



**MAHARASHTRA STATE
BOARD OF TECHNICAL EDUCATION**

Certificate

This is to certify that Mr. / Ms. Savant.... Omkar.... Viththal.....
Roll No. 45....., of Third Semester of Diploma in
..... Computer..... Technology..... of Institute,
..... M.U.P's.... Rajarshi.... Shah... Maharaj.... Polytechnic..
(Code: ...1.002...) has completed the term work satisfactorily in course
Database Management System (22319) for the academic year 20.2.0. to
20.2.1.. as prescribed in the curriculum.

Place: Nasik.

Enrollment No.: 1910020362

Date: 11/02/21.

Exam. Seat No: 240630..

Subject Teacher

Head of the Department

Principal

Seal of
Institution

Date _____

1. Write Ms Access

Code to Create database,
table and Modify table

* Resources Used

S.No.	Name of Resource	Specification
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1	Computer with broad specification	Dual-Core, RAM-6 GB HDD-500 GB
2	Software	MS Access
3	Any other resource used	—

* Result :

- i] Created a Database table
- ii] Created Database using MS Access
- iii] Created a Table
- iv] Modified a table

* Practical Related Questions

- 1] Name the types of GUI databases available in your laboratory.
 → Available GUI databases:

- i] MySQL
- ii] Valentina Studio
- iii] Oracle
- iv] Sequel Pro

Date: / /

Date: / /

- 2) Write steps procedure for creating table in a database
- i) Click File → New, and then select Blank desktop database.
 - ii) In the File Name box, type a file name for the new database.
 - iii) To browse to a different location and save the database, click the folder icon.
 - iv) Click Create.
- Database opens with Table created in it.
- 3) Name Open-Source SQL database management System.

- i] MySQL
- ii] Cubrid
- iii] SQLite
- iv] PostgreSQL
- v] MariaDB
- vi] firebirdSQL
- vii] Apache Cassandra
- viii] CouchDB

★ Exercise:

- i] Create 'Student' database and save document.
- ii] Open MS-Access
- iii] On File tab, click New and then click Blank Database.
- iv] Type 'Student', click browse to change or select a location to put your database.
- v] Click OK
- vi] Click Create
- vii] Click File option and select 'Save' option

Database 'Student' is created.

- Saathi
- Date / /
- 2] Create 'Employee' database and Save it.
- i) Open MS-Access.
- ii) Type 'Employee' in file name box
Click browse to select location of file.
- iii) Click Create
- iv) Click on ^{file} options and Select Save option.
- Database is created and saved.
- 3] Create Multiple tables in Employee and rename it.
- i) Open MS-Access.
- ii) Click on Open and open Employee table.
- iii) Go to Create Tab, in the tables group, Click table
- iv) A new table is inserted
- v) Double click on table to rename it.
- Saathi
- Date / /
- 4] Create Multiple tables in database for 'Student' database.
- i) Open MS Access.
- ii) Click on Open and open Student database.
- iii) Go to Create tab, in the tables group, Click table.
- iv) Inserted Multiple table.
- 5] View the multiple tables in 'Student' database.
- i) Open MS Access
- ii) Click on Open and open Student database.
- iii) You can view all tables.

Date: / /

* Assessment Scheme:

List of Student Team Members

1. Omkar Savant
2. Arjun Jadhav
3. Sushant Solase
4. Om Shimpi

Marks Obtained			Dated Signature of Teacher
Process	Product	Total	
Related (15)	Related (16)	(25)	

(Saathi)

Date: / /

2. Write MS Access Code

To apply given validation on table and set error message, set default value for column, set and remove database password.

(Saathi)

* Resources Used:

S. No.	Name of Resource	Specification
1	Computer System with broad specification	Dual Core, RAM- 6 GB HDD- 500 GB
2	Software	MS Access
3	Any other resource used	—

* Result:

- i] Apply given validation on table and set error message.
- ii] Set default value of column
- iii] Set and remove database password.

* Practical Related Questions:

- 1] Set a default date value in a text box when the user adds a new record.
→
- 2] Open database.

Date / /

Saathi

- 2] Under Field Properties at the Bottom of the design view, on the General tab, Click in the Default Value property box and then type Now() or Date().
- 3] Click the Show date picker property box, and then select Never from list.
- 4] Save your changes, and then close the table.
- 2] What is the use of Validation Rule and Validation Text.
→
 - i] Validation rule is a field property used to specify and define conditions that limit values that can be entered in particular field.
 - ii] Validation text is a message that is displayed when data entered in that field does not conform the validation rule or it is violated.

Date / /

Saathi

* Exercise :

- 1] Create a Validation rule for a field that allows only values over 65 to be entered. If a number less than 65 is entered, a message is displayed.
→
 - 1] Open table for which you want to validate record.
 - 2] On the Field tab, in the Field Validation group, Click validation, and then Click 'Record validation rule'.
 - 3] Use Expression Builder to create rule.
 - 4] Set `value >= 65`. Click on save.
 - 5] On Field tab, in the Field Validation group, Click Validation, and then Click 'Field Validation Message'.
 - 6] Set message.
 - 7] Save and close.

Date / /

Saathi

- 2] Set Course name as a default value in a text box when the user adds a new record.
→
 - 1] Open your Database
 - 2] In navigation pane, right-click the form that you want to change, and then click Design View.
 - 3] Right click the control that you want to change, and then click Properties.
 - 4] Click the All tab in property sheet, locate the default value property, and then enter default value.
 - 5] Press Ctrl+S to save changes.

Date / /

Saathi

- 3] Create a Validation rule for a PARENT MOBILE NO field that allows only value that consist of 10 Number Value. "Mobile No must consist of 10 numbers" this message is displayed if value doesn't conform to rule.
→
 - 1] Select Field.
 - 2] On Field tab, click validation and then click Record Validation Rule.
 - 3] Use Expression Builder to create rule.
 - 4] Set PARENT MOBILE NO = 10, and Save.
 - 5] On Field tab, click validation and then click of Field Validation Message.
 - 6] Set message as "Mobile Number must consist of 10 number".
 - 7] Hit save and close the database.

Page No. []

Page No. []

Date ___/___/___

4] Set a database-level password on a database.

→ 1] Open or Create Database.

2] Under Tools menu, select Security > set database password.

3] When Set Database Password Window appears enter password twice and click OK button.

4] Password has been set.

5] Remove a database-level password from a database.

→ 1] Open or Create database.

2] Under tools menu, select Security > Unset Database password.

3] When Unset Database Password Window appear, enter your password and click OK button.

4) Password has been removed.

Date ___/___/___

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* Assessment Scheme:

List of student Team Member:

1. Omkar Savant
2. Arjun Jadhav
3. Om Shimpri
4. Sushanta Solase

Marks Obtained	Dated Signature of Teacher	
Process Related (15)	Product Related (10)	Total (25)

Date / /

3. Design ER Diagram and Normalize Database

* Resources Used:

S.no.	Name of Resource	Specification
1	Computer System with specifications	Dual Core, 8 GB RAM HDD - 500 GB
2	Software	—
3	Any other Resources Used	—

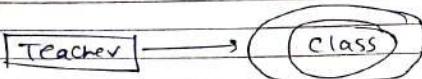
* Result:

- i] Designed ER Diagram
- ii] Created Normalized Database on given data

* Practical Related Questions:

- 1] Draw notations For Multivalued and Derived Attribute.

