

**FACULTY OF ENGINEERING AND TECHNOLOGY
BACHELOR OF TECHNOLOGY**

Database Management System Laboratory
(303105204)

SEMESTER III
Computer Science & Engineering Department



Laboratory Manual

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| 1 | <p>1. What is DBMS? Explain advantages of DBMS over FPS.</p> <p>2. List 15 applications of Database. Explain any 2 how Database can be helpful in managing that application?</p> <p>3. Create the Database for the following:</p> <ul style="list-style-type: none"> 1. Student Details using Excel. 2. Employees Details using MS Access 3. Facebook using Excel | | | | | | |
| 2 | <p>Create following Tables:</p> <p>Important Instructions:</p> <ul style="list-style-type: none"> • Use varchar2(30) datatype for Alphanumeric Characters and Special Symbols, number datatype for Numbers, date datatype for Date. • Use same table and column name (Capital and Small Case) as mentioned in this file. • Insert proper data (Capital and Small Case) as mentioned in this file. • Employee • Emp_name Street City: Adam Spring Pittsfield Brooks Senator Brooklyn Curry North Rye Demalo SunShine San Deago | | | | | | |
| 3 | <p>Simple Queries:</p> <ol style="list-style-type: none"> 1. Describe deposit, branch. 2. Describe borrow, customers. 3. List all data from table DEPOSIT. 4. List all data from table BORROW. 5. List all data from table CUSTOMERS. 6. List all data from table BRANCH. 7. Give account no and amount of depositors. 8. List all data from SAILORS. 9. List Boat Name and its color. 10. List Employee name and its city. 11. List all the details of Clients. 12. Describe various products and its price. 13. Describe sailor's name, age and its rating. 14. Describe the managers of various employees 15. Describe the details of Loan for customers. 16. Describe the date of travel of various sailors. | | | | | | |

| | | | | | |
|----|--|--|--|--|--|
| | | | | | |
| 4. | <p>Simple Queries:</p> <ul style="list-style-type: none"> (1) Give name of depositors having amount greater than 4000. (2) List the employees having salary less than 22000. (3) List the sailors having age more than 25. (4) List the boats travelling on 10-oct-98 (5) List the details of boat “Interlake”. (6) List the details of the red colored boat. (7) List the details of clients whose city is Mumbai (8) List Client Name, due balance and city of the clients having balance greater than 1500. (9) Describe the details of products having selling price less than 500. (10) List the products for which quantity ordered is less than 120 and cost price is greater than 250. (11) Display account details having amount greater 2200. (12) Display all the customers staying in Nagpur (13) Display the names of sailors having rating greater than 7 (14) Display the orders made in the month of June (15) List all the accounts created in the month of March | | | | |
| 5. | <p>“Like” Queries:</p> <ol style="list-style-type: none"> 1. Display all customers whose name start with ‘M’. 2. Display all the customers whose name ends with ‘L’. 3. Display all loan details whose branch starts with ‘A’. 4. Display the details of sailors whose name is minimum 6 characters long. 5. Display the details of Employees whose address starts with ‘S’. 6. List the details of the boat ending with ‘e’. 7. List the details of clients having ‘h’ as a 3rd character in his/her name. 8. List Client Name, due balance and city whose pin code starts with 4. 9. List all customers whose city contains ‘a’ as second character. 10. List client names and city whose state has ‘a’ as fourth or fifth character. | | | | |
| 6. | <p>“Aggregate Functions & DML” Queries:</p> <ol style="list-style-type: none"> 1. List total deposit from deposit. 2. Give Maximum loan given to a customer. 3. Describe the average age of all the sailors. 4. Count total number of customers 5. Count total number of customer’s cities. 6. Display total target for the salesman. | | | | |

| | | | | | | |
|----|--|--|--|--|--|--|
| | <p>7. Update the salary of the employee having 10000 to 11500</p> <p>8. Update the city of client from Bangalore to Bengaluru.</p> <p>9. Give the 15% hike in the salary of all the Employees. Rename that column to “New Salary”.</p> <p>10. Increase the sell price of all products by 20% and label new column as “New Sell Price”. (Do not update the table)</p> <p>11. Provide the count of customers staying in “Bombay”</p> | | | | | |
| 7. | <p>“Join” Queries:</p> <ol style="list-style-type: none"> Find the salary of Adam. Find the city where Brooks work. Display the sailor’s details whose boat is booked for 9th May, 98. Display the day of ride and sailor name for boat 103. Display the sailor name and its age for Red colored and 101 boat. Display the sailor details whose boat is never booked. Display the sailor name that has Red or Green Boat. Display all sailor details and boat details and who has Interlake boat. Display sailor’s rating with boat details or the trip on 10th October, 98. Display the sailor id and name whose age is more than 42 or who has Blue colored boat. Display name and rating of sailor whose boat name is Clipper. List products whose selling price is more than 500 and less than equal to 750. Describe the second highest salary of an employee. Display the date of travel and sailor’s name whose age is between 35 and 65. List all the employees working for “FBC”. | | | | | |
| 8. | <p>“Join” Queries:</p> <ol style="list-style-type: none"> Display all the employee name and the city where they work. Display the employee name and company’s name having salary more than 15000. Find the average rating and age of all sailors. List various products available. Display the names of salesman who have salary more than 2850. Change the cost price of Trousers to 950 | | | | | |

