**SQL 1**

Create table student with field sno, sname, gender and mark with sno as primary key and assign suitable constraints for each attribute.

Insert 5 records into the table

1. Find the average mark.

* select avg(mark) from student;

**AVG(MARK)**

**----------**

**33**

1. Display the sno and sname for all students who got more than the avg mark.

* select sno,sname from student where mark> (select avg(mark) from student);

**SNO SNAME**

**------ -------**

**1 manu**

**4 chinnu**

**5 sri**

1. Display the boy students whose name contains letter ‘r’.

* select sname from student where sname like '%r%’ and gender=’m';

**SNAME**

**-------**

**ram**

**sri**

1. Display boy student name for those who have marks less than 40.

* select sname from student where gender='m' and mark<40;

**SNAME**

**--------**

**manu**

**shan**

**ram**

**SQL 2**

Create table department with fields ename,salary,dno,dname and place with dno as primary key.

* + - create table department(dno number(5)primary key,dname varchar(25), ename varchar(25), salary number(7), place varchar(20));
    - desc department;

**Name Null? Type**

**-----------------------------------------------------**

**DNO NOT NULL NUMBER(5)**

**DNAME VARCHAR(25)**

**ENAME VARCHAR(25)**

**SALARY NUMBER(7)**

**PLACE VARCHAR(20)**

Insert 5 records into the table.

* insert into department values(1,'Cs','Anil',3000,'Tvm');
* insert into department values(2,'Ele','Manu',5000,'Dvpm');
* insert into department values(3,'Maths','Anu',4500,'Klm');
* insert into department values(4,'Cs','Sanu',3000,'Tvm');
* insert into department values(5,'Maths','Sinu',7300,'Alp');
* select \* from department;

**DNO DNAME ENAME SALARY PLACE**

**----- ----- --------- -------- ---------**

**1 Cs Anil 3000 Tvm**

**2 Ele Manu 5000 Dvpm**

**3 Maths Anu 4500 Klm**

**4 Cs Sanu 3000 Tvm**

**5 Maths Sinu 7300 Alp**

1. Change the type of field place.

* + - alter table department modify(place char(20));
    - desc department;

**Name Null? Type**

**-----------------------------------------------**

**DNO NOT NULL NUMBER(5)**

**DNAME VARCHAR(25)**

**ENAME VARCHAR(25)**

**SALARY NUMBER(7)**

**PLACE CHAR(20)**

1. Display total salary of the organization.

* select sum(salary) from department;

**SUM(SALARY)**

**-----------**

**18800**

1. Display ename for those who are working in the same department as Anil.

* select ename from department where dname=(select dname from department where ename='Anil');

**ENAME**

**-------**

**Anil**

**Sanu**

1. Display ename and salary,salary rounded with 5 digits.

* select ename,round(salary,5) from department;

**ENAME ROUND(SALARY,4)**

**-------- ---------------**

**Anil 3000**

**Manu 5000**

**Anu 4500**

**Sanu 3000**

**Sinu 7300**

**SQL 3**

Create table department with fields ename,salary,dno,dname and place with dno as primary key.

Insert 5 records into the table.

1. Display the employees who got salary more than Rs.6000 and less than 10000.

* select ename from department where salary>6000 and salary<10000;

**ENAME**

**----------**

**Sinu**

1. Create a view named ‘star’ with field ename,salary and place.
   * + create view star(ename,salary,place) as select ename,salary,place from department;

* select \* from star;

**ENAME SALARY PLACE**

**--------- -------- -------**

**Anil 3000 Tvm**

**Manu 5000 Dvpm**

**Anu 4500 Klm**

**Sanu 3000 Tvm**

**Sinu 7300 Alp**

1. Display ename in uppercase and lowercase.

* select upper(ename),lower(ename) from department;

**UPPER(ENAME) LOWER(ENAME)**

**------------- ------------**

**ANIL anil**

**MANU manu**

**ANU anu**

**SANU sanu**

**SINU sinu**

1. Display ename for those who are earning same salary as that of Anil.

* select ename from department where salary=(select salary from department where ename='Anil');

**ENAME**

**---------**

**Anil**

**Sanu**

**SQL 4**

create a table emp with fields eno, ename, job, manager, salary, dno with eno as primary key.

