

-- Queries for Banking DB:

-- All customer data.

```
select *  
from customer;
```

-- Names and cities of all borrowers

```
select distinct customer.customer_name, customer_city  
from borrower, customer  
where borrower.customer_name = customer.customer_name;
```

-- Set of names and cities of customers who have a loan at Perryridge branch

```
select distinct C.customer_name, customer_city  
from customer C, borrower B, loan L  
where C.customer_name = B.customer_name and  
      B.loan_number = L.loan_number and  
      branch_name = 'Perryridge';
```

-- Numbers of accounts with balances between 700 and 900.

```
select account_number  
from account  
where balance between 700 and 900;
```

-- Names of customers on streets with names ending in "Hill".

```
select customer_name  
from customer  
where customer_street like '%Hill';
```

-- Names of customers with both accounts and loans at Perryridge branch.

```
select distinct customer_name
from borrower, loan
where borrower.loan_number = loan.loan_number and
      branch_name = 'Perryridge' and
      customer_name in (select customer_name
                        from account, depositor
                        where account.account_number =
                              depositor.account_number and
                              branch_name = 'Perryridge');
```

-- Names of customers with an account but not a loan at Perryridge branch.

```
select distinct customer_name
from account, depositor
where account.account_number = depositor.account_number and
      branch_name = 'Perryridge' and
      customer_name not in (select customer_name
                            from loan, borrower
                            where loan.loan_number =
                                  borrower.loan_number and
                                  branch_name = 'Perryridge');
```

-- Set of names of customers with accounts at a branch where Hayes has an account.

```
select distinct D.customer_name
from depositor D, account A
where D.account_number = A.account_number and
      branch_name in
      (select branch_name
       from depositor Dh, account Ah
       where Dh.account_number = Ah.account_number and
             D.customer_name = 'Hayes');
```

-- Set of names of branches whose assets are greater than the assets of some branch in Brooklyn

```
select distinct T.branch_name
from branch T, branch S
where T.assets > S.assets and
      S.branch_city = 'Brooklyn';
```

-- Names of customers with both accounts and loans at Perryridge branch (using "exists").

```
select customer_name
from customer
where exists (select *
              from account, depositor
              where account.account_number =
depositor.account_number and
                  depositor.customer_name =
                  customer.customer_name and
                  branch_name = 'Perryridge')
and exists (select *
            from loan, borrower
            where loan.loan_number = borrower.loan_number and
                  borrower.customer_name =
                  customer.customer_name and
                  branch_name = 'Perryridge');
```

-- Names of customers with an account but not a loan at Perryridge branch(using "exists").

```
select customer_name
from customer
where exists (select *
              from account, depositor
              where account.account_number =
depositor.account_number and
                  depositor.customer_name =
customer.customer_name and
                  branch_name = 'Perryridge')
and not exists (select *
                from loan, borrower
                where loan.loan_number = borrower.loan_number and
                      borrower.customer_name =
customer.customer_name and
                      branch_name = 'Perryridge');
```

-- The average balance of all accounts.

```
select avg(balance)
from account;
```

-- Names of branches having at least one account, with average account balances.

```
select branch_name, avg(balance)
from account
group by branch_name;
```

-- Name(s) of branch(es) having largest average balance.

```
select branch_name
from account
group by branch_name
having avg(balance) >= all(select avg(balance)
                           from account
                           group by branch_name);
```

>=, >, <, <=, = ALL | ANY

-- Average balance of all customers in Harrison having at least 2 accounts.

```
select avg(balance)
from depositor, account, customer
where depositor.customer_name = customer.customer_name and
      depositor.account_number = account.account_number and
      customer_city = 'Harrison'
group by depositor.customer_name
having count (distinct account.account_number) >= 2;
```