Multivalued Attribute: Double Oval



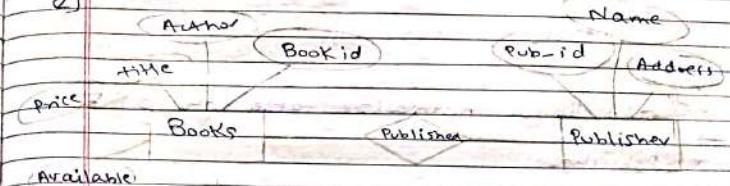
Page No. []

Date / /

Derived Attribute : Dotted oval

Radius → diameter

2]



Available

Due date

Borrow

Renew date

Issue

Email Id

Issue date

Student

Branch

Name

Phone no.

Address

Pub id

Author

Title

Price

Available

Due date

Borrow

Renew date

Issue

Email Id

Issue date

Student

Branch

Name

Phone no.

Address

Pub id

Author

Title

Price

Available

Due date

Borrow

Renew date

Issue

Email Id

Issue date

Student

Branch

Name

Phone no.

Address

Pub id

Author

Title

Price

Available

Due date

Borrow

Renew date

Issue

Email Id

Issue date

Student

Branch

Name

Phone no.

Address

Pub id

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Due date

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Renew date

Issue

Email Id

Issue date

Student

Branch

Name

Phone no.

Address

Pub id

Author

Title

Price

Available

Due date

Borrow

Renew date

Issue

Email Id

Issue date

Student

Branch

Name

Phone no.

Address

Pub id

Author

Title

Price

Available

Due date

Borrow

Renew date

Issue

Email Id

Issue date

Student

Branch

Name

Phone no.

Address

Pub id

Author

Title

Price

Available

Due date

Borrow

Renew date

Issue

Email Id

Issue date

Student

Branch

Name

Page No. []

Page No. []

Date ___ / ___ / ___

(Saathi)

i) Identify Multivalued Attribute

→ Books, ~~Publisher~~ Publisher, ~~Student~~ Student

ii) Identify Primary Key and Foreign Key,
Book_id, Pub_id, Stud_id

3) Consider the database of above figure
and Draw normalize table upto 3NF

→

Publisher:

Pub_id	Primary Key
Name	
Address	
Book_id	Foreign Key ref to books
Stud_id	Foreign Key ref to student

Books:

Book_id	Primary Key
Author	
Title	

Date ___ / ___ / ___

(Saathi)

Price

Available

Stud_id Foreign Key ref to student

Pub_id Foreign Key ref to Publisher

student:

Stud_id	Primary Key
Name	
Return date	
Branch	
Issue date	
Email Id	
Pub_id	Foreign Key ref to Publisher
Book_id	Foreign Key ref to books

Page No. []

Page No. []

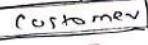
An entity that is
not explicitly identified independent of any other
entity in a schema.

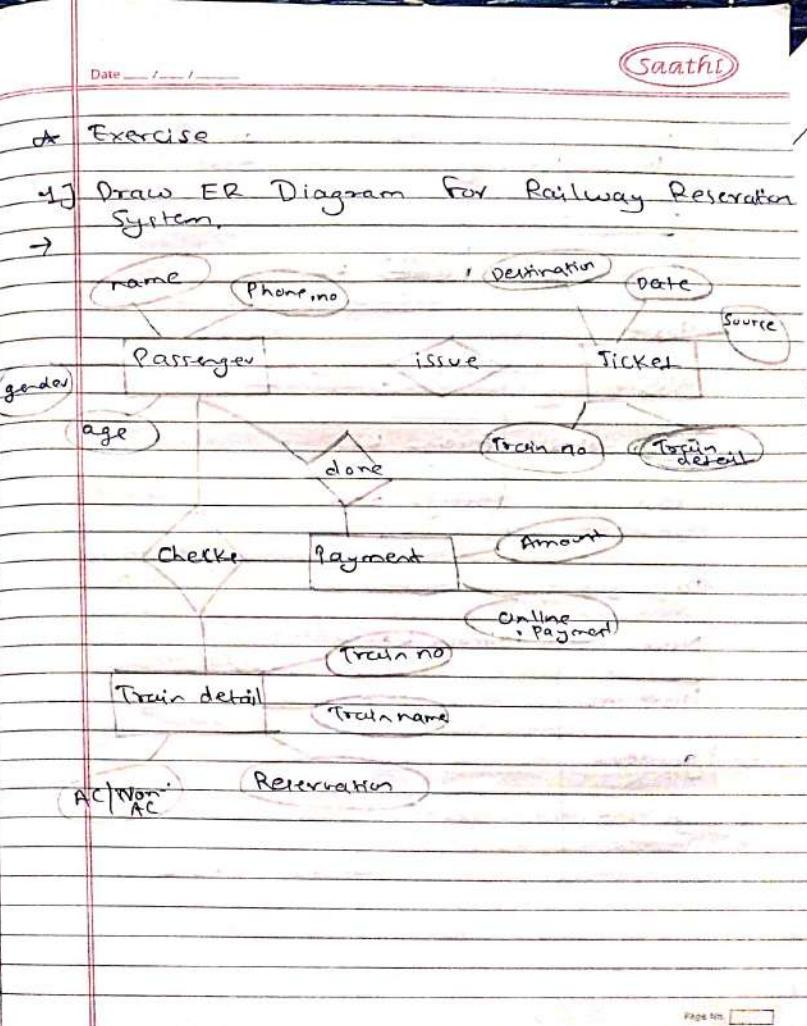
Always depend on a strong enemy	Does not depend on another entity
------------------------------------	--------------------------------------

denoted by a double ticked word denoted by a single tick.

reading
Does not have any key
Has all key attribute
attribute or ist

四

★ Theory related Questions:	
1) Draw notations for strong and weak entity.	→
Strong Entity ← 	
weak Entity ← 	
2) Difference between strong & weak entity.	
Weak Entity	Strong Entity
An entity that cannot be uniquely identified by its attribute alone.	An entity that is independent of any other entity in a schema.
Always depend on a Strong entity	Does not depend on another entity
Denoted by a double rectangle	Denoted by a single rectangle
Does not have any Key attribute on its own	Has a Key attribute



Date / /

2) Normalize the database of Railway Reservation System upto 3NF.

→ Ticket :

Destination	Primary Key
Date	
Same	
Train detail	Foreign Key
Train no	Foreign Key

Passenger :

Name	Primary Key
Phone no	
gender	
age	

(Saathi)

Date / /

Train detail:

Train name	Primary Key
Reservation	
AC / Non-AC	
Train no	Foreign Key

Payment:

Amount	Primary Key
Online Payment	

→ Assessment Scheme

List of Student Members:

1. Omkar Savant
2. Arjun Jadhav
3. Sujan Solare
4. OM shimp

Marks obtained

Process Related (15)	Product Related (10)	Total (25)

Dated signature
of teacher.

