Exercises

**Q1. Consider a database LOANS with the following tuples:**



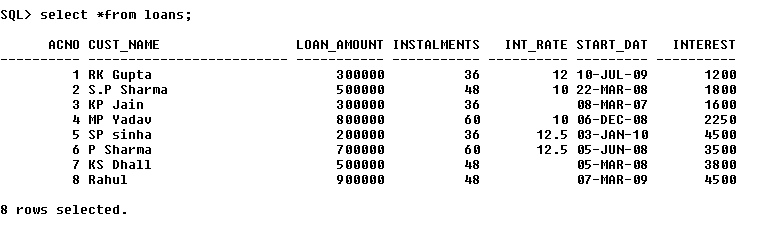
1. Create the table Loans and insert tuples in it.

create table loans (AccNo integer, Cust\_Name varchar(25),Loan\_Amount number,Instalments number,int\_rate float,Start\_date date, Interest number);

insert into loans values(&Acno,’&Name’,&Amount,&Instalments,&intrate’&date’,&interest);

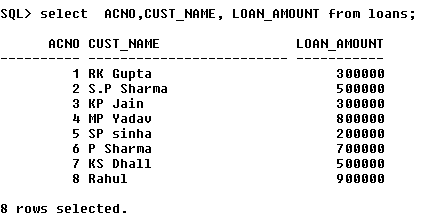
1. Display the details of all the loans.

select \*from loans;



1. Display the AccNo, Cust\_Name, and Loan\_Amount of all the loans.

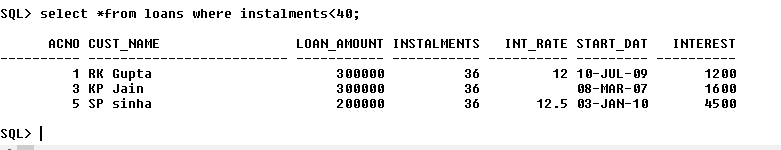
select ACNO,CUST\_NAME, LOAN\_AMOUNT from loans;



Conditional Select using Where Clause

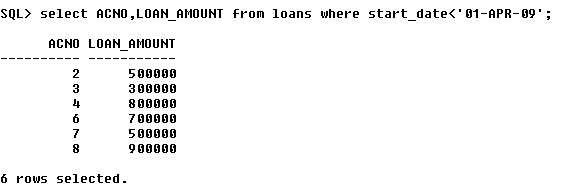
1. Display the details of all the loans with less than 40 instalments.

select \*from loans where instalments<40;



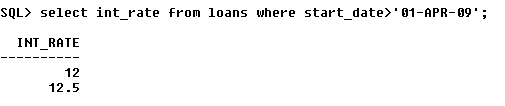
1. Display the AccNo and Loan\_Amount of all the loans started before 01-04-2009.

select ACNO,LOAN\_AMOUNT from loans where start\_date<'01-APR-09';



1. Display the Int\_Rate of all the loans started after 01-04-2009.

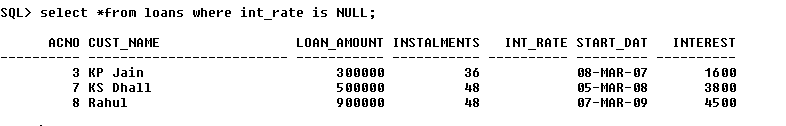
select int\_rate from loans where start\_date>'01-APR-09';



Using NULL

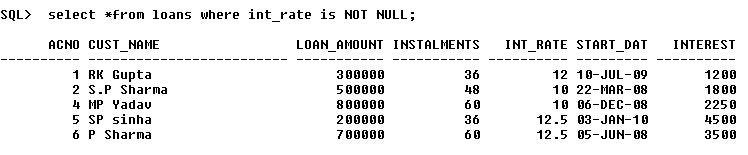
1. Display the details of all the loans whose rate of interest is NULL.

select \*from loans where int\_rate is NULL;



1. Display the details of all the loans whose rate of interest is not NULL.

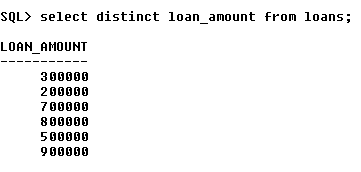
select \*from loans where int\_rate is NOT NULL;



Using DISTINCT Clause

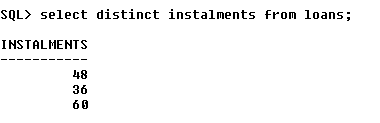
1. Display the amounts of various loans from the table LOANS. A loan amount should appear only once.

select distinct loan\_amount from loans;



