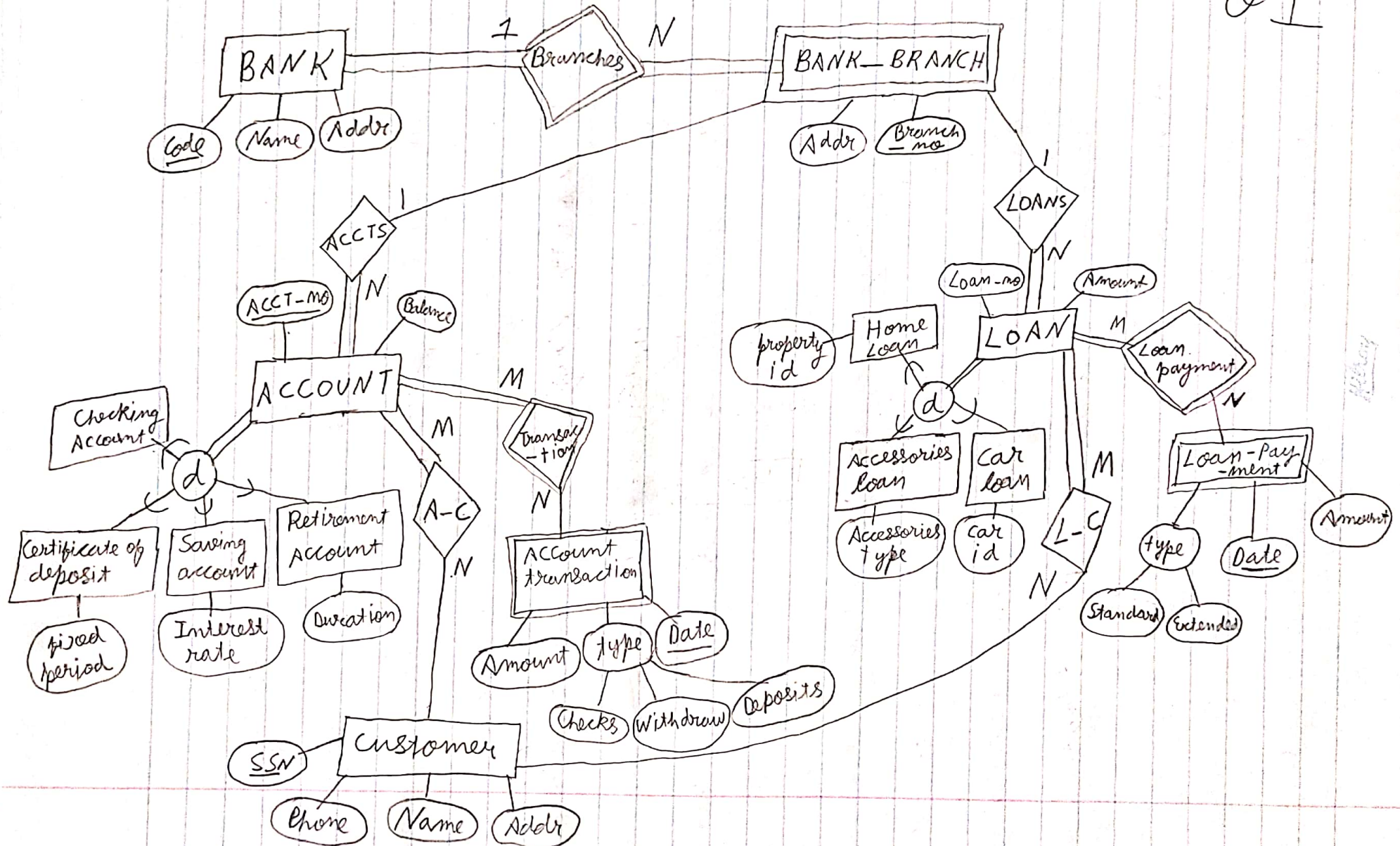


Assignment 1

Q 1



Q1 Explanation

- ① To keep track of different type of Accounts and Loans we will need to use the concept of subclasses.

Assumption → Here subclasses of Account are Certificate of deposits, Saving, checking, Retirement Account only.

→ The type attribute of Account transaction is a Composite...

{ only these type exist for our E-R diagram } attribute which consists of checks, withdraw, Deposits (Only)

→ The subclasses of Loan are Accessories loan, Car loan and Home loan only.

- ② To keep track of Account transaction I created a identifying

{ Account transaction can not exist without Account } relation called transaction from Accounts and (M:N)
for loan payment tracking I had a new M:N identifying relation from Loans as loan payment depend on Loans entity.

→ This is a M:N relation because different accounts could have different Account transactions

→ Similarly for loan payment it is M:N as different

Loans with many different loans payment could be possible.

→ Total participation from Account to transaction as there must be a account before any transaction. Similarly for loans

Q2
①

Relational model Conversion from ER diagram

Step 1 → Consider all Strong Entities

Event (Ename, ^{primary key} CFP Text, Weblink)
↑
Relation name
↓
attributes

Research topic (Area, R-Name)

People (Affiliation, P-Name)

Step 2 → Add weak Entity

Activity (EA-Name, Event-name, A-date, Activity name)