Page No. □

Page No. □

Date _____ / _____ / _____

**4. Execute SQL Queries
based on DML Commands**

(Saathi)

*** Resources Used:**

S. No.	Name of Resource	specifications
1	Computer with broad specification	dual-core, 8GB RAM 500 GB HDD
2	Software	MySQL
3	Any other resource	—

*** Result:**

- i] Write and Execute SQL queries for creating and altering table structure with all integrity constraints.
- ii] Write and Execute SQL queries for changing the structure of table.
- iii] Write and Execute SQL queries for removing the structure of table and renaming table.

*** Practical Related Questions**

- 1]. Create a table EMPLOYEE. in following with Schema:

Emp(Emp_no, E_name, Dept_no, Dept_name,
Job_id, Sal, age)

Create table Emp (Emp_no int(120), Dept_no
int(200), Dept_name varchar(100),
Job_id int(200), Salary int(10000))

- 2] Create a table EMPLOYEE and DEPARTMENT with following schema by applying Primary Key and Foreign Key:

Emp (empno as primary key, empname, salary, phno)
Dept (deptno as primary key, empno Foreign Key, dept
name, location)

→ i] Emp

Create table Emp (Empno int(100), empname varchar(100),
salary float(10000), phno int(10))

ii] Dept

Create table

Dept (deptno int(100),
empno int(100),
deptname varchar(100),
location varchar(100);
)

Date / /

(Saathi)

Theory Questions:

i] List DDL Commands with Syntax.

ii] Create :

Create table tablename (col1 name datatype (size), col2 name datatype (size), ...);

iii) Drop :

Drop table tablename;

iv) Alter :-

Alter table tablename

v) Rename :

Rename table tablename to newname.

vi) Truncate :

Truncate table tablename;

vii) Describe :

Describe table tablename;

Date / /

(Saathi)

2] Use of Describe Command.

The

- i] The describe command enable you to describe objects recursively to the depth level set in the set describe.
- ii] You can also display the line number and indentation of the attribute or column name when an object contains multiple object type.

3] Analyze the difference between drop and Truncate.

Drop

Truncate

It is used to remove It is used to delete table definition and all the rows from table its content.

In it the view of table While here, view of table doesn't exist doesn't exist.

It is quick to perform while this command but gives rise to is faster than complications Drop.

Saathi

Exercise :-

- Exercise:

1] Create table for std using attributes Rollno, Stdname, percentage. Apply primary key for Roll no and check constraint on percentage should not greater than 100.

→ Create table stud (Rollno int Primary Key,
int(100), Not Null; the stud name varchar(100),
Percentage int Not Null check
(percentage < 100))

- 2] Change the std1 table structure by adding column city.

create table stock

Rollno int primary Key,
Sbjd name varchar(200),
Percentage int Not null check
check (percentage < 100)

Alter table add column City varchar(100)

- 3) Increase the size by 10 of Studname column.

Alley table sand

Alter column ~~stud~~ studname (110);

Page No.

Date ___ / ___ / ___

- Q] Write output of following.

a) Create table passenger_details(passenger_name varchar2(30),
toin_details varchar2(30), travelling_date
varchar2(30), birthdate varchar2(30);

Passenger name	train details	travelling date	birthdate
----------------	---------------	-----------------	-----------

- b) Alter Table passenger detail add column
TicketCost int(100);

Passenger name	train detail	travelling date	birth date	Ticket Cost
----------------	--------------	-----------------	------------	-------------

* Assessment Scheme:

			Dated _____ Signature of Teacher _____
Process	Process	Total (25)	
Related (15)	Related (10)		

Date / / 5. Execute DML Command in SQL. (Saathi)

* Resources Used:

S.No.	Name of Resource	Specifications
1	Computer System with Specifications	Dual-core, 6gb Ram 500gb Hdd
2	Software	MySQL
3	Any other resource	—

* Result :

- i] Creating a Database
- ii] Insert single or multiple rows in table
- iii] Update single or multiple rows of table
- iv] Delete single and multiple rows of table.

* Practical Related Questions:

- 1] Create a table EMPLOYEE with following schema:

→ Emp(Emp_no, E-name, Dept_no, Dept_name,
Job_id, Salary, hiredate)

Create table Emp(

Emp_no int(100),
Dept_no int(100),
Dept_name varchar2(100)

Page No.

Date / /

(Saathi)

Job_id int(100)
Salary int(10000)
hiredate ~~int~~ date(100)

→ i] Insert multiple rows in the above table Emp using Single Insert Command in SQL

Insert into Emp (
table_1 int(100);
table_2 int(100);
table_3 int(100);
table_4 int(100);
)

3] Execute the following query, during the error and write output:

a] Insert into

Emp(Emp_no, E-name, Dept_no, Dept_name,
Job_id, Salary, hiredate)
Values (1, 'Shreyas', 100, 'Sales', 111, 4000,
'28-09-2014');

b] Delete Emp where E-name = Shreyas;

c] Update set salary = 50000 where dept no = production.

d] Select * from ~~Sal~~ where salary >= 5000 and
<= 6000

Page No.

Date ___ / ___ / ___

a)

Errors:

- i) Missing quotations in Values & Salaries.

Correction:

- i) Added double quotations on Salaries.

Output:

Emp_no	E-name	Dept_no	Dept_name	Job_id	Salary	Hiredate
1	Shreyas	100	Sales	111	40000	28-09-2011

b)

Errors:

- i) Missing From statement.

Correction:

- i) Added From quotation.

Emp_no	E-name	Dept_no	Dept_name	Job_id	Salary	Hiredate
1	Null	100	Sales	111	40000	28-09-2011

(Saathi)

Date ___ / ___ / ___

c)

Errors:

- i) No such dept no as text query.

Correction:

- i) Set dept_no as integer value.

Output:

Emp_no	E-name	Dept_no	Dept_name	Job_id	Salary	Hiredate
1	Null	100	Sales	111	50000	28-09-2011

d)

Errors:

- i) Syntax error: No table mentioned.

Correction:

- i) Select * from emp where salary >= 25000 and <= 60000

Output:

Emp_no	E-name	Dept_no	Dept_name	Job_id	Salary	Hiredate
1	Null	100	Sales	111	50000	28-09-2011

Page No. _____

Page No. _____

Date: / /

Theory questions:

- 1] Analyze the difference between drop & delete

Drop Delete

Drop can remove entire Schema, table, domain from database or an tuple from a table.

Delete is Data Definition Language Command

No clause can be used along with Drop

Where clause can be used with Delete

Actions cannot be rollback Actions can be roll-backed

- 2] How to delete Multiple table.

Delete top (10)
from Emp;

// This will delete top 10 records from table.

- 3] Mention True/False. Justify. After drop, the structure of database remain same.

→ False. After 'drop table' the structure of database does not remain same.

Saathi

Date: / /

Saathi

* Exercise:

- 1] Create table Employee with following schema:

Emp (Emp_no, F_name, Dept_no, Dept_name, Job_id, salary, hiredate)

Write SQL queries for following questions:

- a] Insert at least 5 rows in the table,

→
Insert into Emp
table1 int (10),
table2 varchar (10),
table3 int (10),
table4 int (10),
table5 varchar (10),
)

- b] Display all the information of Emp table.

→
Select * From Emp

- c] Display the information of employee working in department Production and salary above 40000.