* create table emp(eno number(10) primary key,ename varchar(10),job varchar(10),manager varchar(10),salary number(10),dno number(10));
* desc emp;

**Name Null? Type**

**------------------------------------------------**

**ENO NOT NULL number(10)**

**ENAME varchar(10)**

**JOB varchar(10)**

**MANAGER varchar(10)**

**SALARY number(10)**

**DNO number(10)**

Insert 5 records into the table.

* insert into emp values(1,'Divya','Teacher','Arun',26000,10);
* insert into emp values(2,'Aradhana','Clerk','Ambika',20000,13);
* insert into emp values(3,'Ajeesh','Accountant','Deepa',24000,12);
* insert into emp values(4,'Neethu','Manager','Anoop',30000,10);
* insert into emp values(20,'Manu','Accountant','Anoop',26000,14);
* select \* from emp;

**ENO ENAME JOB MANAGER SALARY DNO**

**----- --------- ---------- -------- -------- ----**

**1 Divya Teacher Arun 26000 10**

**2 Aradhana Clerk Ambika 20000 13**

**3 Ajeesh Accountant Deepa 24000 12**

**4 Neethu Manager Anoop 30000 10**

**20 Manu Accountant Anoop 26000 14**

1. Display ename and salary for eno=20.

* select ename,salary from emp where eno=20;

**ENAME SALARY**

**------ ---------**

**Manu 26000**

1. create another table dept with fields dno,dname.

* create table dept(dno number(10)primary key,dname varchar(20));
* desc dept;

**Name Type**

**-------------------------------------------**

**DNO NUMBER(10)**

**DNAME VARCHAR(20)**

* insert into dept values(10,'CS');
* insert into dept values(11,'Ele');
* insert into dept values(12 ,‘Phy’);
* select \* from dept;

**DNO DNAME**

**---- ------**

**10 CS**

**11 Ele**

**12 Phy**

1. Display ename,manager of any employee employed by an existing department.

* select ename,manager from emp where dno=ANY(select dno from dept);

**ENAME MANAGER**

**---------- ----------**

**Divya Arun**

**Ajeesh Deepa**

4.Display the employee names in uppercase and lowercase**.**

* select upper(ename),lower(ename) from emp;

**UPPER(ENAME) LOWER(ENAME)**

**-------------- -------------**

**DIVYA divya**

**ARADHANA aradhana**

**AJEESH ajeesh**

**NEETHU neethu**

**MANU manu**

**SQL 5**

Create table emp with fields eno,ename,job,manager,salary with eno as primary key.insert five records into table

1. Display the number of employees of each manager in descending order.

* select manager,count(ename)from emp groupby manager orderby manager desc;

**MANAGER COUNT(ENAME)**

**-------------- --------------**

**manu 1**

**kannan 1**

**arundathy 1**

**arun 1**

**abraham 1**

1. Create a view called emp\_view based on the eno,ename from emp table change the heading for the ename to 'employ'.

* create view emp\_view as select eno,ename empoly from emp;
* select \* from emp\_view;

**ENO EMPLOY**

**------- ---------**

**1 arunima**

**2 devika**

**3 abee**

**4 akhila**

**5 beena**

1. Display the eno and aname for all employees whose names ends with 'a' and 'e'.

* select eno,ename from emp where ename like '%a' or ename like '%e';

**ENO ENAME**

**------- ---------**

**1 arunima**

**2 devika**

**3 abee**

**4 akhila**

**5 beena**

1. Display total salary.

* select sum(salary) from emp;

**SUM(SALARY)**

**-----------**

**432000**

**SQL 6**

Create a table dept with fields ename,salary,dno,designation, dname,place with dno as primary key.