1. Display the number of installments of various loans from the table LOANS. An instalment should appear only once.

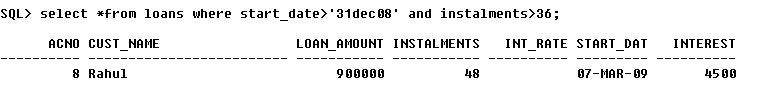
select distinct instalments from loans;



Using Logical Operators (NOT, AND, OR) and Between

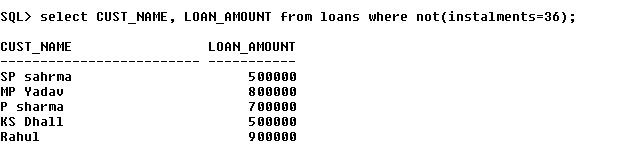
1. Display the details of all the loans started after 31-12-2008 for which the number of instalments are more than 36.

select \*from loans where start\_date>'31dec08' and instalments>36;



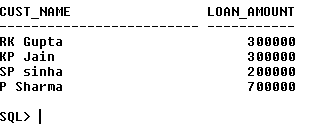
1. Display the Cust\_Name and Loan\_Amount for all the loans which do not have number of instalments 36.

select CUST\_NAME, LOAN\_AMOUNT from loans where not(instalments=36);



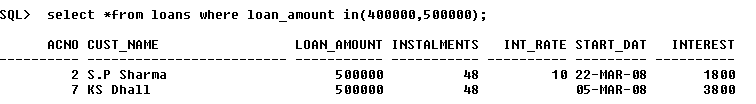
1. Display the Cust\_Name and Loan\_Amount for all the loans for which the loan amount is less than 500000 or int\_rate is more than 12.

select CUST\_NAME, LOAN\_AMOUNT from loans where (LOAN\_AMOUNT<500000 or INT\_RATE>12);



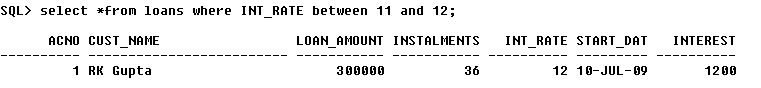
1. Display the details of all the loans whose Loan\_Amount is in the range 400000 to 500000.

select \*from loans where loan\_amount between 400000 and 500000;



1. Display the details of all the loans whose rate of interest is in the range 11% to 12%.

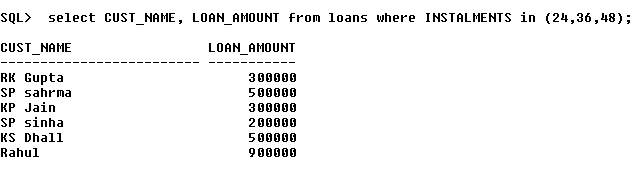
select \*from loans where INT\_RATE between 11 and 12;



Using IN Operator

1. Display the Cust\_Name and Loan\_Amount for all the loans for which the number of installments are 24, 36, or 48. (Using IN operator)

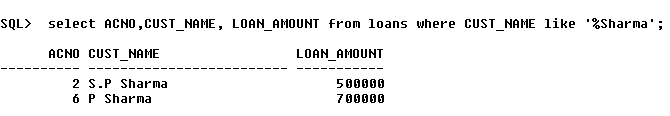
select CUST\_NAME, LOAN\_AMOUNT from loans where INSTALMENTS in (24,36,48);



Using LIKE Operator

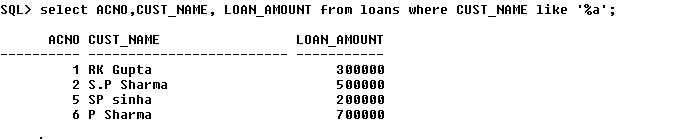
1. Display the AccNo, Cust\_Name, and Loan\_Amount for all the loans for which the Cust\_Name ends with 'Sharma'.

select ACNO,CUST\_NAME, LOAN\_AMOUNT from loans where CUST\_NAME like '%Sharma';



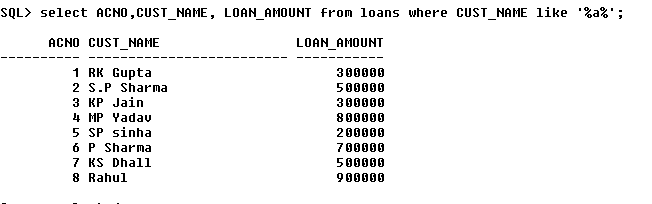
1. Display the AccNo, Cust\_Name, and Loan\_Amount for all the loans for which the Cust\_Name ends with 'a'.

select ACNO,CUST\_NAME, LOAN\_AMOUNT from loans where CUST\_NAME like '%a’;