→
Select * From Emp where Dept_name = 'Production' and salary > 40000;

Page No: []

Page No: []

Date _____

(Saathi)

- a) Update the salary of employee to 30000 working in department Sales.
- Update from Emp where deptname = 'Sales' and Salary = 30000;
- b) Delete the employee working in Sales department having salary below 10000.
- Delete from Emp where dept_name = 'Sales' and Salary < 10000;
- c) Display the complete record of employees working in Sales Department.
- Select * from Emp where deptname = 'Sales';
- d) Create a table Employee and Department with following schema by applying Primary Key and Foreign Key:
- Emp (empno, empname, Salary, photo)
- Dept (deptno, deptname, location, jobid)
- e) Insert 5 rows in both tables.
-
- Insert into Emp
- C
- table 1 varchar2(100),
 table 2 varchar2(100),
 table 3 varchar2(100),
 table 4 varchar2(100),

Page No.

Date _____

(Saathi)

Tables created (100)

Insert into
Dept C

table 1 varchar2(100);
 table 2 varchar2(100);
 table 3 varchar2(100);
 table 4 varchar2(100);
 table 5 varchar2(100);

b) Display information of bus info.

Select * from Emp
 Select * from Dept

c) Update degree of employee to year to 201.

Update from Emp where empname = 'Morgan' and dept_no = 201;

d) Delete the information of employees belonging to department.

→ Delete from Emp where primary key = Dept.

e) Display the information of Emp and Dept and analyze difference.

→
 Select * from Emp
 Select * from Dept

Date / / Assessment Scheme:

Dated Signature
of Teacher

Process	Total (25)
Related (15)	Related (10)

(Saathi)

Date / / 6. Execute SQL Queries
(Saathi)
Using Arithmetic, Comparison, Logical
Set, between and Like Operator.

* Resources Used :

S. No.	Name of Resource	Specification
1	Computer System with specification	Dual-core, 6gb RAM 500 gb HDD
2	Software	MySQL
3	Any other resource	—

* Result :

Write Queries using following operators:

- i] Arithmetic Operator
- ii] Comparison Operator
- iii] Logical Operator
- iv] Set Operator
- v] Between and Like Operator

* Practical Related Questions:

- 1] Consider the table EMPLOYEE
Emp (Emp_no, E_name, Dept_no, Dept_name, Job_id,
Salary, hiredate).
Execute and write output of the following
queries.

Date / /

a) Select E-name, Emp-no From Emp where
Salary ≤ 50000 and ≥ 25000 ;

E-name	Emp-no	Salary
Rahul	105	30000
Rajesh	108	40000

b) Select details of employees having salary
more than Ashish Salary;

Emp-no	E-name	Dept-no	Dept-name	Job-id	Salary
105	Rahul	201	EFG	568	30000
108	Rajesh	201	EFG	571	40000

c) Select * from Emp where Dept-no < 801

Emp-no	E-name	Dept-no	Dept-name	Job-id	Salary
105	Rahul	201	EFG	568	30000
108	Rajesh	201	EFG	571	40000

Page No. []

Date / /

2] Consider the table EMPLOYEE and DEPARTMENT
Emp (Emp-no, E-name, Dept-no, Dept-name,
Job-id, Salary)
Dept (E-name, Dept-no, Location, Job-id);
Execute and write output.

i) Select * from Emp union Select * from Dept.

Emp.no	E-name	Dept.no	Dept.name	Jobid	Salary
105	Rahul	201	EFG	568	30000
108	Rajesh	201	EFG	571	40000

ii) Select * from EMP intersect Select * from
Dept.

E-name	Dept.no	Job_id
105 Rahul	201	abc
108 Rajesh	201	def
100 Ashish	201	ghi

Page No. []

Date / /

iii] Select * From EMP minus Select
* From Dept.

Emp_no	Dept_name	Salary
105	EFF	30000
108	EFF	40000
110	EFF	20000

iv] Select * From EMP where Salary Emp_no
between 100 and 200;

EMP_no	Salary
105	30000
108	40000
110	20000

Saathi

Date / /

Theory Questions:

i] What is use of SET operator.
Set operators are used to joint the result of two or more select statement.

ii] Syntax of if Between ij Not Between
ij Like ij Not like ij In

iii] Select column_name
From table_name
Where column_name Between value1 AND
value2

iv] Select column_name
From table_name
Where column_name Not Between value1 AND
value2

v] Select column_name
From table_name
Where column_name Like pattern

vi] Select column_name
From table_name
Where column_name Not like pattern

vii] Select column_name
From table_name
Where column_name In (Select Statement)

Page No. []

Page No. []

3] Difference in Union & Union All.

Union

Union All

A SQL Command that A SQL Command that
Combined result of two Combined result of two
Select Statement without select Statement with
any duplicate rows duplicate rows.

Give the result without duplicate rows gives result with
duplicate rows

* Exercise:

1] Write Queries for the following.

a) Display the names of employees who does
not work under any job_id = 2.
→ Select * from emp where job_id < 2

b) Display name of all employees whose name
is exactly 6 character long.
→ Select * from emp where E-name =
Like '_____o' ;

c) List all employees information except
job_id = 2 and job_id > 3.
→ Select * from emp where job_id > 3 And
job_id < 2.

d) List all employee's name and salary whose
Salary is not in range of 20000 to
35000.

→ Select * from emp where salary
between 20000 and 35000.

e) List common E-name from Emp and
Dept table.

Select * from Emp
Intersect
Select * from Dept.

f) Execute and write output of the following
queries:

→ a) select * from Emp where Salary > 40000 And
Dept. name = 'Sales';
→

Emp_no	E-name	Deptname	Dept-name	Jobid	Salary
103	Rohit	PD-3	Sales	Xyz	50000

Date / /

Saathi

b) Select * from EMP where NOT (Dept_name
= 'Sales');

Emp-no	F-name	Dept-no	Dept_name	Job-id	Salary
105	Pahul	201	EFG	abc	30000
108	Rajesh	201	EFG	def	40000
110	Ashish	201	ZFG	ghi	20000

c) Select * from where F-name like 'S%';

Emp-no	F-name	Dept-no	Dept_name	Job-id	Salary
112	Sohil	205	JKL	cde	10000
115	Sneha	205	JKL	efg	25000

d) Select * from Emp where F-name like 'A%';

Emp-no	F-name	Dept-no	Dept_name	Job-id	Salary
110	Ashish	201	EFG	ghi	20000

Date / /

Saathi

Assessment Scheme:

Relaxed (15) Relaxed (10)

Total (25)

Dated Signature
of Teacher.

List of Team member:

1. Omkar Savant
2. Pushpak Wani
3. Ajum Jadhav.

Date / / **7. Execute SQL Queries** Saath!
 Using String, Arithmetic, Date and
 Time, Aggregate function

* Resources Used:

S.No.	Name of Resource	Specifications
1	Computer System with Specifications	Dual-Core, 6 GB RAM 500 GB HDD
2	Software	MySQL
3	Any Resources	—

* Result:

Write queries using following functions:

- a) String
- b) Arithmetic
- c) Date and time
- d) Aggregate function.

