

```
/*  
Create table account(  
acc_id int primary key,  
acc_name text not null,  
phno varchar unique,  
email varchar not null,  
city text not null  
);  
*/
```

```
/*  
Create table balance(  
acc_id int,  
balance_amt float,  
constraint fk1  
foreign key(acc_id)  
references account(acc_id)  
);  
*/
```

```
/*  
Create table trans(  
tno serial primary key,  
acc_id int,  
amt_tran float,  
transaction_type text,
```

```
constraint fk2
foreign key(acc_id)
references account(acc_id)
);
*/
/*
Create table loan(
loan_no serial primary key,
acc_id int,
amount float,
constraint fk3
foreign key (acc_id)
references account(acc_id)
);
*/
/*
Create table branch(
bid varchar primary key,
bname text unique,
bcity text not null,
assets int not null
);
*/
/*
Create table branch_acc(
bid varchar,
acc_id int,
```

```
constraint fk4
foreign key (bid)
references branch(bid),
constraint fk5
foreign key(acc_id)
references account(acc_id)
);
*/
/*
Create table agent(
agent_id varchar primary key,
agent_name text not null,
agent_phno varchar unique not null,
agent_comm float,
agent_email varchar not null,
agent_address varchar
);
*/
/*
Create table acc_agent(
acc_id int,
agent_id varchar,
constraint fk6
foreign key(acc_id)
references account(acc_id),
constraint fk7
foreign key(agent_id)
```

```
references agent(agent_id)
```

```
);
```

```
*/
```

```
/*
```

```
Create table trans_back(
```

```
tno serial primary key,
```

```
acc_id int,
```

```
amt_tran float,
```

```
transaction_type text,
```

```
date_info date
```

```
);
```

```
*/
```

```
/*
```

```
Create or replace procedure proc1( i int, j float )
```

```
Language plpgsql as $$
```

```
begin
```

```
insert into balance(acc_id,balance_amt) values (i,j);
```

```
commit;
```

```
end; $$
```

```
*/
```

```
/*
```

```
Create or replace procedure proc2(sender int, receiver int, amount float)
```

```
Language plpgsql as $$
```

```
Begin
```

```
--subtracting the amount from sender acc
```

```
Update balance set balance_amt= balance_amt-amount
```

```
Where acc_id=sender;
```

```

Insert into trans(acc_id,amt_tran,transaction_type)
Values (sender,amount,'Debit');
--adding the amount to receiver account
Update balance set balance_amt= balance_amt+amount
Where acc_id=receiver;
Insert into trans(acc_id,amt_tran,transaction_type)
Values (receiver,amount,'credit');
Commit;
End;$$
*/
/*
Create or replace procedure proc3(i int, b float)
Language plpgsql as $$
begin
Insert into loan (acc_id,amount) values (i , b);
Commit;
End; $$
*/
/*
Create or replace procedure proc4(i varchar,j int)
Language plpgsql as $$
Begin
Insert into branch_acc(bid,acc_id) values(i,j);
Commit;
End;$$
*/
/*

```

Create or replace procedure proc5(i int, j varchar)

Language plpgsql as \$\$

Begin

Insert into acc\_agent(acc\_id,agent\_id) values(i,j);

Commit;

End;\$\$

\*/

/\*

Create or replace function fun3(i int)

Returns float as \$tot\$

Declare

tot float;

begin

select sum(amount) into tot from loan where acc\_id=i;

return tot;

end;

\$tot\$ language plpgsql;

\*/

/\*

Create or replace function fun4(i int)

Returns int as \$tot\$

Declare

tot int;

begin

select count(\*) into tot from loan group by acc\_id having acc\_id=i;

return tot;

```
end;

$tot$ language plpgsql;
*/
/*

Create or replace function fun5()
Returns varchar as $aid$

Declare

aid varchar;

begin

Select agent_id into aid from acc_agent group by agent_id order by count(*) desc limit 1;

Return aid;

end;

$aid$ language plpgsql;
*/
/*

Create or replace function fun6()
Returns int as $top$

Declare

top int;

begin

Select acc_id into top from balance order by balance_amt desc limit 1;

Return top;

end;

$top$ language plpgsql;
*/
/*

Create or replace function fun7()
```

Returns int as \$top\$

Declare

top int;

begin

Select acc\_id into top from trans group by acc\_id order by count(\*) desc limit 1;

Return top;

end;

\$top\$ language plpgsql;

\*/

Create trigger mytrig4

before delete

On trans

For each row

Execute procedure fun20();

Create or replace function fun20()

Returns trigger as \$mytrig4\$

Begin

insert into trans\_back(tno,acc\_id,amt\_tran,transaction\_type,date\_info)  
values(old.tno,old.acc\_id,old.amt\_tran,old.transaction\_type,current\_date);

Return old;

End;

\$mytrig4\$ language plpgsql;

/\*

Create user user1

Login

Password 'Pass123';



\*/

/\*

GRANT SELECT

ON account,balance,trans,loan,branch,branch\_acc,agent,acc\_agent,trans\_back

To user1

\*/

/\*

Create user user2

Login

Password 'Pass123';

