SET 1

1.

Consider the MOVIE DATABASE

Movies

title	director	myear	rating
Fargo	Coen	1996	8.2
Raising Arizona	Coen	1987	7.6
Spiderman	Raimi	2002	7.4
Wonder Boys	Hanson	2000	7.6

Actors

actor	ayear
Cage	1964
Hanks	1956
Maguire	1975
McDormand	1957

Acts

actor	title
Cage	Raising Arizona
Maguire	Spiderman
Maguire	Wonder Boys
McDormand	Fargo
McDormand	Raising Arizona
McDormand	Wonder Boys

Directors

director	dyear
Coen	1954
Hanson	1945
Raimi	1959

Write following relational algebra queries for a given set of relations.

1. Find movies made after 1997
2. Find movies made by Hanson after 1997
3. Find all movies and their ratings
4. Find all actors and directors
5. Find Coen's movies with McDormand

2. Write a Pl/SQL program to print integers from 1 to 10 by using PL/SQL FOR loop.

SET 2

1.

Consider the Company database with following tables

EMPLOYEE	FNAME	MINIT	LNAME	SSN	BDATE	ADDRESS	SEX	SALARY	SUPERSSN	DNO
	John	B	Smith	123456789	1965-01-09	731 Fondren, Houston, TX	M	30000	333445555	5
	Franklin	T	Wong	333445555	1955-12-08	638 Voss, Houston, TX	M	40000	888665555	5
	Alicia	J	Zelaya	999887777	1968-07-19	3321 Castle, Spring, TX	F	25000	987654321	4
	Jennifer	S	Wallace	987654321	1941-06-20	291 Berry, Bellaire, TX	F	43000	888665555	4
	Ramesh	K	Narayan	666884444	1962-09-15	975 Fire Oak, Humble, TX	M	38000	333445555	5
	Joyce	A	English	453453453	1972-07-31	5631 Rice, Houston, TX	F	25000	333445555	5
	Ahmad	V	Jabbar	987987987	1969-03-29	980 Dallas, Houston, TX	M	25000	987654321	4
	James	E	Borg	888665555	1937-11-10	450 Stone, Houston, TX	M	55000	null	1

DEPARTMENT	DNAME	DNUMBER	MGRSSN	MGRSTARTDATE
	Research	5	333445555	1988-05-22
	Administration	4	987654321	1995-01-01
	Headquarters	1	888665555	1981-06-19

Perform the following:

1. Create company database
2. Viewing all databases
3. Viewing all Tables in a Database,
4. Creating Tables (With and Without Constraints)
5. Inserting/Updating/Deleting Records in a Table
6. Saving (Commit) and Undoing (rollback)

2. Given the table EMPLOYEE (EmpNo, Name, Salary, Designation, DeptID) write a cursor to select the five highest paid employees from the table. EMPLOYEE (EmpNo, Name, Salary, Designation, DeptID).

SET 3

1.

Consider Dept table

DEPTNO	DNAME	LOC

Perform the following:

1. Rename the table dept as department
2. Add a new column PINCODE with not null constraints to the existing table DEPT
3. All constraints and views that reference the column are dropped automatically, along with the column.
4. Rename the column DNAME to DEPT_NAME in dept table
5. Change the data type of column loc as CHAR with size 10
6. Delete table

2. Given an integer i, write a PL/SQL procedure to insert the tuple (i, 'xxx') into a given relation.

SET 4

1.

Consider Employee table

EMPNO	EMP_NAME	DEPT	SALARY	DOJ	BRANCH
E101	Amit	oduction	45000	12-Mar-00	Bangalore
E102	Amit	HR	70000	03-Jul-02	Bangalore
E103	sunita	anagemer	120000	11-Jan-01	mysore
E105	sunita	IT	67000	01-Aug-01	mysore
E106	mahesh	Civil	145000	20-Sep-03	Mumbai

Perform the following

1. **Display all the fields of employee table**
2. **Retrieve employee number and their salary**
3. **Retrieve average salary of all employee**
4. **Retrieve number of employee**
5. **Retrieve distinct number of employee**
6. **Retrieve total salary of employee group by employee name and count similar names**
7. **Retrieve total salary of employee which is greater than >120000**
8. **Display name of employee in descending order**
9. **Display details of employee whose name is AMIT and salary greater than 50000;**

2. Create a table to represent sb-account of a bank consisting of account-no, customer-name, balance-amount. Write a PL/SQL block to implement deposit and withdraw. Withdraws should not be allowed if the balance goes below Rs.1000.

SET 5

1.