* Practical Related Questions:

1] Write output of the following queries.

a) Select abs(-15) from dual;
 → 15

b) Select exp(4) from dual;
 → 54.59815

c) Select power(4,2) from dual;
 → 16

d) Select mod(10,3) from dual;
 → 1

e) Select sqrt(16) from dual;
 → 4

2] Write Output of following queries.

a) Select concat('Shreyas', 'NBA') from dual;
 → Shreyas NBA

b) Select trim('Shreyasss', 's') from dual;
 → Shreyasss

c) Select ltrim('Shreyasss', 's') from dual;
 → Shreyass

d) Select lower ('SALES') from dual;
 → Sales

3] Write Output of the following queries:

a) Select systime from dual;
 → 03-Dec-20

b) Select next_day('SYSDATE', 'Thur') from dual;
 → 04-Dec-20

Date / /

(Saathi)

c) Select add_months (sysdate, 2) From dual.
→ 08-Feb-21

d) Select last_day (sysdate) From dual.
→ 31-Dec-20

Theory Questions:

1) Use of format() with Syntax 4 example

i) The format() function formats a value with the specified format.

ii) Syntax:

FORMAT (value, format, [culture])

iii) examples

Select Format (123456789, '###-##-####');

2) Use of months_between Function with Syntax and example.

i) The months_between function returns the number of months between two dates.

ii) Syntax:

Select months_between (d1, d2) .

Date / /

(Saathi)

iii) example:

Select months_between ('11-Sep-20', '02-Feb-21') From dual.

→ Example Exercise.:

1) Write SQL queries for the following.

a) Display information of employees whose salary is greater than average salary of all employees.

→ Select * from emp where salary > avg(salary) From emp.

b) Display maximum and minimum salary of employee.

→ select max(salary) from emp and select min(salary) from emp.

c) Display total employees in sales department.

→ Select * from emp where dept_name='Sales' and count(E_name) from emp.

d) Display the difference in joining date of employees Ashish - and Shreyas.

→ Select months_between ('11-Oct-20', '02-May-21') From dual.

Saathi

Saathi

- 2] Write Output of the following queries.
- select upper('production') From dual.
→ PRODUCTION
 - select length('sales') From dual;
→ 5
 - Select substr('production sales', 3, 4) From dual.
→ oduc
 - Select instr('production ',' ', 3, 2) From dual
→ production.
 - select greatest('10-jan-07', '12-oct-07') From dual
→ 12-oct-07
 - Select dateadd('2016-01-01', interval 1 day) From dual.
→ 2016-01-02
 - Select datediff('2015-07-01', '2015-07-19') From dual
→ 18 days.

Assessment Scheme.:

List of students:

1. Anyraav Savant
2. Pushpok Wari
3. Atharva Patil.

Dated Signature of Teacher		
Process	Product	Total (25)
Related (15)	Related (10)	

Date _____ / _____ / _____ 8. Execute Queries Using
the Select Command with where,
having, Group by and Order by.

(Saathi)

* Resource Used:

S.No.	Name of Resource	Specification
1	Computer System with Speciation	Dual-Core, 6GB RAM, 500 GB HDD
2	Software	MySQL
3	Any other	-

* Result :

Write Queries using following clauses.

- a) Group by
- b) Having and order by

* Practical Related Question:

1) Select empno, sum(salary) from Emp e,
Dept d where e.empno=d.empno
group by deptno;

Emp No	Deptno	Salary
103	201	30000
105	201	40000

Date _____ / _____ / _____ 2) Explain order by clause (asc/desc) with suitable example.

i) Asc:-

Select Count (Customer ID), Country
From Customer
Group by Country
Order by Count (Customer ID) ASC;

ii) Desc:-

Select Count (Customer ID), Country
From Customer
Group by Country
Order by Count (Customer ID) DESC;

3) Write Query of the following.

a) Display minimum salary of employee from every department.

Select Emp Salary
From Emp
where salary Min(salary)
Group by Salary
Order by Emp

b) Display Total salary of every department.

Query : SELECT

Dept_name

Sum(Salary)

Group by Dept_name

c) Display details of employees with the

Employee name in increasing order

Select (Name, Department),

From Emp

Order by Name

By Ascending Order

d) Employee

e) Display sal greater than 50000.

f) Display total salary for each job category.

g) Display total salary

for each salary

From Emp

Where Job_Salary

h) Display lowest paid employee details under

Each department.

SELECT * Salary

From Emp

Where Min(Salary)

Dept_name	Perce	Perce	Total (Rs)
IT	100000	100000	100000

Date / /

Saathi

b) Display Total Salary of every department.

→ Select Salary
From Emp
Where Max(Salary)
Group by emp;

c) Display details of employees with the Employee name in ascending order.

→ Select Count(E-name),
From Emp
Group by E-name
Order by Count(E-name) Asc;

* Exercise

1] Write SQL queries for following.

a) Display total salary for each job category.

→ Select Salary
From Emp
Where Max(Salary)

b) Display lowest paid employee details under each department.

→ Select * Salary
From Emp
Where Min(Salary)

Date / /

Saathi

c) Display number of employees working.

→ Select Count(Emp-name)
From Emp
Where dept-no = 201

d) Display detail of employee with salary more than 60000.

→ Select * From Emp
Where Salary > 60000.

e) List employees in ascending order.

→ Select Count(E-name)
From Emp
Order by Count(E-name) Asc;

* Assessment Scheme:

1. Omkar Sawant
2. Arjun Jathau
3. Atharva Raut.

Dated signature
of Teacher

Process	Product	Total (25)
Related (15)	Related (10)	

Date / /

Q. Write Query Using Inner
and Outer Join.

(Saathi)

* Resources Used:

S.No.	Name of Resource	Specifications
1	Computer System with Specification	Dual-core, 6 GB RAM 500 GB HDD
2	Software	MySQL
3	Any other resource	—

Date / /

2) Select * From emp Left Outer Join dept on
(emp.deptno = dept.deptno),

E-no	E-name
102	Joseph
103	Jonathan
104	Eren

3) Select * From emp Right Outer Join dept
on (emp.deptno = dept.deptno),

Dept_no	Dept_name	Salary
201	EFG	40000
201	EFG	30000
301	JKF	50000

E-no	E-name	Dept_no	Dept_name	Salary
102	Joseph	201	EFG	40000
103	Jonathan	201	EFG	30000

Page No. []

Page No. []

Saathi

Date: / /

Q4] Select * from Emp full outer join
dept on (emp.dept_no = dept.deptno);
→

Emp.no	E-name	Dept.no	Dept.name	Salary
102	Joseph	201	EEG	10000
103	Jonathan	201	EEG	30000
104	Eren	301	JKF	50000

→ Exercise:

1] Perform RIGHT Join on EMP and Dept Table

→ Select * From EMP
RIGHT OUTER JOIN
dept on
emp.dept_no = dept.deptno);

2] Perform LEFT Join on EMP and Dept Table

→ Select * From Emp
left Outer Join
dept on
(emp.dept_no = dept.deptno);

Page No. []

Date: / /

3] Perform Inner Join on EMP and Dept table.

→ Select Emp.E-no, Dept.D-no
From Emp
Inner Join Dept
ON
Emp.E-no = Dept.E-no.