\*/

/\*

GRANT SELECT

ON account,balance,trans,loan,branch,branch\_acc,agent,acc\_agent,trans\_back

To user2;

\*/

/\*

insert into account values(1001,'Daniel Alvez','812-232-2234','Daniel@123.com','Hyderabad'),

(1002,'Ribery Consta','948-011-3341','Costa@123.com','Mumbai'),

(1003,'Maradona Segio','978-097-3341','Sergio@123.com','Delhi'),

(1004,'Berlin Catyio','916-007-3041','Berlin@123.com','Punjab'),

(1005,'Neymar Sinzuke','788-907-3221','Neymar@123.com','Maharashtra'),

(1006,'Kane Alba','889-900-3834','Kane@123.com','Hyderabad'),

(1007,'Martinez kiyu','708-997-6342','Kiyu@123.com','Hyderabad'),

(1008,'Karen Jarvez','908-007-9343','Karen@123.com','Mumbai'),

(1009,'Tom Hardy','928-007-3347','Tom@123.com','Mumbai'),

(1010,'Sargiu Alfa','914-007-3342','Alfa@123.com','Delhi'),

(1011,'Maria Gomez','702-007-3349','Gomez@123.com','Punjab'),  
(1012,'Juventiz Suarez','772-274-3343','Suarez@123.com','Punjab'),  
(1013,'Cristain Lopez','948-254-3391','Cristain@123.com','Bangalore'),  
(1014,'Justin Dokem','945-238-3234','Justin@123.com','Punjab'),  
(1015,'Demi Cokri','947-231-3098','Demi@123.com','Bangalore'),  
(1016,'Luke Cage','918-239-3301','Luke@123.com','Mumbai'),  
(1017,'Berry Alan','998-230-3491','Berry@123.com','Hyderabad'),  
(1018,'Carl Alberto','910-284-9391','Carl@123.com','Bangalore'),  
(1019,'Jimmy Lesner','909-204-8391','Jimmy@123.com','Hyderabad'),  
(1020,Health Ledger,'810-204-8291','Ledger@123.com','Bangalore');

\*/

/\*

insert into branch values('B101','Noorbazar SBI','Mumbai',200000),  
( 'B102','Hdfc Masabtank','Hyderabad',500000),  
( 'B103','ICICI RT nagar','Bangalore',100000),  
( 'B104','Noida Kotak','Punjab',400000),  
( 'B107','Punjab bank Gulsannagar','Maharashtra',100000),  
( 'B108','Axis Delhi','Delhi',500000);

\*/

/\*

insert into agent values('A5001','Sammy Daek','990-223-  
1234','sammy@hotmail.com','Hyderabad'),  
( 'A5002','Cristaino Balemy','977-103-1344','Balemy@gmail.com','Mumbai'),  
( 'A5003','Sergio Dragos','890-563-1764','Dragos@Yahoomail.com','Delhi'),  
( 'A5004','Ribery Costa','870-987-6543','Ribery@hotmail.com','Punjab'),  
( 'A5005','Rooney martino','978-282-1762','Rooney@outlookmail.com','Maharastra'),  
( 'A5006','Silva Dom','823-097-3447','Ribery@hotmail.com','Hyderabad'),

```
('A5007','Alberto Nemo','845-127-0943','Nemo@hotmail.com','Delhi'),  
('A5008','David Veroz','998-347-8941','David@hotmail.com','Punjab'),  
('A5009','Carry Bemor','887-997-8042','Carry@hotmail.com','Mumbai'),  
('A5010','Dostre Aakhan','800-937-2340','Aakhan@hotmail.com','Maharashtra'),  
('A5011','Vesilius Bolse','780-917-8798','Bolse@hotmail.com','Delhi'),  
('A5012','Elom Kush','990-927-4309','Kush@hotmail.com','Punjab');  
('A5013','Bieber Rush','793-927-4309','Rush@hotmail.com','Bangalore');  
*/
```

```
--call proc1(1020,5100);
```

```
--select * from balance;
```

```
--call proc4('B103',1020);
```

```
--select * from branch;
```

```
--select * from branch_acc;
```

```
--select * from account;
```

```
--call proc5(1020,'A5013');
```

```
--SELECT * FROM ACC_AGENT ORDER BY ACC_ID;
```

```
--select agent_id,count(*) from acc_agent group by agent_id order by count(*) desc;
```

```
--call proc5(1020,'A5013');
```

```
--select * from acc_agent;
```

```
--call proc3(1020,1200);
```

```
--select * from loan;
```

```
--call proc2(1019,1015,400);
```

```
--select * from trans;
```

```
--select * from loan;
```

```
--select fun3(1001);
```

```
--select fun4(1001);
```

```
--select * from acc_agent;
```

```
--select fun5();
```

```
--select * from balance;
```

```
--select fun6();
```

```
--select * from trans;
```

```
--select fun7();
```

--when user deletes a transaction from trans table it should be stored as a backup in trans\_back table

```
--select * from trans;
```

```
--delete from trans where tno=14;
```

```
--select * from trans_back;
```