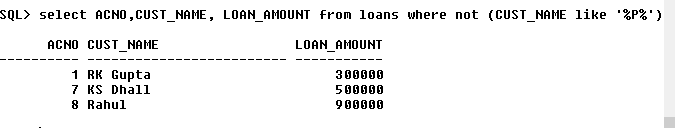
1. Display the AccNo, Cust\_Name, and Loan\_Amount for all the loans for which the Cust\_Name contains 'a'.

select ACNO,CUST\_NAME, LOAN\_AMOUNT from loans where CUST\_NAME like '%a%';

se;

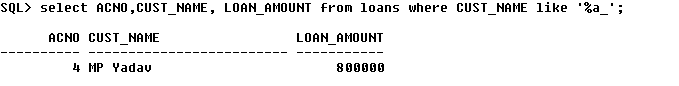
1. Display the AccNo, Cust\_Name, and Loan\_Amount for all the loans for which the Cust\_Name does not contain 'P'.

select ACNO,CUST\_NAME, LOAN\_AMOUNT from loans where not (CUST\_NAME like '%P%');



1. Display the AccNo, Cust\_Name, and Loan\_Amount for all the loans for which the Cust\_Name contains 'a' as the second last character.

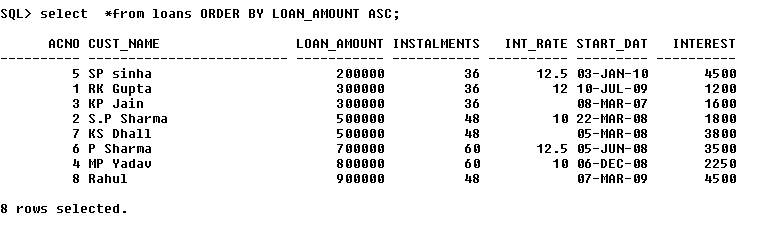
select ACNO,CUST\_NAME, LOAN\_AMOUNT from loans where CUST\_NAME like '%a\_';



Using ORDER BY clause

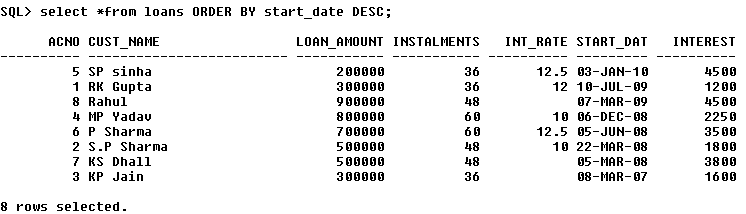
1. Display the details of all the loans in the ascending order of their Loan\_Amount.

select \*from loans ORDER BY LOAN\_AMOUNT ASC;



1. Display the details of all the loans in the descending order of their Start\_Date.

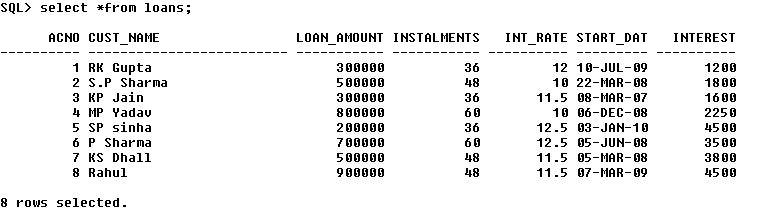
select \*from loans ORDER BY start\_date DESC;



Using UPDATE, DELETE, ALTER TABLE

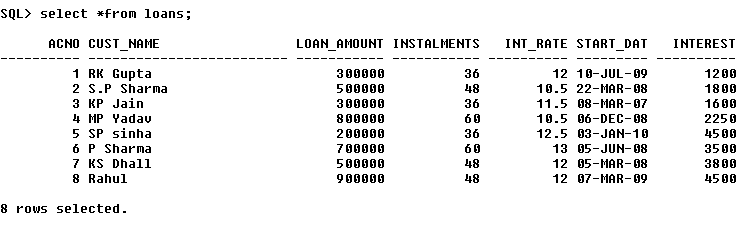
1. Put the interest rate 11.50% for all the loans for which interest rate is NULL.

update loans set int\_rate=11.50 where int\_rate is NULL;



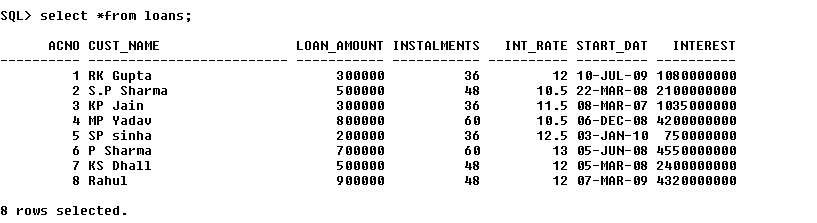
1. Increase the interest rate by 0.5% for all the loans for which the loan amount is more than 400000.