| | | | | | | |
|----|---|--|--|--|--|--|
| | <p>7. List all the clients having “a” as a second character in their names.</p> <p>8. List all the products whose QtyOnHand is less than ReorderLvl.</p> <p>9. Print the description and total qty sold for each product.</p> <p>10. Find out all the products which have been sold to “Ivan Bayross”.</p> <p>11. Find the names of all clients who have purchased Trousers.</p> <p>12. Find the products and their quantities for the orders placed by client C00001 and C00002.</p> <p>13. List the client details who place order no. O19001.</p> <p>14. List the name of clients who have placed orders worth Rs. 10000 or more.</p> <p>15. Find the total of Qty ordered for each Order.</p> | | | | | |
| 9. | <p>“Miscellaneous” Queries:</p> <p>1. Find the average rate for each Order.</p> <p>2. Give the loan details of all the customers.</p> <p>3. List the customer name having loan account in the same branch city they live in.</p> <p>4. Provide the loan details of all the customers who have opened their accounts after August’95.</p> <p>5. List the order information for client C00001 and C00002.</p> <p>6. List all the information for the order placed in the month of june.</p> <p>7. List the details of clients who do not stay in Maharashtra.</p> <p>8. Determine the maximum and minimum product price. Rename the output as “Max_Price” and “Min_Price”.</p> <p>9. Count the number of products having price less than or equal to 500.</p> <p>10. List the order number and the day on which client placed an order.</p> <p>11. List the month and the date on which an order is to be delivered.</p> <p>12. List the date, 25 days after today’s date.</p> <p>13. Find the total of all the billed orders in the month of June.</p> <p>14. List the products and orders from customers who have ordered less than 5 units of “Pull Overs”.</p> <p>15. Find the list of products and orders placed by “Ivan Bayrosss” and “Mamta Muzumdar”.</p> <p>16. List the clients who placed order before June’04.</p> <p>17. List all the clients who stays in “Bengaluru” or “Mangalore”.</p> | | | | | |

| | | | | | | | | | |
|-----|---|--|--|--|--|--|--|--|--|
| 10. | PL/SQL Block: <ol style="list-style-type: none">1. Write a PL/SQL Block to Add 2 Numbers2. Write a PL/SQL Block to find Area of Rectangle, Triangle and Square.3. Write a PL/SQL Block to find Maximum of 3 numbers4. Write a PL/SQL Block to print sum of N Numbers using For Loop.5. Write a PL/SQL Block to generate Fibonacci series of N numbers | | | | | | | | |
|-----|---|--|--|--|--|--|--|--|--|

PRACTICAL: 1

1. What is DBMS? Explain advantages of DBMS over FPS.

→ DBMS stands for Database Management System. DBMS helps to maintain the data in tables and records which is more systematic than FPS (File Processing System). The advantages of DBMS over FPS are as follows:

1. Data redundancy and inconsistency.
2. Data sharing.
3. Data concurrency.
4. Data searching.
5. Data integrity.
6. Data security.
7. Data backup.
8. Easy maintenance.

2. List 15 applications of the Database. Explain any 2 how Data base can be helpful in managing that application.

→ The 15 applications of the Database are follows:

1. Banking.
2. School (Students and Staff's Details).
3. Human resources management.
4. Manufacturing Sector (Product Details).
5. Supermarket.
6. Library.
7. Railway Reservation System.
8. Credit Card Exchange.
9. Social Media Services.
10. Airline Reservation System.

- 11. Healthcare Sector.
- 12. Online Shopping.
- 13. Agriculture Fields.
- 14. Telecommunication Sector.
- 15. Military Purpose.