4] Cross Join with suitable example

→ i) The cross join is used to generate a paired combination of each row of first table with each row of second table.

ii) Example:

Select * From Meals
Cross Join drinks

→ Assessment Scheme:

1. Omkar Savant
2. Anjali Tadkar
3. Alpana Rach

Process	Product	Total (25)
Related (15)	Related (10)	

Pated signature of
Teacher

Page No. []

Date / /

10. Create and Modify View

(Saathi)

* Resources used:

S.No.	Name of Resource	Specifications
1	Computer System with specification	Dual-Core, 6GB RAM 500 GB HDD
2	Software	MySQL
3	Any resource	—

* Result:

Implemented views

- i) Created different views
- ii) Insert, modify and delete record through view.
- iii) Delete the view.

* Practical Related Questions:

A) Write output of following.

- 1] Create view emp-view as select emp_no, e-name, salary from emp;
→ View created.
- 2] Update emp-view set e-name = 'RAMEN'
where emp-no = 1001;
→ You have made changes to database.

Date / /

(Saathi)

3] Delete from emp-view where emp-no=1005,
Value deleted.

4] Delete view emp-view;
→ View deleted.

* Exercise:

1] Created dept view on dept table.

→ Create view dept-view as
select dept_no, dept_name
from dept;

2] Insert new record in dept-view view.

→ Update view dept-view ~~as~~
select dept_no, dept_name, salary
from dept.

3] Modify location of dept_no 10 of dept-view

→ Update ~~as~~ dept-view set
dept_no = 101;

4] Delete the record of 20 from dept-view

→ delete from dept-view where dept_no = 20;

- 5) Delete the views dept view
 & Delete views dept view

Assessment Scheme

- 1. Omkar Savant
- 2. Arjun Jadhav
- 3. Atharva Raut.

Process	Product	Total (25)
Related (15)	Related (10)	

Dated Signature
of Teacher.

Saathi

Date _____ **1. Write Query For Indexes, Sequences and Synonyms.** Saathi

Resources Used:

S.No.	Name of Resource	Specifications
1	Computer System with specification	Dual-core, 6GB RAM, 500 GB HDD
2	System	MySQL
3	Any other required	—

Result:

Created and Execute Indexes, Sequences and Synonyms in SQL

Practical Related Questions:

- a] How to distinguish between index and views?

Index	View
Index are used to retrieve data from database	View is a virtual table based on the result-set of a statement
The user cannot see the indexes, they are just to Speed Searches	A view contains row and column just like real table

Saath!

Date / /

b) What is an unique index?

i) Unique indexes are indexes that help maintain data integrity by ensuring that no two rows of data in table have identical key values.

c) Write output of query.

1] Create index sid on emp(empno);
→ Index created

2] Create index cid on emp(empno,ename),
→ Index created

3] Create sequence emp_sequence
increment by 1
start with 1
no max value
nocycle
cache 10;
→ Sequence created

4] Alter sequence emp_sequence
increment by 15
maxvalue 1000
cycle
cache 20
→ Sequence Altered

5] drop sequence emp_sequence;
→ Sequence dropped

6] Create synonym emp_synonym for emp;
drop synonym emp_synonym.
→ Synonym created
Synonym dropped.

* Exercise :

1] Create Simple index dept_simple_index on dept table.
→ Create Index dept_simple_index on dept(dept_no,dept_name)

2] Create Composite index dept_composite_index on dept table.
→ Create Index dept_composite_index on dept(dept_no,dept_name,location)

3] Drop index dept_simple_index and dept_composite_index
→ Drop Index dept_simple_index on dept
Drop Index dept_composite_index on dept

Date / /

Saathi

1) Create sequence dept_sequence on dept table.

Create Sequence dept_sequence

Increment by 1

Start with 1

MaxValue 100

MinValue 1

Cache 10;

2) Alter Sequence dept_sequence.

Alter Sequence dept_sequence

Increment by 1

Minvalue 10

Maxvalue 1000

Start with 10

Cache 10;

3) Create Synonym dept_synonym on dept table.

Create Synonym dept_synonym

ON dept

4) drop synonym dept_synonym

drop Synonym dept_synonym

Date / /

Saathi

* Assessment Scheme :

1. Omkar Savant

2. Arjun Jadhav

3. Atharva Rath.

Dated Signature
of Teacher.

Process	Product	Total (25)
Related (15)	Related (10)	

Date / / 12. PL/SQL Program using
if then else, for, while and
Nested Loops

* Resources Used:

S. No.	Name of Resource	Specification
1	Computer System with Specification	Dual core, 6gb RAM
2	System	MySQL
3	Any other Resource	—

* Result

(*) Write PL/SQL code for database

* Practical Related Questions:

1) Write a PL/SQL program to display 1 to 10 number in reverse order using for loop.

Declare

```
i int;
Loop
  if i>10 then
    exit;
  end if;
```

dbms_output.put_line();
i := i + 1;
End loop;

2) Write PL/SQL program to find Factorial of number 5 using while loop.

```
declare
  fac number := 1;
  n number := 5;
begin
  while n > 0 loop
    fac := n * fac;
    n := n - 1;
  end loop;
  dbms_output.put_line(fac);
end;
```

* Exercise:

1) Write a PL/SQL program to accept three number and display the largest number.

declare

```
a number := 46;
b number := 67;
c number := 21;
begin
  if a > b
    and a > c then
```

Date / /

Saathi

```

dbms_output.put_line('Greatest number
is '||a);
else if b > a
    and b > c then
        dbms_output.put_line('Greatest number is '||b);
else
        dbms_output.put_line('Greatest number is '||c);
end if;

```

End;

e) Write a PL/SQL program to display even numbers between 1 to 100.

```

declare
    num Number(3) := 100;
begin
    while num <= 100 loop
        dbms_output.put_line(num);
        num := num + 2;
    End Loop;

```

End;

3] Enlist data type available in PL/SQL.

→ int, float, double, smallint
 char, varchar2, long, nchar
 Boolean data types.

Date / /

Saathi

a) Complete the table:

Program Code	Output
a) Declare	1
i number := 0;	2
Begin	3
loop	4
dbms_output.put_line(i=' i)	5
i := i + 1;	6
exit when i >= 11;	7
end loop;	8
end;	9
	10

b) Declare

```

num Number(3) := 123;
ans Number(2) := 0;
l Number(3) := 0;

```

```

Begin
    while num != 0 loop
        i := mod(num, 10);
        ans := (ans * 10) + i;
        num := floor(num/10);
    end loop;
    dbms_output.put_line('Reverse
of given number is:'||ans);
End;

```

Reverse of given number
is 321

13. PL/SQL Program based on Implicit and Explicit Cursor.

* Resources Used:

Sr. No.	Name of Resources	Specification
1	Computer System	Dual-core, 6gb ram
2	Software	MySQL
3	Any other Resource	-

* Result:

We wrote PL/SQL program based on Implicit and Explicit Cursor.

* Practical Related Question

1) Write a PL/SQL program for displaying detail of employees working in Computer department.



