

Chit 1

Use MySQL -(Joins and Subqueries)

Create Customer and Account table and add rows shown below

Customer Table

C_Id	Cname	City
1	John	Nashik
2	Seema	Aurangabad
3	Amita	Nagar
4	Rakesh	Pune
5	Samata	Nashik
6	Ankita	Chandwad
7	Bhavika	Pune
8	Deepa	Mumbai
9	Nitin	Nagpur
10	Pooja	Pune

Account Table

C_Id	Acc_Type	Amount
1	Current	5000
2	Saving	20000
3	Saving	70000
4	Saving	50000
6	Current	35000
7	Loan	30000
8	Saving	50000
9	Saving	90000
10	Loan	8000
11	Current	45000

1. Show the cname, Acc_Type, amount information of customer who is having an saving account.
2. Display the data using Natural, left and right join.
3. Display the information of customers living in the same city as of ‘pooja’.
4. Display the information of account, having less amount than average amount throughout the bank.
5. Display the C_id having maximum amount in account.
6. Display the amount and acc_type of those customers whose amount is the minimum amount of that Acc_type.
7. Display the amount of those accounts whose amount is higher than amount of any saving account amount.

Chit 2

Unnamed PL/SQL code block: Use of Control structure and Exception handling is mandatory.

Write a PL/SQL block of code for the following requirements:-

Schema:

1. Borrower(Rollin, Name, DateofIssue, NameofBook, Status)

2. Fine(Roll_no,Date,Amt)

Accept roll_no & name of book from user.

Check the number of days (from date of issue), if days are between 15 to 30 then fine amount will be Rs 5per day.

If no. of days>30, per day fine will be Rs 50 per day & for days less than 30, Rs. 5 per day.

After submitting the book, status will change from I to R.

If condition of fine is true, then details will be stored into fine table.

Chit 3

Unnamed PL/SQL code block: Use of Control structure and Exception handling is mandatory. Write a PL/SQL block of code for the following requirements:-Consider table Stud(Roll, Att, Status) Write a PL/SQL block for following requirement and handle the exceptions. Roll no. of student will be entered by user. Attendance of roll no. entered by user will be checked in Stud table. If attendance is less than 75% then display the message “Term not granted” and set the status in stud table as “D”. Otherwise display message “Term granted” and set the status in stud table as “ND” .

Chit 4

(Perform on MYSQL Terminal)

```
student(S_ID,name,dept_name,tot_cred)
instructor(T_ID,name,dept_name,salary)
course(course_id,title,dept_name,credits)
```

- i. Find the average salary of instructor in those departments where the average salary is more than Rs. 42000/-.
- ii. Increase the salary of each instructor in the computer department by 10%.
- iii. Find the names of instructors whose names are neither ‘Amol’ nor ‘Amit’.
- iv. Find the names of student which contains ‘am’ as its substring.
- v. Find the name of students from computer department that “DBMS” courses they take.

Chit 5

Cursors: (Implicit and Explicit Cursor). Write a PL/SQL block of code using parameterized Cursor, that will merge the data available in the newly created table N_RollCall with the data available in the table O_RollCall. If the data in the first table already exist in the second table then that data should be skipped.

Chit 6

PL/SQL Stored Procedure.

Write a Stored Procedure namely proc_Grade for the categorization of student. If marks scored by students in examination is ≤ 1500 and $\text{marks} \geq 990$ then student will be placed in distinction category if marks scored are between 989 and 900 category is first class, if marks 899 and 825 category is Higher Second Class Write a PL/SQL block for using procedure created with above requirement. Stud_Marks(name, total_marks) Result(Roll,Name, Class).

Chit 7

PL/SQL Stored Function.

Write a Stored Procedure namely proc_Grade for the categorization of student. If marks scored by students in examination is ≤ 1500 and $\text{marks} \geq 990$ then student will be placed in distinction category if marks scored are between 989 and 900 category is first class, if marks 899 and 825 category is Higher Second Class Write a PL/SQL block for using procedure created with above requirement. Stud_Marks(name, total_marks) Result(Roll,Name, Class).