* create table dept(dno number(10) primary key,dname varchar(16),place varchar(15),ename varchar(15),designation varchar(15),salary number(10));

insert 5 records into the table

* insert into dept values(10,'accounting','trivandrum', 'aparna','assiaccount',20000);
* insert into dept values(20,'sales','kollam','beena','salesgirl',9000);
* insert into dept values(30,'packing','trivandrum','manu','manager',25000);
* insert into dept values(40,'hr','kollam','sruthi','clerk',15000);
* insert into dept values(50,'accounting','dvpm','sujin','assimanager',20000);
* select \* from dept;

**DNO DNAME PLACE ENAME DESIGNATION SALARY**

**--- ----------- ---------- ----------- -------------- --------**

**10 accounting trivandrum aparna assiaccount 20000 20 sales kollam beena salesgirl 9000 30 packing trivandrum manu manager 25000 40 hr kollam sruthi clerk 15000**

**50 accounting dvpm sujin assimanager 20000**

1. Display the number of characters in ename and dname.

* select length(dname),length(ename) from dept;

**LENGTH(DNAME) LENGTH(ENAME)**

**------------- ---------------**

**10 6**

**5 5**

**7 4**

**2 6**

**10 5**

1. Display the total salary of each department for salary more than 5000.

* select dname,sum(salary) from dept where salary>5000

group by dname;

**DNAME SUM(SALARY)**

**---------- -------------**

**accounting 40000**

**hr 15000**

**packing 25000**

**sales 9000**

1. Display the employees who got salary less than the average salary of the organization.

* select ename from dept where salary<(select avg(salary) from dept);

**ENAME**

**-------**

**Beena**

**sruthi**

1. Display the names of all employees where the third letter of their name is 'a'.

* select ename from dept where ename like '\_\_a%';

**ENAME**

**-------**

**Aparna**

**SQL 7**

Create table dept with fields ename,salary,dno,designation, dname,place with dno as primary key.Insert 5 records into the table.

1. Display ename in uppercase and lowercase.

* select upper(ename),lower(ename) from dept;

**UPPER(ENAME) LOWER(ENAME)**

**-------------- -------------**

**APARNA aparna**

**BEENA beena**

**MANU manu**

**SRUTHI sruthi**

**SUJIN sujin**

1. Display average salary of each dept. other than accounting dept.

* select dname,avg(salary) from dept where dname not in('accounting') group by dname;

**DNAME AVG(SALARY)**

**--------- ------------ Hr 15000**

**Packing 25000**

**sales 9000**

1. Display all employees who got salary between 5000 and 10000.

* select ename from dept where salary between 5000 and 10000;

**ENAME**

**-------**

**beena**

1. Display the names of all employees where the second letter of their name is an 'a'.

* select ename from dept where enmae like '\_a%';

**ENAME**

**-------**

**manu**

**SQL 8**

Create table loan with fields loanno,cname,cid,bname and assigning suitable constraints.

* create table loan(loanno number(10) not null,cname varchar(20),cid number(5) primary key,bname varchar(20));
* desc loan;

**Name Null? Type**

**--------------------------------------------**

**LOANNO NOT NULL number(10)**

**CNAME varchar(20)**

**CID NOT NULL number(5)**

**BNAME varchar(20)**

Insert 5 records into the table.

* insert into loan values(10,'Vasu',1,'Kollam');
* insert into loan values(8,'Sindu',2,'Kollam');
* insert into loan values(11,'Achu',7,'Kochi');
* insert into loan values(1,'Hari',8,'TVM');
* insert into loan values(2,'Raman',20,'TVM');
* select \* from loan;

**LOANNO CNAME CID BNAME**

**------ ------ ------ ----------**

**10 Vasu 1 Kollam**

**8 Sindu 2 Kollam**

**11 Achu 7 Kochi**

**1 Hari 8 TVM**

**2 Raman 20 TVM**

1. Add one more field amount to loan table.

* alter table loan add(amount number(10));
* update loan set amount=3000 where loanno=10;
* update loan set amount=5000 where loanno=8;
* update loan set amount=9000 where loanno=11;
* update loan set amount=12000 where loanno=1;
* update loan set amount=15000 where loanno=2;
* select \* from loan;