For a given tables

EMPLOYEE

FNAME	MINIT	LNAME	SSN	BDATE	ADDRESS	SEX	SALARY	SUPERSSN	DNO
John	B	Smith	123456789	1965-01-09	731 Fondren, Houston, TX	M	30000	333445555	5
Franklin	T	Wong	333445555	1955-12-08	638 Voss, Houston, TX	M	40000	888665555	5
Alicia	J	Zelaya	999887777	1968-07-19	3321 Castle, Spring, TX	F	25000	987654321	4
Jennifer	S	Wallace	987654321	1941-06-20	291 Berry, Bellaire, TX	F	43000	888665555	4
Ramesh	K	Narayan	666884444	1962-09-15	975 Fire Oak, Humble, TX	M	38000	333445555	5
Joyce	A	English	453453453	1972-07-31	5631 Rice, Houston, TX	F	25000	333445555	5
Ahmad	V	Jabbar	987987987	1969-03-29	980 Dallas, Houston, TX	M	25000	987654321	4
James	E	Borg	888665555	1937-11-10	450 Stone, Houston, TX	M	55000	null	1

DEPARTMENT

DNAME	DNUMBER	MGRSSN	MGRSTARTDATE
Research	5	333445555	1988-05-22
Administration	4	987654321	1995-01-01
Headquarters	1	888665555	1981-06-19

Create tables and perform the following

1. How the resulting salaries if every employee working on the 'Research' Departments is given a 10 percent raise.
2. Find the sum of the salaries of all employees of the 'Accounts' department, as well as the maximum salary, the minimum salary, and the average salary in this department
3. Retrieve the name of each employee Controlled by department number 5 (use EXISTS operator).
4. Retrieve the name of each dept and number of employees working in each department which has at least 2 employees
5. Retrieve the name of employees who born in the year 1990's
6. Retrieve the name of employees and their dept name (using JOIN)

2. Create the following tables for Library Information System : Book : (accession-no, title, publisher, author, status) Status could be issued, present in the library, sent for binding, and cannot be issued. Write a trigger which sets the status of a book to "cannot be issued", if it is published 20 years back.

SET 6

1.

For a given EMPLOYEE tables

EMPLOYEE	FNAME	MINIT	LNAME	SSN	BDATE	ADDRESS	SEX	SALARY	SUPERSSN	DNO
	John	B	Smith	123456789	1965-01-09	731 Fondren, Houston, TX	M	30000	333445555	5
	Franklin	T	Wong	333445555	1955-12-08	638 Voss, Houston, TX	M	40000	888665555	5
	Alicia	J	Zelaya	999887777	1968-07-19	3321 Castle, Spring, TX	F	25000	987654321	4
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	Ahmad	V	Jabbar	987987987	1969-03-29	980 Dallas, Houston, TX	M	25000	987654321	4
	James	E	Borg	888665555	1937-11-10	450 Stone, Houston, TX	M	55000	null	1

Perform the Following

1. Creating Views (With and Without Check Option),
2. Selecting from a View
3. Dropping Views,

2. Create the following tables : Book(accession-no, title, publisher, year, date-of-purchase, status) Member(member-id, name, number-of-books-issued, max-limit) Book-issue(accession-no, member-id, date-of-issue) (a) Insert values that accept the data from the user with appropriate validation checks. (b) Write a PL/SQL procedure to issue the book. Write a trigger to set the status of students to "back listed" if they have taken book but not returned even after one year.

SET 7

1. Create The following two tables :
   College-info
   Faculty-info
   College-info consists of fields : college-code, college-name, address
   Faculty-info consists of fields : college-code, faculty-code, faculty-name, qualification, experience-in-no-of-years, address.
   The field college-code is foreign key.
   (a) Insert values that to accept the data from the user.
   (b) Generate queries to do the following :
   (i) List all those faculty members whose experience is greater than or equal to 10 years and have M. Tech degree.
   (ii) List all those faculty members, who have at least 10 years of experience but do not have M. Tech degree.

2. Create the following tables : Book(accession-no, title, publisher, year, date-of-purchase, status) Book-Place(accession-no, rack-id, rack-position) Member(member-id, name, number-of-books-issued, max-limit, status) Book-issue(accession-no, member-id, date-of-issue)
   (a) Insert values that to accept the data from the user with appropriate validation checks. (b) Write a PL/SQL procedure to issue the book. Write a trigger to set the status of a book neither to "lost" which is neither issued nor in the library.

SET 8

1. Create the following tables for
   Library Information System : Book(accession-no, title, publisher, author, status, date-of-purchase) Status could be issued, present in the library, sent for binding, and account be issued. (a) Insert values that to accept the data from the user with appropriate validation checks.
   (b) Generate queries to do the following :
   (i) List all those books which are new arrivals. The books which are acquired during the last 6 months are categorized as new arrivals.
   (ii) List all those books that cannot be issued and purchased 20 years ago.