update loans set int\_rate=int\_rate+0.5 where loan\_amount>400000;



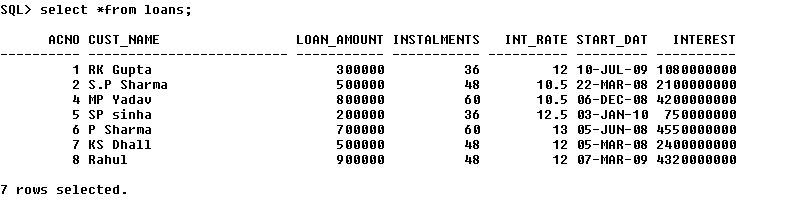
1. For each loan replace Interest with (Loan\_Amount\*Int\_Rate\*Instalments) /12\*100.

update loans set interest=(LOAN\_AMOUNT\*INT\_RATE\*INSTALMENTS)/12\*100;



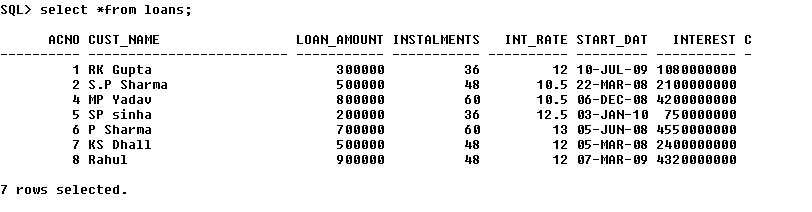
1. Delete the records of all the loans of 'K.P. Jain'

delete from loans where cust\_name='KP Jain';



1. Add another column Category of type CHAR(1) in the Loan table.

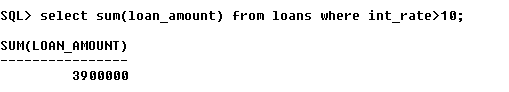
alter table loans add category char(1);



Using Aggregate Functions

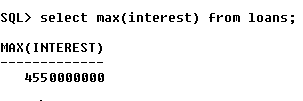
1. Display the sum of all Loan Amount for whose Interest rate is greater than 10.

select sum(loan\_amount) from loans where int\_rate>10;



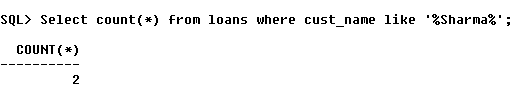
1. Display the Maximum Interest from Loans table.

select max(interest) from loans;



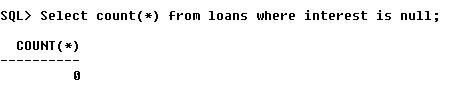
1. Display the count of all loan holders whose name is ending with ‘Sharma’.

Select count(\*) from loans where cust\_name like ‘%Sharma%’;



1. Display the count of all loan holders whose Interest is Null.

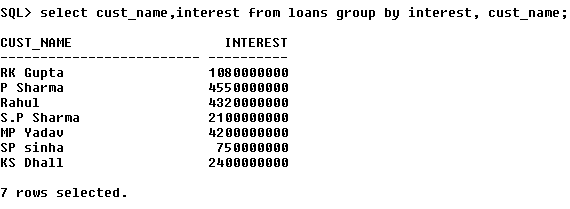
Select count(\*) from loans where interest is null;



Using Group By Clause

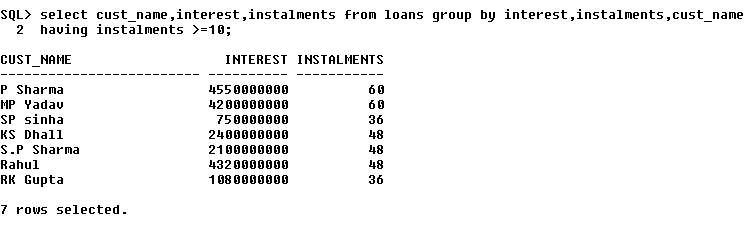
1. Display the Interest wise details of Loan Account Holders.

select cust\_name,interest from loans group by interest, cust\_name;



1. Display the Interest wise details of Loan Account Holders with at least 10 installments remaining.

select cust\_name,interest,instalments from loans group by interest,cust\_name,instalments having instalments>=10;



1. Display the Interest wise count of all loan holders whose Installment due is more than 5 in each group.

select count(interest),instalments,cust\_name from loans group by interest,instalments,cust\_name having instalments>5;