**LOANNO CNAME CID BNAME AMOUNT**

**------ ------ ----- ---------- ----------**

**10 Vasu 1 Kollam 3000**

**8 Sindu 2 Kollam 5000**

**11 Achu 7 Kottayam 9000**

**1 Hari 8 TVM 12000**

**2 Raman 20 TVM 15000**

1. Create table depositor with fields cid and accno with accno as primary key.

* create table depositor(accno number(5)primary key,cid number(5));
* desc depositor;

**Name Null? Type**

**--------------------------------------------**

**ACCNO NOT NULL number(5)**

**CID number(5)**

1. Insert 5 records into the table.

* insert into depositor values(1000,2);
* insert into depositor values(1500,20);
* insert into depositor values(500,1);
* insert into depositor values(100,7);
* insert into depositor values(150,8);
* select \* from depositor;

**ACCNO CID**

**------ ------**

**1000 2**

**1500 20**

**500 1**

**100 7**

**150 8**

1. Display loanno,accno,cname of all customers who are having loan at kollam branch.

* select loanno,accno,cname from loan,depositor

where loan.cid=depositor.cid and loan.bname='Kollam';

**LOANNO ACCNO CNAME**

**------ ------ ------**

**10 500 Vasu**

**8 1000 Sindu**

1. Calculate Rs.150 extra for all customers having loan. The added loan amount will display in a new column.

* select amount+150 NewAmount from loan;

**NewAmount**

**----------**

**3150**

**5150**

**9150**

**12150**

**15150**

**SQL 9**

Create table mark with fields studid,studname,advisor, course,mark1,mark2,mark3 with studid as primary key.Insert 5 records into the table.

1. Find out the advisor of each student.

* select studname,advisor from mark;

**STUDNMAE ADVISOR**

**--------- ----------**

**Hari Anitha**

**Balu Anil**

**Abhi Rajesh**

**Sangi Anil**

**Teena Anitha**

**Divya Anil**

**Ram Anitha**

1. Add a new column total to the table and Give values to column total using update command.

* alter table mark ADD total number(10));
* update mark set total=mark1+mark2+mark3;
* select total from mark;

**TOTAL**

**------**

**150**

**180**

**185**

**150**

**165**

**165**

**195**

1. Display students who are in having mark less than average of mark.

* Select studname from mark where total<(select avg(total)from mark);

**STUDNAME**

**----------**

**Hari**

**Sangi**

**Teena**

**Divya**

**SQL 10**

Create table customer with fields custid,custname,city, occupation with custid as primary key.

* create table customer(custid number)primary key,custname varchar(10),city varchar(20),occupation varchar(20);
* desc customer;

**Name Null? Type**

**---------------------------------------------------**

**CUSTID NOT NULL number(10)**

**CUSTNAME varchar(10)**

**CITY varchar(20)**

**OCCUPATION varchar(20)**

Insert 5 records into the table.

* insert into customer values(2,'Achu','TVM','Marketing');
* insert into customer values(3,'Lalu','Kochi','Teacher');
* insert into customer values(5,'Haritha','Kannur','Sales');
* insert into customer values(9,'Anil','Kollam','Clerk');
* insert into customer values(10,'Sangi','Kollam','Clerk');
* select \* from customer;

**CUSTID CUSTNAME CITY OCCUPATION**

**------ -------- ------ ----------**

**2 Achu TVM Marketing**

**3 Lalu Kochi Teacher**

**5 Haritha Kannur Sales**

**9 Anil Kollam Clerk**

**10 Sangi Kollam Clerk**

1. List the customers who live in kannur and kollam.

* select custname from customer where city in('kannur','kollam');

**CUSTNAME**

**---------**

**Haritha**

**Anil**

**Sangi**

1. Create another table bank which contains acctid,custid, acttype,balance with acctid as primary key.

* create table bank(acctid numeric(8)primary key,custid number(10),acttype varchar(10),balance number(10));
* desc bank;

**Name Null? Type**

**-----------------------------------------------**

**ACCTID NOT NULL number(8)**

**CUSTID number(10)**

**ACTTYPE varchar(10)**

**BALANCE number(10)**

* insert into bank values(20,2,'Single',50);
* insert into bank values(30,5,'Single',10000);
* insert into bank values(40,10,'Mixed',5000);
* insert into bank values(50,9,'Single',8000);
* select \* from bank;