2. Create the following tables : Book(accession-no, title, publisher, year, date-of-purchase, status) Member(member-id, name, number-of-books-issued, max-limit) Book-issue(accession-no, member-id, date-of-issue) (a) Insert values that to accept the data from the user with appropriate validation checks. (b) Write a PL/SQL procedure to issue the book. Write a trigger to set the status of students to "back listed" if they have taken book but not returned even after one year.

SET 9

1. Create the following table :
   Item (item-code, item-name, qty-in-stock, reorder-level) Supplier (supplier-code, supplier-name, address)
   Can-supply(supplier-code, item-code)
   (a) Insert values that to accept the data from the user with appropriate validation checks.
   (b) Generate queries to do the following :
   (i) List all those suppliers who can supply the given item.
   (ii) List all those items which cannot be supplied by given company.

2. Create the following tables : Student(roll-no, name, date-of-birth, course-id) Course (Course-id, name, fee, duration, status) (a) Insert values that to accept the data from the user with appropriate validation checks. (b) Write PL/SQL procedure to do the following : Set the status of course to "not offered" in which the number of candidates is less than 5.

SET 10

1. Create the following tables : Student(roll-no, name, date-of-birth, course-id) Course (Course-id, name, fee, duration) (a) Insert values that to accept the data from the user with appropriate validation checks. (b) Generate queries to do the following : (i) List all those students who are between 18-19 years of age and have opted for MCA course. (ii) List all those courses in which number of students are less than 10.

2. Create the following tables : Student(roll-no, name, date-of-birth, course-id) Course (Course-id, name, fee, duration, status) (a) Insert values that to accept the data from the user with appropriate validation checks. (b) Write PL/SQL procedure to do the following : Set the status of course to "offered" in which the number of candidates is at least 10 otherwise set it to "not offered".

SET 11

1. BOOK(Book_id, Title,PublisherName)
   Book_authors(BookId, Authorname)
   Publisher(Name,address,Phoneno)
   Book_copies(Bookid,BranchId,No of Copies)
   Book_loans(Bookid,Branchid,Card no, Date_out,Duedate)
   Library_branch(branchid,Branchname,Address)
   Borrower(Cardno,Name,address,phone)
   Create the above database by populating necessary data and execute the following queries
   1. How many copies of the book titled “The Lost tribe”are owned by the library branch whose nameis “Sharpstown”?
   2. Retrieve the names, addresses and number of books checked out for all borrowers who have more than five books checked out.

2. Create the following table : Item (item-code, item-name, qty-in-stock, reorder-level) Supplier (supplier-code, supplier-name, address) Can-supply(supplier-code, item-code)
   (a) Insert values that to accept the data from the user with appropriate validation checks.
   (b) Write PL/SQL procedure to do the following : Generate a report to list the items whose qty-in-stock is less than or equal to their reorder-levels.

SET 12

1. Student(Name,Studentnumber,Class,Major)
   Course(Coursename,Coursenumber,Credithours,Department)
   Section(SectionIdentifier, Coursenumber, Semester, year, Instructor)
   Grade_report(Studno,sectionIdentifier,Grade)
   Prerequisite(Courseno,Prerequisiteno)
   Create the above database by populating necessary data and execute the following queries.
   1.Retrieve the names of all senior students majoring in 'COSC'(Computer Science)
   2.Retrieve the names of all courses taught by professor King in 2021 and 2020

2. Create the following table : Item (item-code, item-name, qty-in-stock, reorder-level) Supplier (supplier-code, supplier-name, address, status) Can-supply(supplier-code, item-code) (a) Insert values that to accept the data from the user with appropriate validation checks. (b) Write PL/SQL procedure to do the following : Set the status of the supplier to "important" if the supplier can supply more than five items.

SET 13

1. Student(Name,Studentnumber,Class,Major)
   Course(Coursename,Coursenumber,Credithours,Department)
   Section(SectionIdentifier, Coursenumber, Semester, year, Instructor)
   Grade_report(Studno,sectionIdentifier,Grade)
   Prerequisite(Courseno,Prerequisiteno)
   Create the above database by populating necessary data and execute the following queries.
   1.For each section taught by professor king , retrieve the course no, semester,year and number of students who took the section.
   2.Retrieve the name and transcript of each senior student majoring in COSC(computer Science). Transcript includes coursename,course number, credit hours,semester, year, and grade for each course completed by the student.

2. Create the following tables : Item (item-code, item-name, qty-in-stock, reorder-level) Supplier (supplier-code, supplier-name, address, status) Can-supply(supplier-code, item-code)
   (a) Insert values that to accept the data from the user with appropriate validation checks. (b) Write PL/SQL procedure to do the following : Generate a report of those items that are supplied by those suppliers whose status is "important".