Declare

```

2 _ empid employee . employee_id % type
2 _ empname employee . first_name % type
2 _ salary employee . salary % type;
cursor employees cursor IS
select employee_id,
       first_name,
       salary
from employee;
```

begin
 open employee_cursor;
 Loop
 Fetch employee cursor
 into
 z_empid
 z_empname
 z_salary;
 exit
 when employee_cursor%notfound;
 If (z_salary > 8000) then
 dbms_output.put_line(z_empid || ' ' ||
 z_empname
 || ' ' ||
 z_salary);
 else
 end if;
 end loop
 close employee_cursor
 end

2) Write PL/SQL program using cursor to print
 the name of job of employees having Design-
 ation as Manager or Analyst.
 →
 Declare
 z_empname employees.employee_name%type
 z_empjob employees.job_name%type
 cursor emp_cursor IS
 Select Name,
 Job,
 From employee;
 begin
 open emp_cursor
 loop
 fetch emp_cursor
 into
 z_empname
 z_empjob
 exit
 when emp_cursor%notfound;
 if (emp_job = 'Manager' || emp_job = 'Analyst') then
 dbms_output.put_line(z_empname || ' ' ||
 z_empjob
 || ' ' ||
);
 else
 end if;
 end loop
 close emp_cursor;
 end

Q) Write a PL/SQL code to print 4th, 6th and 8th record from emp table.

Declare
 z_employee employee%Rowtype;
begin
 select *
 into z_employee
 from employee
 where id=4 And
 id=6 And
 id=8;
 dbms_output.PutLine('Emp details : ID :')
 || z_employee.employee_id
 || 'Name : '
 || z_employee.name
 || 'Salary : '
 || z_employee.salary);
end;

Theory Questions:

a) Difference between Implicit and Explicit Cursors.

Implicit Cursor

Implicit cursors are automatically created when select statement are executed.

They can only fetch single row.

less efficient

b) Give the syntax of 'fetch into' keyword with example.

Syntax:

Fetch cursor_name into variable

Example:

Fetch c1 into column;

Explicit cursor

Explicit cursor needs to be defined explicitly by the user by providing a name.

They can fetch multiple rows.

More efficient

Date / /

*** Exercise.**

- 1) Write a PL/SQL program to print the details of first five highest salary earner employee.

Declare

```
cursor c_emp is select empno, name, sal
from emp
order by sal desc;
end emp.empno%type;
nm emp.empname%type;
sal emp.sal%type;
```

Begin

```
open c_emp;
dbms_output.put_line ("Name || Emp-no || Salary");
```

loop

```
fetch c_emp into emp, nm, sal;
exit when c_emp%rowcount = 5 or
c_emp%notfound;
```

```
dbms_output.put_line (nm||' '||sal);
```

end loop;

close c_emp;

End;

Date / /

- 2) Complete the given table:

Program Code

Output

a) Declare

```
cursor c1 is select * from emp;
begin
dbms_output.put_line ('Name
Salary');
for emp_rec in c1 loop
if emp_rec.salary >= 10000
then
dbms_output.put_line (emp_rec.name || ' ' || emp_rec.salary);
end if;
end loop;
end;
```

b) Declare

```
v_no emp.empno%type := v_no; v_name emp.empname%type;
v_name emp.empname%type;
v_designation emp.degnation%type;
v_designation emp.degnation%type;
v_sal emp.sal%type;
v_sal emp.sal%type;
begin
select ename, designation, sal into
v_name, v_designation, v_sal
from emp
where empno = v_no;
dbms_output.put_line (v_name||' '||v_designation||' '||v_sal);
exception
when no_data_found then
dbms_output.put_line ('Does not exist');
end;
```

Saathi

12. DIL/SOI Programs Using Base on Encryption Standard

Saathi

a) Resources Used:

S.No.	Name of Resource	Specification
1	Computer System	Dual-core system
2	Software	Visual
3	Any other Resources	-

b) Result :

Write PASCAL code for given Database

c) Practical Related Question

1) Which of the following is handled with the help of exception-handling statement in a PASCAL block?

- a) A runtime error b) Both A & B
c) None of the above d) None of the above

→ a) A runtime error

2) For a user-defined exception, Structure returned by SAI.CPPM routine

- a) User-defined exception b) 3
c) 0 d) None of above
→ a) user-defined exception

Date _____

14. PL/SQL Programs Using Base on Exception Handling

*** Resources Used:**

S.No.	Name of Resource	Specification
1	Computer System	Dual-core, 8GB RAM
2	Software	MySQL
3	Any other Resources	-

*** Result:**

Wrote PL/SQL code for given Database

*** Practical Related Question**

1] Which of the following is handled with the help of exception-handling section in an PL/SQL block. ~~For e.g.,~~

- a) A runtime error
 - b) ~~A syntax error~~
 - c) Both A & B
 - d) None of the above
- a) A runtime error

2] For a user-defined exception, SQL code returns 1, and SQLERRM returns

- a) User-defined exception
 - b) 1
 - c) 0
 - d) None of above
- a) user-defined exception

Saathi

Date: / /

* Exercise:

1) Write a PL/SQL program by using predefined exception.

Declare

```
C_id customers.id%type := 8;  
C_name customers.name%type;  
C_addr customers.address%type;
```

Begin

```
Select name, address Into C_name, C_addr  
From customers  
where id = C_id;  
Dbms_output.put_line('Name: ' || C_name);  
Dbms_output.put_line('Address: ' || C_addr);
```

Exception

```
When no_data Found then  
dbms_output.put_line('No Such customer!');  
when others then  
dbms_output.put_line('Error!');
```

End;

Saathi

Date: / /

2) Write a PL/SQL program by using user exception

Declare

```
C_id customers.id%type := 7; c_id;  
C_name customers.name%type;  
C_addr customers.address%type;  
Ex Invalid_id exception;
```

Begin

```
IF C_id <= 0 then  
raise ex_invalid_id;
```

else

```
Select name, address Into C_name, C_addr  
From customers  
where id = C_id;  
Dbms_output.put_line('Name: ' || C_name);  
Dbms_output.put_line('Address: ' || C_addr);
```

End If;

Exception

When ex_invalid_id then

```
dbms_output.put_line('Id must be greater!');
```

when no_data input then

```
dbms_output.put_line("No Such customer!");
```

when others then

```
dbms_output.put_line('Error!');
```

End;

Date / /

Saathi

9) Complete the table

a) Declare

stock_price Number := 979;

net_earning Number := 0;

pe_ratio Number;

Begin

pe_ratio := stock_price / net_earning
Dbms_output.Put_line('Price/Earning

ratio = ' || pe_ratio);

Exception

when zero divide then
Dbms_output.Put_line('Company has zero
Earnings'); pe_ratio := NULL;

End;

b) Declare

c_id customers.id%type := &cc_id;

c_name customers.l_name%type;

c_addr customers.address%type;

-- user defined exception

Ex_invaled_id Exception

Begin

IF c_id <= 0 then

Raise Ex_invaled_id

else

Select name, address into c_name,

c_addr From customers

Where id = c_id;

Dbms_output.Put_line('Name : ' || c_name);

Dbms_output.Put_line('Address : ' || c_addr);

End If

O/P

Company had
zero earnings.

Date / /

Saathi

Exception

when ex_invaled_id then
Dbms_output.Put_line('ID must be greater than 0');

else handle it as per requirement

Dbms_output.Put_line('No such customer!');

else - otherwise

Dbms_output.Put_line('Found!');

End;

* Assessment Scheme

Date _____ **15. Write PL/SQL code to Create Procedures and Functions.** Saath

* Resources Used :

S.No	Name of Resource	Specifications
1	Computer System	Dual-core, 6gb RAM
2	Software	MySQL
3	Any other Resource	-

* Result :

Applied triggers to database, also created procedures and functions according to condition.

