Transaction_id ,date ,Time ,status ,description ,
PRIMARY KEY (Transaction_id)
);

Reports(Id ,description ,date ,status ,type ,email,
PRIMARY KEY (Id),
FOREIGN KEY (email) REFERENCES client(email));

Notifications(Notification_id,type,time_created_ ,date_sent,sent ,priority_level ,
PRIMARY KEY (Notification_id));

Application(id ,name ,status ,email ,
PRIMARY KEY (id),
FOREIGN KEY (email) REFERENCES client(email));

```
bank_account_app(account_type ,id ,  
    PRIMARY KEY (id),  
    FOREIGN KEY (id) REFERENCES application(id));
```

```
CREATE TABLE loan_app(loan_type ,id ,  
    PRIMARY KEY (id),  
    FOREIGN KEY (id) REFERENCES application(id));
```

```
credit_app(credit_card_type ,id,  
    PRIMARY KEY (id),  
    FOREIGN KEY (id) REFERENCES application(id));
```

```
Payment(amount, id,  
    PRIMARY KEY (id));
```

```
Third_party_application(name ,id ,access_token ,  
    PRIMARY KEY (id));
```

```
Bank_announcements(description ,Notification_id ,  
    PRIMARY KEY (Notification_id),  
    FOREIGN KEY (Notification_id) REFERENCES Notifications(Notification_id));
```

```
ReportsHandledByAdmin(email ,Id ,  
    PRIMARY KEY (email, Id),  
    FOREIGN KEY (email) REFERENCES admin(email),  
    FOREIGN KEY (Id) REFERENCES Reports(Id));
```

```
NotificationsToUser(email,Notification_id ,  
    PRIMARY KEY (email, Notification_id),
```

```
FOREIGN KEY (email) REFERENCES Users(email),  
FOREIGN KEY (Notification_id) REFERENCES Notifications(Notification_id));
```

```
CREATE TABLE Account(balance ,account_number ,email ,  
PRIMARY KEY (account_number),  
FOREIGN KEY (email) REFERENCES client(email)  
);
```

```
Credit_Card (cvv ,number ,PIN ,rate ,expiry_date ,limit ,balance ,credit_score ,email ,  
PRIMARY KEY (number),  
FOREIGN KEY (email) REFERENCES client(email));
```

```
Loan(id ,amount, end, start, rate, name, email,  
PRIMARY KEY (id),  
FOREIGN KEY (email) REFERENCES client(email)  
);
```

```
Personal_loan(id,  
PRIMARY KEY (id),  
FOREIGN KEY (id) REFERENCES Loan(id));
```

```
Car_loan(car_year ,car_make ,car_model ,VIN , id ,  
PRIMARY KEY (id),  
FOREIGN KEY (id) REFERENCES Loan(id));
```

```
Account_transaction( Transaction_id ,account_number ,  
PRIMARY KEY (Transaction_id),  
FOREIGN KEY (Transaction_id) REFERENCES Transaction (Transaction_id),  
FOREIGN KEY (account_number) REFERENCES Account(account_number));
```

Credit_card_transaction(merchant ,points_earned ,Transaction_id ,number ,
PRIMARY KEY (Transaction_id),
FOREIGN KEY (Transaction_id) REFERENCES Transaction (Transaction_id),
FOREIGN KEY (number) REFERENCES Credit_Card(number));

Credit_card_payment(isPartial, id,account_number,
PRIMARY KEY (id),
FOREIGN KEY (id) REFERENCES Payment(id),
FOREIGN KEY (account_number) REFERENCES Account(account_number));

Loan_Payment (id, account_number, id,
PRIMARY KEY (id),
FOREIGN KEY (id) REFERENCES Payment(id),
FOREIGN KEY (account_number) REFERENCES Account(account_number),
FOREIGN KEY (id) REFERENCES Loan(id));

Bill_Payment (id, number ,account_number ,id ,
PRIMARY KEY (id),
FOREIGN KEY (id) REFERENCES Payment(id),
FOREIGN KEY (number) REFERENCES Credit_Card(number),
FOREIGN KEY (account_number) REFERENCES Account(account_number),
FOREIGN KEY (id) REFERENCES Third_party_application(id));

Deposit (Transaction_id,
PRIMARY KEY (Transaction_id),
FOREIGN KEY (Transaction_id) REFERENCES Account_transaction(Transaction_id));

Withdraw (Transaction_id ,

PRIMARY KEY (Transaction_id),

FOREIGN KEY (Transaction_id) REFERENCES Account_transaction(Transaction_id));

Transfer (Transaction_id,

PRIMARY KEY (Transaction_id),

FOREIGN KEY (Transaction_id) REFERENCES Account_transaction(Transaction_id));

Internal_transfer (Transaction_id ,account_number ,

PRIMARY KEY (Transaction_id),

FOREIGN KEY (Transaction_id) REFERENCES Transfer(Transaction_id),

FOREIGN KEY (account_number) REFERENCES Account(account_number));

International_transfer (swift_code ,router_number ,account_number,Transaction_id ,

PRIMARY KEY (Transaction_id),

FOREIGN KEY (Transaction_id) REFERENCES Transfer (Transaction_id));

Domestic_transfer(router_number ,account_number ,Transaction_id ,

PRIMARY KEY (Transaction_id),

FOREIGN KEY (Transaction_id) REFERENCES Transfer (Transaction_id));

Reminder (date_of_reminder ,Notification_id ,id , number ,

PRIMARY KEY (Notification_id),

FOREIGN KEY (Notification_id) REFERENCES Notifications (Notification_id),

FOREIGN KEY (id) REFERENCES Loan(id),

FOREIGN KEY (number) REFERENCES Credit_Card(number));

CreditCardwithProblems(Id, number,

PRIMARY KEY (Id, number),

FOREIGN KEY (Id) REFERENCES Reports (Id),

FOREIGN KEY (number) REFERENCES Credit_Card (number));

AccountsBankerCanView (email, account_number,
PRIMARY KEY (email, account_number),
FOREIGN KEY (email) REFERENCES Banker(email),
FOREIGN KEY (account_number) REFERENCES Account(account_number));

LoansBankerCanView(email, id ,
PRIMARY KEY (email, id),
FOREIGN KEY (email) REFERENCES Banker(email),
FOREIGN KEY (id) REFERENCES Loan(id));

CreditCardsBankercanView(email, number,
PRIMARY KEY (email, number),
FOREIGN KEY (email) REFERENCES Banker(email),
FOREIGN KEY (number) REFERENCES Credit_Card(number));

Bills(Bill_id ,due_date ,amount ,late_payment_fee,id ,email,
PRIMARY KEY (Bill_id),
FOREIGN KEY (id) REFERENCES Bill_Payment(id),
FOREIGN KEY (email) REFERENCES client(email));