Chit 8

(Perform on MYSQL Terminal)

teaches(T_ID, course_id, sec_id, semester, year)

student(S_ID, name, dept_name, tot_cred)

instructor(T_ID, name, dept_name, salary)

course(course_id, title, dept_name, credits)

- i. Find the names of the instructor in the university who have taught the courses semester wise.
- ii. Create View on single table which retrieves student details.
- iii. Rename the column of table student from dept_name to deptatrmnt_name
- iv. Delete student name whose department is NULL

Chit 9

Collection “orderinfo“ which contains the documents given as below(Perform on Mongo Terminal)

```
{  
    cust_id:123  
    cust_name:"abc",  
    status:"A",  
    price:250  
}
```

- i. find the average price for each customers having status 'A'
- ii. Display the status of the customers whose amount/price lie between 100 and 1000
- iii. Display the customers information without “_id” .
- iv. create a simple index on onderinfo collection and fire the queries.

Chit 10

Use Java and MongoDB

Connectivity with with MongoDB using any Java application. Write Java code for

Institute Database (MongoDB) and perform following operations

1. Create Database.
2. Create Collection
3. Insert document.
4. Display Data.
5. Remove Document
6. Update Document.

Chit 11

Database Trigger (Row level, Before Trigger). Write a database trigger on Library table. The System should keep track of the records that are being updated or deleted. The old value of updated or deleted records should be added in Library_Audit table.

Chit 12

Database Trigger (Row level, After Triggers). Write a database trigger on Library table. The System should keep track of the records that are being updated or deleted. The old value of updated or deleted records should be added in Library_Audit table.

Chit 13

Collection “movies“ which contains the documents given as below(Perform on Mongo Terminal)

```
{  
    name: "Movie1",  
    type: "action",  
    budget:1000000  
    producer:{  
        name: "producer1",  
        address:"PUNE"  
    }  
}
```

- i. Find the name of the movie having budget greater than 1,00,000.
- ii. Find the name of producer who lives in Pune
- iii. Update the type of movie “action” to “horror”
- iv. Find all the documents produced by name “producer1” with their address

Chit 14

Consider following structure for Mongodb collection and write a query for following requirements in Mongodb
Teachers (Tname,dno,Experience,Salary,Data_of_Joining)
Department (Dno,Dname)
Students(Sname,Roll_No,Class)

1. Write a query to create above collection insert some sample documents.
2. Find the information about all teachers of Dno=2 and having salary greater than or equal to 10,000/-
3. Find the student information having Roll_no=2 or Sname='xyz'
4. Update student name whose Roll_No=5
5. Delete all student whose Class is 'FE'
6. Apply index on Students Collection

Chit 15

Use MongoDB

Create Institute Database and Create Student collection

1. RollNo
2. Student Name
3. Age
4. Branch
5. Address : { City, State }
6. Hobbies (Array)

Perform following operations

1. Create database Institute.
2. Create collection Students.
3. Insert 10 documents with above mentioned structure.
4. Display all students' information.
5. Display Student information whose age is greater than 15.
6. Display Student information sorted on name field
7. Update student branch Computer of RollNo 3.
8. Remove document with RollNo 1
9. Display Student information whose name starts with A
10. Display the total numbers of documents available in collection.
11. Display only first 5 documents.
12. Display all documents instead of first 3.
13. Display the name of Students who live in Pune City.
14. Display only Name of all students.
15. Drop Collection

Chit 16

Perform aggregation and Indexing using mongodb on below database

1. Create a database department
2. Create a collection as teacher with fields as name , department ,experience and salary
3. Display the department wise average salary.
4. Display the no. Of employees working in each department.
5. Display the department wise minimum salary.
6. Apply index and drop index

Chit 17

Use MySQL Create Employee table, Project table and add rows shown below

Employee table

Eid	EName	Address	Salary	Commision
1	Amit	Pune	35000	5000
2	Sneha	Pune	25000	
3	Savita	Nasik	28000	2000
4	Pooja	Mumbai	19000	
5	Sagar	Mumbai	25000	3000

Project table

PrNo	Addr
10	Mumbai
20	Pune
30	Jalgoan

1. Find different locations from where employees belong to?
2. What is maximum and minimum salary?
3. Display the content of employee table according to the ascending order of salary amount.
4. Find the name of employee who lived in Nasik or Pune city.
5. Find the name of employees who does not get commission.
6. Change the city of Amit to Nashik.
7. Find the information of employees whose name starts with ‘A’.
8. Find the count of staff from Mumbai.
9. Find the count of staff from each city
10. Find the address from where employees are belonging as well as where projects are going on.
11. Find city wise minimum salary.
12. Find city wise maximum salary having maximum salary greater than 26000
13. Delete the employee who is having salary greater than 30,000.