SET 14

1. BOOK(Book_id, Title,PublisherName)
   Book_authors(BookId, Authorname)
   Publisher(Name,address,Phoneno)
   Book_copies(Bookid,BranchId,No of Copies)
   Book_loans(Bookid,Branchid,Card no, Date_out,Duedate)
   Library_branch(branchid,Branchname,Address)
   Borrower(Cardno,Name,address,phone)

   Create the above database by populating necessary data and execute the following queries
   1.Retrieve the names of all borrowers who do not have any books checked out.
   2.How many copies of book titled “The lost tribe” are owned by each library branch

2. Create the following tables : Student (roll-no, name, category, district, state) Student –rank (roll-no, marks, rank) (a) Insert values that to accept the data from the user with appropriate validation checks. (b) Write PL/SQL procedure to the following : Generate a report to list of those districts from which the first hundred rankers come from.

SET 15

1. Student(Name,Studentnumber,Class,Major)
   Course(Coursename,Coursenumber,Credithours,Department)
   Section(SectionIdentifier, Coursenumber, Semester, year, Instructor)
   Grade_report(Studno,sectionIdentifier,Grade)
   Prerequisite(Courseno,Prerequisiteno)
   Create the above database by populating necessary data and execute the following queries.
   1. Retrieve the names ad major departments of all straight A students(Students who have a grade in all their courses)
   2. Retrieve the names and major departments of all students who do not have any grade of Ain any of their courses.

2 Create the following tables : Student (roll-no, name, subject-opted) Subject –rank (subject-code, subject-name, faculty-code, specialization) Faculty (faculty-code, faculty-name, specialization) (a) Insert values that to accept the data from the user with appropriate validation checks. (b) Write PL/SQL procedure to the following : Set the status of the subject to "not offered" if the subject is not opted by at least 5 students.

SET 16

1. BOOK(Book_id, Title,PublisherName)
   Book_authors(BookId, Authorname)
   Publisher(Name,address,Phoneno)
   Book_copies(Bookid,BranchId,No of Copies)
   Book_loans(Bookid,Branchid,Card no, Date_out,Duedate)
   Library_branch(branchid,Branchname,Address)
   Borrower(Cardno,Name,address,phone)

   Create the above database by populating necessary data and execute the following queries.
   1. For each library branch, retrieve the branch name and total no of books loaned out from that branch
   2. Retrieve the names, addresses and number of books checked out for all borrowers who have more than five books checked out.

2. Create the following tables : Student (roll-no, name, subject-opted) Subject –rank (subject-code, subject-name, faculty-code, specialization) Faculty (faculty-code, faculty-name, specialization) (a) Insert values that to accept the data from the user with appropriate validation checks. (b) Write PL/SQL procedure to the following : Set the status of the subject to "not offered" if the subject is not offered by any of the faculty members.

SET 17

1. Create the following tables : Student (roll-no, name, subject-opted) Subject –rank (subject-code, subject-name, faculty-code) Faculty (faculty-code, faculty-name, specialization) (a) Insert values that to accept the data from the user with appropriate validation checks. (b) Generate queries to do the following : (i) Find the number of students who have enrolled for the subject "DBMS" (ii) Find all those subjects which are not offered by any faculty members.
2. Write a PL/SQL block to display the last name of manager, and their departments for a particular city, using parameters with a default value in explicit cursor.

SET 18

1. Create the following tables : Student (roll-no, name, subject-opted) Subject –rank (subject-code, subject-name, faculty-code) Faculty (faculty-code, faculty-name, specialization) (a) Insert values that to accept the data from the user with appropriate validation checks. (b) Generate queries to do the following : (i) Find the number of students who have enrolled for the subject "DBMS" (ii) Find all those subjects which are offered by more than one faculty member.
2. Write a program in PL/SQL to create a cursor displays the name and salary of each employee in the EMPLOYEES table whose salary is less than that specified by a passed-in parameter value.

SET 19

1. Create the following tables : Student (roll-no, name, subject-opted) Subject –rank (subject-code, subject-name, faculty-code) Faculty (faculty-code, faculty-name, specialization) (a) Insert values that to accept the data from the user with appropriate validation checks. (b) Generate queries to do the following : (i) Find the number of students who have enrolled for the subject "OS" (ii) Find all those students who opted for more than 5 subjects.
2. Write a PL/SQL program to count number of employees in a specific department and check whether this department have any vacancies or not. If any vacancies, how many vacancies are in that department.

SET 20

1. Create the following tables : Student (roll-no, name, subject-opted) Subject –rank (subject-code, subject-name, faculty-code) Faculty (faculty-code, faculty-name, specialization) (a) Insert values that to accept the data from the user with appropriate validation checks. (b) Generate queries to do the following : (i) Find the number of students who have not enrolled for the subject "DBMS" (ii) Find all those subjects which are offered by more than one faculty member.
2. Write a PL/SQL program to arrange the number of two variable in such a way that the small number will store in num_small variable and large number will store in num_large variable.