

1) Find the names of all branches in the loan relation

select branch-name **from** loan

2) Find the names of all branches in the loan relation, and remove duplicates

select distinct branch-name

from loan

_ The keyword **all** specifies that duplicates not be removed.

select all branch-name

from loan

3) _ Find the loan number of those loans with loan amounts between \$90,000 and \$100,000 (that is, _\$90,000 and _\$100,000)

select loan-number

from loan

where amount **between** 90000 **and** 100000

4) _ Find the Cartesian product borrower _loan

select _

from borrower, loan

5) Find the name and loan number of all customers having a loan at the Perryridge branch.

select distinct customer-name, borrower.loan-number

from borrower, loan

where borrower.loan-number = loan.loan-number **and** branch-name = "Perryridge"

6) _ Find the name and loan number of all customers having a loan at the Perryridge branch; replace the column name loan-number with the name loan-id.

select distinct customer-name, borrower.loan-number **as** loan-id

from borrower, loan

where borrower.loan-number = loan.loan-number **and** branch-name = "Perryridge"

7) _ Find the customer names and their loan numbers for all customers having a loan at some branch.

select distinct customer-name, T.loan-number

from borrower **as** T, loan **as** S

where T.loan-number = S.loan-number

8) _ Find the names of all branches that have greater assets than some branch located in Brooklyn.

select distinct T.branch-name

from branch **as** T, branch **as** S

where T.assets > S.assets **and** S.branch-city = "Brooklyn"

9) _ Find the names of all customers whose street includes the substring 'Main'.

select customer-name

from customer

where customer-street **like** "%Main%"

10) _ List in alphabetic order the names of all customers having a loan at Perryridge branch

select distinct customer-name

from borrower, loan
where borrower.loan-number = loan.loan-number **and**
branch-name = "Perryridge"
order by customer-name

11) _ Find all customers who have a loan, an account, or both:
(**select** customer-name **from** depositor)
union
(**select** customer-name **from** borrower)

_ 12) Find the average account balance at the Perryridge branch.
select avg (balance)

from account
where branch-name = "Perryridge"

13)_ Find the number of tuples in the customer relation.
select count (*)

from customer

_ 14) Find the number of depositors in the bank
select count (**distinct** customer-name)

from depositor

15) _ Find the number of depositors for each branch.
select branch-name, **count** (**distinct** customer-name)

from depositor, account

where depositor.account-number = account.account-number
group by branch-name

16) _ Find the names of all branches where the average account balance is more than \$1,200

select branch-name, **avg** (balance)

from account

group by branch-name

having avg (balance) > 1200

_ 17) Find all loan numbers which appear in the loan relation with null values for amount.

select loan-number

from loan

where amount **is null**

18)_ Total all loan amounts

select sum (amount)

from loan

19)_ Find all customers who have both an account and a loan at bank.

select distinct customer-name

from borrower

where customer-name **in** (**select** customer-name
from depositor)

20) Find all customers who have a loan at the bank but do not have an account at the bank.

select distinct customer-name

from borrower

where customer-name **not in** (**select** customer-name

from depositor)

_ Find all customers who have both an account and a loan at the Perryridge branch.

```
select distinct customer-name
from borrower, loan
where borrower.loan-number = loan.loan-number and
branch-name = "Perryridge" and
(branch-name, customer-name) in
(select branch-name, customer-name
from depositor, account
where depositor.account-number =
account.account-number)
```

_ Find all branches that have greater assets than some branch located in Brooklyn.

```
select distinct T.branch-name
from branch as T, branch as S
where T.assets > S.assets and
S.branch-city = "Brooklyn"
```

_ Find all branches that have greater assets than some branch located in Brooklyn.

```
select branch-name
from branch
where assets > some
(select assets
from branch
where branch-city = "Brooklyn")
```

_ Find the names of all branches that have greater assets than all branches located in Brooklyn.

```
select branch-name
from branch
where assets > all
(select assets
from branch
where branch-city = "Brooklyn")
```

_ Find all customers who have an account at all branches located in Brooklyn.

```
select distinct S.customer-name
from depositor as S
where not exists (
(select branch-name
from branch
where branch-city = "Brooklyn")
```

except
(**select** R.branch-name
from depositor **as** T, account **as** R
where T.account-number = R.account-number **and**
S.customer-name = T.customer-name))

_ Find the average account balance of those branches where the average account balance is greater than \$1200.

select branch-name, avg-balance
from (**select** branch-name, **avg** (balance)
from account
group by branch-name)
as result (branch-name, avg-balance)
where avg-balance > 1200

_ A view consisting of branches and their customers

create view all-customer **as**
(**select** branch-name, customer-name
from depositor, account
where depositor.account-number = account.account-number)
union
(**select** branch-name, customer-name
from borrower, loan
where borrower.loan-number = loan.loan-number)

_ Find all customers of the Perryridge branch

select customer-name
from all-customer
where branch-name = "Perryridge"

_ Increase all accounts with balances over \$10,000 by 6%, all other accounts receive 5%.

– Write two **update** statements:

update account
set balance = balance _ 1.06
where balance > 10000
update account
set balance = balance _ 1.05
where balance _ 10000