* Practical Related Questions

Consider the table Employee and Department
 Emp (empno as primary key, empname, salary, phone)
 Dept (deptno as primary key, empno Foreign Key, deptname, location)

Give the significance of following statements:

1) Create or Replace Function

We use Create or Replace function to change a function definition without

Date _____ **breaking objects that refer to the function.** Saath
 ALSO ALTER function can be used to change most of the auxiliary properties of an existing function.

2) Set Server Output ON

→ we need to write set server output on command everytime we start SQL Server PL/SQL program execution into Oracle engine so we always required to get server output result and display into the screen otherwise result can't be displayed.

Write output of the following.

1) Set Server Output ON;
 Create or replace procedure proc1
 AS
 begin
 dbms_output.put_line('Hello World!');
 End;

Hello World!

3] Set Server Output On

```

Declare
a number;
b number;
c number;
Procedure Min(x In number, y In number, z Out
number) Is
Begin
  If x < y Then
    z := x;
  Else
    z := y;
  End If;
End;
Begin
  a := 40;
  b := 50;
  Min(a, b, c);
  dbms_output.put_line('Minimum of (40, 50): ' || c);
End;

```

→ Minimum of (40, 50): 40

4] Create or replace Function Func1(F_no in Number)

Date: / /

Declare
 V_no number;
 V_count number;

Begin
 Select count(*) into V_count From emp where dept_no = F_no;
 If V_no > 20000 Then
 Update emp set salary = SAL * 0.2 where emp_no = F_no;
 Else
 Update emp set salary = 10000 where emp_no = F_no;
 End If;
End Proc;

Declare
 temp Empno number;
 Begin
 Proc2(4 temp - Empno)
 End;

→ Program executed

4] Create or replace Function Func1(F_no in Number)

Return Number As V_no number

V_count number

begin
 Select count(*) into V_count From emp where dept_no = F_no;
 If V_no = F_no Then
 Select count(*) into V_count From emp where dept_no = F_no;
 Return V_count;

Date / /

Saathi

End If;
End Func1;

```
SQL) Ed Func1_Call.SAL Declare  
V_no number;  
R number  
Begin  
V_no := & V_no;  
R := Func1(V_no);  
If (R>0) Then  
Dbrms_output.put_line('No. of Employee in Dept' || V_no  
|| 'Are' || R);  
Else  
If (R=0) Then  
Dbrms_output.put_line('Dept no'||V_no||'Not Exist but no  
Employee in Dept');  
Else  
Dbrms_output.put_line('Dept no'||V_no||'Not exist');  
End If  
End;
```

No. of employee in Dept Are 1
Dept no 69 Exist but no employee in dept
Dept no 100 does not exists.

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Exercise

1) Write procedure to update the salary of all
employees by 25 %.

→ Begin
update employee set salary = salary * 1.25 where
emp_code = 43450;
If SQL%FOUND Then
dbrms_output.put_line ('Employee record modified');
Else
dbrms_output.put_line ('Employee no. does not exist');
End If
End;

2) Write function to calculate factorial of given
number.

```
declare  
Fac_number := 1;  
n_number := 41;  
begin  
while n > 0 loop  
Fac := n * Fac;  
n := n - 1;  
end loop;  
dbrms_output.put_line (Fac);  
end;
```

Date _____ 16. Write PL/SQL code to
Create Triggers on Given Database.

* Resources Used.

Sr.No	Name of Resource	Specification
1	Computer System	Dual-core, 8GB RAM
2	Software	MySQL
3	Any other Resource	-

* Result

Applied triggers on database. Also created procedure and function according to condition.

* Practical Related Questions

- 1) Does trigger fixed on table affect on its view? Justify.
- Before and after apply to both statement and row trigger. Before and After triggers fixed by DML statements can be defined only on table, not on views. However, trigger on the base table of a view are fixed if an Insert, Update or, Delete statement.

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- 2) Difference between Statement level & Row level trigger.

Statement level Row level

Statement level trigger Row level triggers
Creates only one for execute once for each &
each single transaction every row.

Used for enforcing all security on transactions, data auditing purpose

For each Row clause is 'for each row' clause is present.
omitted.

* Exercise

- 1) Execute the following DML operation on Emp table and write output. Here is one Insert Statement, which will create a new record.

Insert into emp (Id, name, age, address, salary)
values (7, 'Kriti', 22, HP, 7500)

ID	Name	Age	Address	Salary
7	Kriti	22	HP	7500

- 3) Execute following one more DML operations on the Emp table. The Update statement will update an existing record in table -
Update set employee set salary = salary + 50,
where id = 7

ID	Name	Age	Address	Salary
7	Kriti	22	HP	8000

* Assessment Scheme

Date: _____ 17. Executing DCL commands

(Saathi)

Using SQL

- i) Create user
- ii) Grant Privileges to User
- iii) Revoke Privileges to User

* Resources Used:

S.No	Name of Resource	Specifications
1	Computer System	Dual-core, 6GB RAM
2	Software	MySQL
3	Any other Resource	-

* Result:

Write Queries using following commands:
Create user, Grant and Revoke.

* Practical Related Questions

- 1) Write output of following queries.
 - a) Create user jyoti identified by mitpoly
→ Created user jyoti identified by password
 - b) Grant Create table, Create view to jyoti
→ Granted jyoti right to create table and view.

- c) Grant select, insert, update on Emp to jyoti;
→ Granted jyoti right to select, insert and update Emp.
- d) Grant select, update (deptno,empno) on Dept. to jyoti;
→ Granted jyoti permission to select, update deptno, empno record on Dept table.
- e) Alter user sys identified by mit,
→ Altered user.
- f) Revoke create table, create views from jyoti;
→ Revoked the right to create table & view from jyoti.
- g) Revoke select,insert,update on Emp from jyoti.
→ Revoked Select, insert and update On emp from jyoti.
- h) Create role emp-pvr;
→ Created role emp-pvr
- i) Grant create table, create views to emp-pvr;
→ Granted Create table and views to emp-pvr.
- j) Grant emp-pvr to jyoti, john;
→ Shared privileges with jyoti, John.

→ Exercise

Create user john and implement following commands on table Emp and Dept.

- 1) Write a query to grant select, insert, delete privilege on Emp and Dept.
→ Grant select, insert, delete on Dept And Emp to John.
- 2) Write a query to grant update privilege on columns of empno and salary table.
→ Grant update (empno, salary) on Emp to John.
- 3) Write a query to revoke all above privilege from Emp and Dept table.
→ Revoke select, insert, delete, update from John.
- 4) Write a query to create role dept_pur.
→ Create role dept_pur.
- 5) Write query to assign create table, create view to role dept_pur.
→ Grant create view, create table to dept_pur.

- 6) write query to assign above system privilege to user jyoti and john.
→ Grant create view, create table to jyoti, John.
- 7) Write query to assign object privilege - select, insert, delete to role dept_pur;
→ Grant select, insert, delete to dept_pur.
- 8) write query to assign above object privilege to user jyoti and john.
→ Grant select, insert, delete to jyoti, john.

→ Assessment scheme.