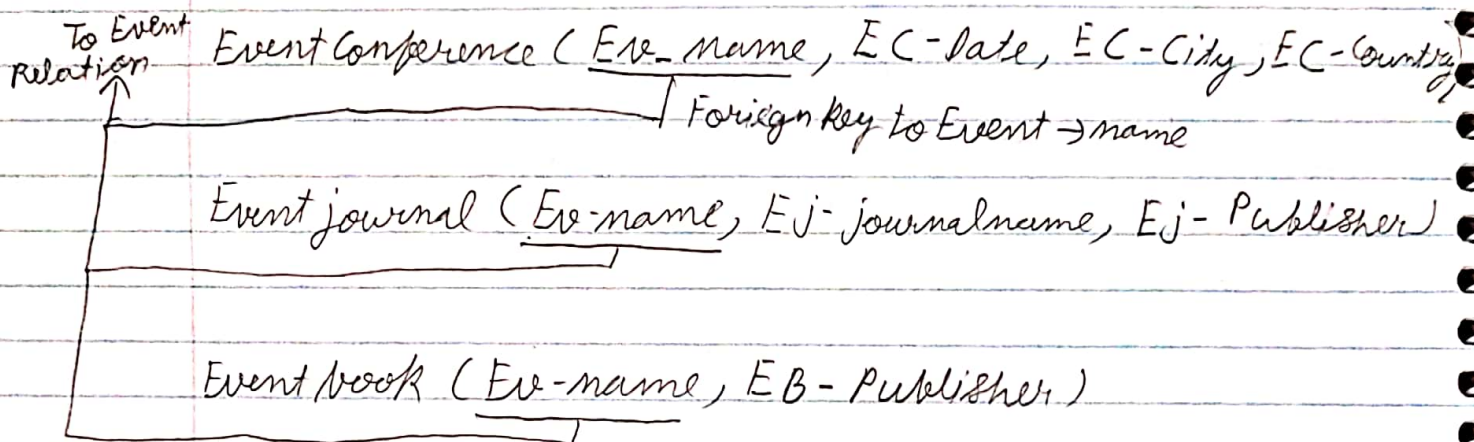
Foreign key to Event

Step 3 Mapping of M:N relations

Organises (EO-name, PO-name, role)

Covers (EC-name, R(-name))

Step 4 subclasses \Rightarrow

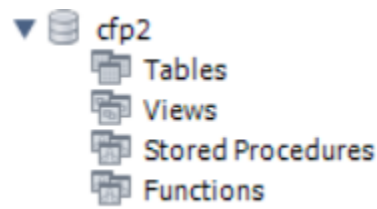


★ Uniqueness \Rightarrow

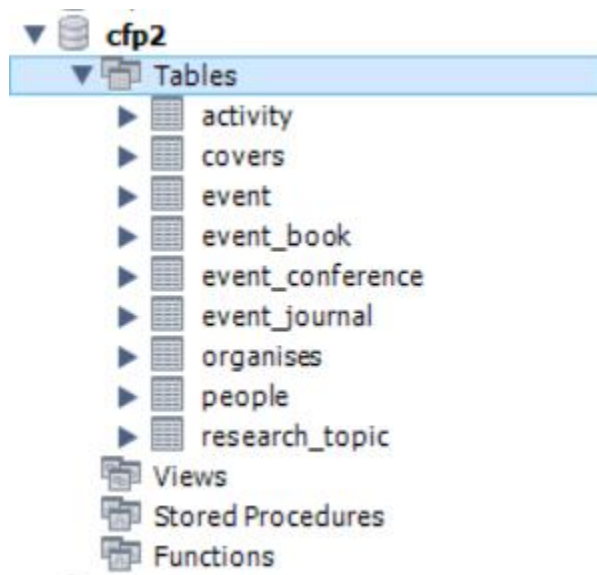
- (1) for Event table \Rightarrow CFP-text is not unique as it could be similar among different event
 \rightarrow Similarly web link could be shared by different event for different dates so not unique
- (2) for Activity table \Rightarrow Event_name and Activity name should be unique to remove any misunderstanding.
- (3) Event journal name is unique to make sure 2 different journal are distinguished
- (4) for Event book table \Rightarrow publisher is not unique as multiple publishers could publish same book

Q2 Screen Shots –

1) Database tables before running the script –



2) Database tables after running the script –



3) Success status of the script –

✓	3	22:58:37	USE 'cfp2'	0 row(s) affected	0.000 sec
✓	4	22:58:37	CREATE TABLE Event (-- code for varchar length taken from lecture slide 6 CFPT_text varchar(30) NOT ...	0 row(s) affected	0.032 sec
✓	5	22:58:37	CREATE TABLE Research_topic (-- code for varchar length taken from lecture slide 6 Area varchar(30) ...	0 row(s) affected	0.031 sec
✓	6	22:58:37	CREATE TABLE People (Affiliation varchar(30), P_name varchar(15) NOT NULL, unique (P_name), PRI...	0 row(s) affected	0.031 sec
✓	7	22:58:37	CREATE TABLE Organises (EO_name varchar(30) NOT NULL, --primary key of event PO_name varcha...	0 row(s) affected	0.047 sec
✓	8	22:58:37	CREATE TABLE Covers (EC_name varchar(30) NOT NULL, --primary key of event RC_name varchar(3...	0 row(s) affected	0.047 sec
✓	9	22:58:37	CREATE TABLE Activity (--here seeing unique A_date int NOT NULL, Event_name varchar(15) NOT N...	0 row(s) affected	0.031 sec
✓	10	22:58:37	CREATE TABLE Event_conference (EC_date int NOT NULL, EC_city varchar(15) NOT NULL, EC_coun...	0 row(s) affected	0.031 sec
✓	11	22:58:37	CREATE TABLE Event_journal (Ej_journal_name varchar(30) NOT NULL, Ej_publisher varchar(30) NO...	0 row(s) affected	0.032 sec
✓	12	22:58:37	CREATE TABLE Event_book (EB_publisher varchar(30) NOT NULL, EB_name varchar(40) NOT NULL...	0 row(s) affected	0.031 sec