Chit 18

Collection “city “ which contains the documents given as below(Perform on Mongo Terminal)

```
{
    city:"pune",
    type:"urban",
    state:"MH",
    population:"5600000"
}
```

- using mapreduce, find statewise population
- using mapreduce, find citywise population
- using mapreduce, find typewise population.

Chit 19

Use MySQL

Create a table emp with following fields and constraints

Eno -(Constraint:- primary key and apply sequence starts with 101) ,Ename -(Constraint :- not null)

Address —(Constraint :-default ‘Nashik’) ,Joindate,

After table creation add field - Post in the emp table.

Insert some data in emp table.Create Index on Ename field of employee table.

Create View on employee table to show only Ename and Salary.

Chit 20

Use MongoDB

Indexing

1. Create Collection
2. Insert some Documents
3. Create Single Index,
4. Create Compound Index,
5. Create Unique on Collection
6. Show Index Information
7. Remove Index

Aggregation

Collection creation Student and insert following data in that:

Rollno:1,name:'Navin',subject:'DMSA',marks:78

Rollno:2,name:'anusha',subject:'OSD',marks:75

Rollno:3,name:'ravi',subject:'TOC',marks:69

Rollno:4,name:'veena',subject:'TOC',marks:70

Rollno:5,name:'Pravini',subject:'OSD',marks:80

Rollno:6,name: 'Reena',subject: 'DMSA',marks:50

Rollno:7,name:'Geeta',subject:'CN',marks:90

Rollno:8,name:'Akash',subject:'CN',marks:85

1. Write aggregate function to find Max marks of Each Subject.
2. Write aggregate function to find Min marks of Each Subject.
3. Write aggregate function to find Sum of marks of Each Subject.
4. Write aggregate function to find Avg marks of Each Subject.
5. Write aggregate function to find first record Each Subject.
6. Write aggregate function to find Last record of Each Subject.
7. Write aggregate function to find count number of records of each subject
8. Write aggregate function to find count number of records of each subject

Chit 21

Collection “orderinfo“ which contains the documents given as below(Perform on Mongo Terminal)

```
{
```

```
    cust_id:123
    cust_name:"abc",
    status:"A",
    price:250
```

```
}
```

- i. Add “Age” field to the orderinfo collection
- ii. Create the complex index on orderinfo collection and fire the queries and drop the duplicates.
- iii. Display the average price for each customer group by status
- iv. Change the customer’s name whose status is “B”

Chit 22:

Collection “orderinfo“ which contains the documents given as below(Perform on Mongo Terminal)

```
{
    cust_id:123
    cust_name:"abc",
    status:"A",
    price:250
}
```

- i. Display the name of the customer having the price between 250 and 450
- ii. Increment the price by 10 for cust_id: 123 and decrement the price by 5 for cust_id: 124
- iii. Remove any one of the field from the orderinfo collection.
- iv. Find the name of the customer whose status is either A or price is 250 or both.

Chit 23:

Using MySQL and JAVA connectivity (Two Tier) perform the following queries

- i. Create a table of employee details , Employee(SSN, Ename,state, salary)
- ii. Insert Records into Employee table
- iii. Retrieve the details based on Social Security Number(SSN).
- iv. Update the employee state from 'MH' to 'TN'
- v. Delete all the employees from 'Gujrat'

Chit 24:

(Perform on MYSQL Terminal)

Emp(emp_id,ename, street, city)

works(emp_id,c_id,ename, cname, sal)

Company(c_id,cname, city)

Manager(mgr_id, mgrname)

- i. Modify the database so that a particular company (eg. ABC) now in Pune
- ii. Give all managers of Mbank a 10% raise. If salary is >20,000, give only 3% raise.
- iii. Find out the names of all the employees who works in ‘Bosch’ company in city Pune
- iv. Delete all records in the works table for employees of a particular company (Eg, SBC Company) whose salary>50,000.

Chit 25:

(Perform on MYSQL Terminal)

Empl(e_no, e_name, post, pay_rate)

Position(pos_no, post)

Duty-alloc (pos_no, e_no, month,year, shift)

Implement the following SQL queries

- i. Get duty allocation details for e_no 123 for the first shift in the month of April 2003
- ii. Get the employees whose rate of pay is > or equal rate of pay of employees 'Sachin'.
- iii. Create a view for displaying minimum, maximum and average salary for all the posts.
- iv. Get count of different employees on each shift having post 'manager'.