**ACCTID CUSTID ACTTYPE BALANCE**

**------ ------ ------- -------**

**20 2 Single 50**

**30 5 Single 10000**

**40 10 Mixed 5000**

**50 9 Single 8000**

1. Display custid,custname,acctid,balance of all customers who are having balance more than 5000.

* select custid,custname,acctid,balance from customer,bank where customer.custid=bank.custid and bank.balance>5000;

**CUSTID CUSTNAME ACCTID BALANCE**

**------ -------- ------ -------**

**5 Haritha 30 10000**

**2 Anil 50 8000**

1. Find out the total number of customers in each city in ascending order.

* select city,count(custid) from customer group by city order by city;

**CITY COUNT(CUSTID)**

**---------- --------------**

**Kannur 1**

**Kochi 1**

**Kollam 2**

**TVM 1**

**SQL 11**

Create table customer with fields custid,custname,city, occupation with custid as primary key.Insert 5 records into the table

1. Display the customers whose names contain ‘a’ as last letter.

* select custname from customer where custname like '%a';

**CUSTNAME**

**--------**

**Haritha**

1. Remove the customers whose balance is less than 100.

* delete from customer where custid=(select custid from bank where balance<100);

**1 row deleted.**

1. List the customers who are with occupation clerk.

* select custname from customer where occupation=’clerk’;

**CUSTNAME**

**--------**

**Anil**

**Sangi**

1. Display the customers who live in the same city as ‘anil’

* select custname from customer where city=(select city from customer where custname=’Anil’);

**CUSTNAME**

**--------**

**Sangi**

**SQL 12**

Create table invoice with fields invno,invdate,custno,city,

itemno with invno as primary key.

* create table invoice(invno number(10)primary key,invdate date,custno number(10),qty number(10),itemno number(10));
* desc invoice;

**Name Null? Type**

**------------------------------------------------**

**INVNO NOT NULL number(10)**

**INVDATE date**

**CUSTNO number(10)**

**QTY varchar(20)**

**ITEMNO number(10)**

Insert 5 records into the table.

* insert into invoice values(1000,'10jan91',1200,2,1);
* insert into invoice values(2000,'01jan91',1300,3,2);
* insert into invoice values(3000,'02mar91',1400,1,3);
* insert into invoice values(4000,'05dec91',1500,5,4);
* insert into invoice values(5000,'05aug91',1600,6,5);
* select \* from invoice;

**INVNO INVDATE CUSTNO QTY ITEMNO**

**------ ---------- ------ ---- ------**

**1000 10-jan-91 1200 2 1**

**2000 01-jan-91 1300 3 2**

**3000 02-mar-91 1400 1 3**

**4000 05-dec-91 1500 5 4**

**5000 05-aug-91 1600 6 5**

1. Find invoices in which 2 or more items are ordered.
   * select invno from invoice where qty>=2;

**INVNO**

**-------**

**1000**

**2000**

**4000**

**5000**

1. Create another table item which contains itemno,invno, itemname,itemprice with itemno as primary key.

* create table item(itemno number(10)primary key,itemname varchar(20),itemprice number(10));
* desc item;

**Name Null? Type**

**-----------------------------------------------**

**ITEMNO NOT NULL number(10)**

**ITEMNAME varchar(20)**

**ITEMPRICE number(10)**

1. Insert 5 records into the table.

* insert into item values(1,'dairymilk',400);
* insert into item values(2,'soap',30);
* insert into item values(3,'biscuit',100);
* insert into item values(4,'cake',500);
* insert into item values(5,'icecream',600);
* select \* from item;

**ITEMNO ITEMNAME ITEMPRICE**

**-------- ---------- --------**

**1 dairymilk 400**

**2 soap 30**

**3 biscuit 100**

**4 cake 500**

**5 icecream 600**

1. Display the details of items ordered in invoice number 1000.

* select item.\* from item,invoice

where item.itemno=invoice.itemno and invno=1000;

**ITEMNO ITEMNAME ITEMPRICE**

**------ -------- ---------**

**2 dairymilk 400**

**SQL 13**

Create table book with fields bookno,bookname,author, publication with bookno as primary key.

* create table book(bookno numeric(5)primary key,book name character(15)not null,author character(15),publication character(15));
* desc book;

**Name Null? Type**

**--------------------------------------------------**

**BOOKNO NOT NULL NUMERIC(5)**

**BOOKNAME NOT NULL CHARACTER(15)**

**AUTHOR CHARACTER(15)**

**PUBLICATION CHARACTER(15)**

Insert 5 records into the table.

* insert into book values(100,'java','balaguru','star');
* insert into book values(200,'dbms','connolly','surya');
* insert into book values(300,'cg','pauline','mrpal');
* insert into book values(400,'introduction to c', 'booch','star');
* insert into book values(500,'crypto','william','new');
* select \* from book;

**BOOKNO BOOKNAME AUTHOR PUBLICATION**

**------- ------------------- --------- ------------**

**100 java balaguru star**

**200 dbms Connolly surya**

**300 cg Pauline mrpal**

**400 introduction to c ashok star**

**500 crypto william new**

1. Display bookno,bookname in the descending order.

* select bookno,bookname from book order by bookname desc;

**BOOKNO BOOKNAME**

**--------- ---------------------**

**100 java**

**400 introduction to c**

**200 dbms**

**500 crypto**

**300 cg**

1. Display the books which contains the character ‘r’ in their names in ascending order of their author.

* select bookname from book where bookname like ‘%r%’

order by author;

**BOOKNAME**

**---------------------**

**crypto**

**introduction to c**

1. Find out tha books which has the same publication as that of ‘introduction to c’.

* select bookname from book where publication=(select publication from book where bookname=’introduction to c’);

**BOOKNAME**

**---------------------**

**java**

**introduction to c**

1. list the number of books authorwise.

* select author,count(bookno)from book group by author order by author;

**AUTHOR COUNT(BOOKNO)**

**-------------- ----------------**

**ashok 1**

**balaguru 1**

**conolly 1**

**Pauline 1**

**William 1**

**SQL 14**

Create table employee with fields empid,empname,dept,salary and empid as primary key.

* Create table employee(empid numeric(8)primary key,empname character(10)not null,dept character(10),salary numeric(5));

1. Insert 5 rows into the table.

* insert into employee values(1,’anil’,’cs’,9000);
* insert into employee values(2,’siva’,’cs’,8500);
* insert into employee values(3,’jithin’,’maths’,8000);
* insert into employee values(4,’lekshmi’,’maths’,7500);
* insert into employee values(5,’sithara’,’commerce’,7000);
* select\*from employee;

**EMPID EMPNAME DEPT SALARY**

**---------- -------- --------- --------**

**1 anil cs 9000**

**2 siva cs 8500**

**3 jithin maths 8000**

**4 lekshmi maths 7500**

**5 sithara commerce 7000**

1. Find out total salary for each department.

* select dept,sum(salary)from employee group by dept;

**DEPT SUM(SALARY)**

**--------- ------------**

**commerce 7000**

**cs 17500**

**maths 15500**

1. create a table emp\_new from employee which contains empid,empname,salary.

* create table emp\_new as select empid,empname ,salary from employee;
* select\*from emp\_new;

**EMPID EMPNAME SALARY**

**-------- ---------- --------**

**1 anil 9000**

**2 siva 8500**

**3 jithin 8000**

**4 lekshmi 7500**

**5 sithara 7000**

1. Find out the employees who are not in ‘maths’ department and salary above 6700.

* select empname from employee where dept not in(‘maths’) and salary>6700;

**EMPNAME**

**----------**

**anil**

**siva**

**sithara**

1. List the employees who work in the same department as that of ‘anil’**.**

* select empname from employee where dept=(select dept from employee where empname=‘anil’);

**EMPNAME**

**----------**

**anil**

**siva**

**SQL 15-Program 1**

**SQL 16-Program 3**

Section 1 : SQL 1, SQL 2, SQL 4, SQL 6, SQL 7,SQL 9, SQL 13,

SQL 15

Section 2 : SQL 3, SQL 5, SQL 8, SQL 10, SQL 11, SQL 12,SQL 14,

SQL 16