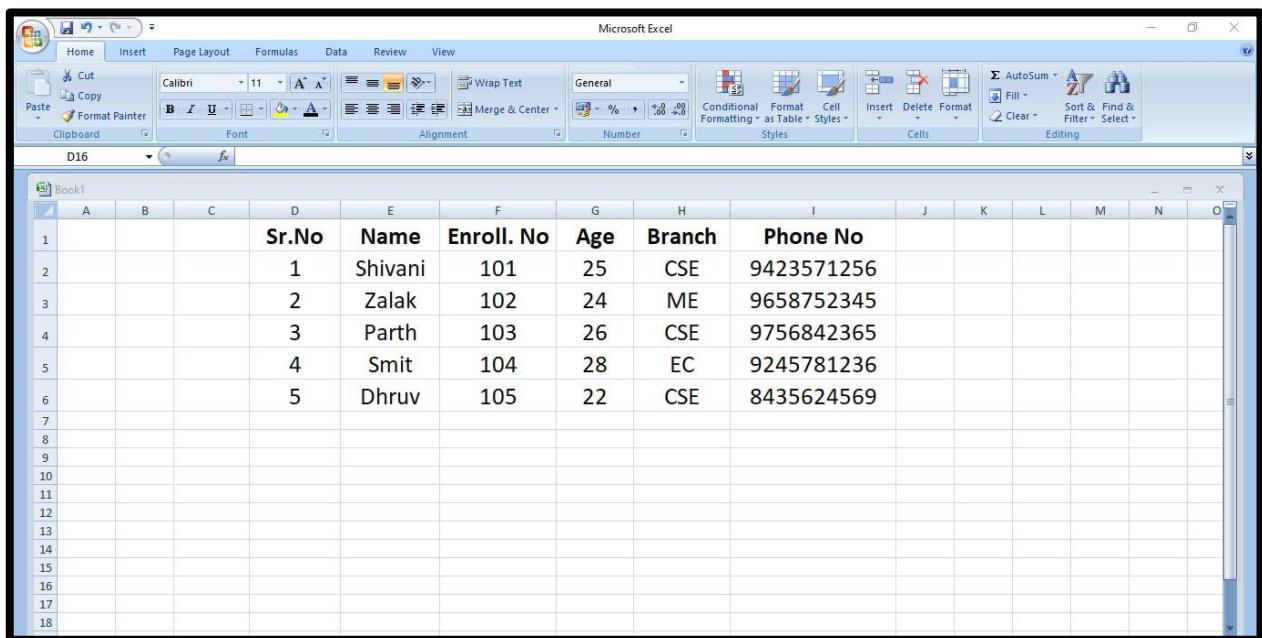
Railway and Airline Reservation System: It keeps the records of ticket bookings, arrival time, departure time, time delay, and even the seat no. of the airplane or train.

Library Management System: There are thousands of books in the library, so it is very important to keep a record of the details of each book. Hand written records can be proven as a hassle when we have to manage large no of books, using DBMS all the details of each book such as name, author's name, number of pages, availability, quantity, etc., can be managed productively.

3. Create the database for the following:

- A. Student Details using Excel
- B. Employees Details using MS Access
- C. Facebook using Excel

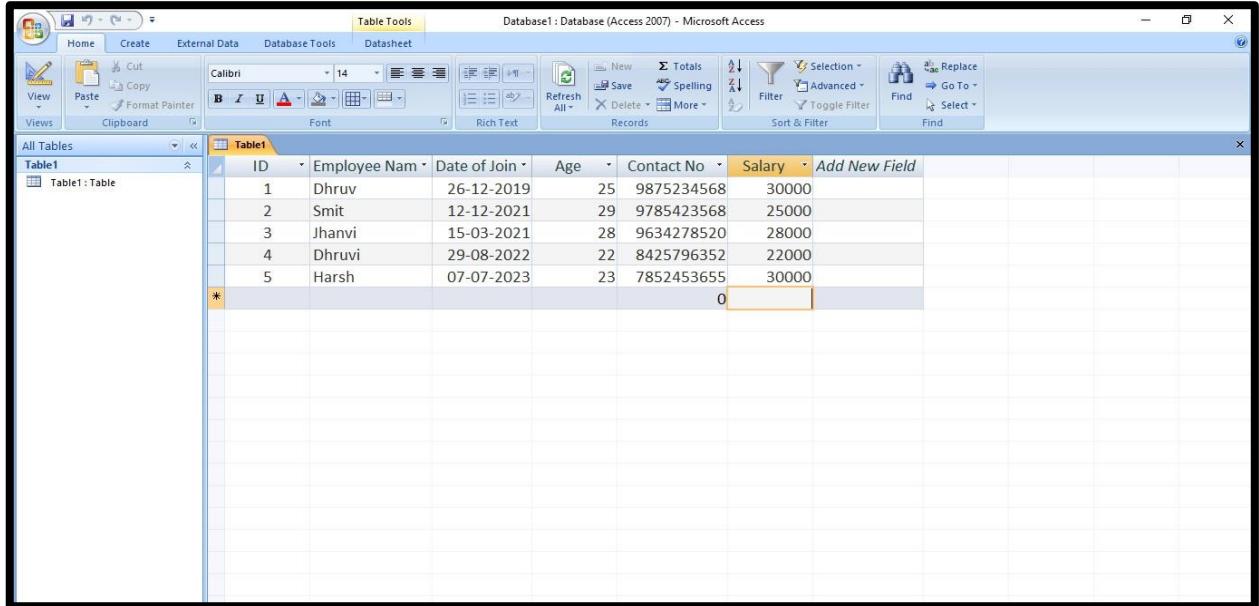
A. Student Details using Excel



The screenshot shows a Microsoft Excel spreadsheet titled "Book1". The table has columns labeled "Sr.No", "Name", "Enroll. No", "Age", "Branch", and "Phone No". The data is as follows:

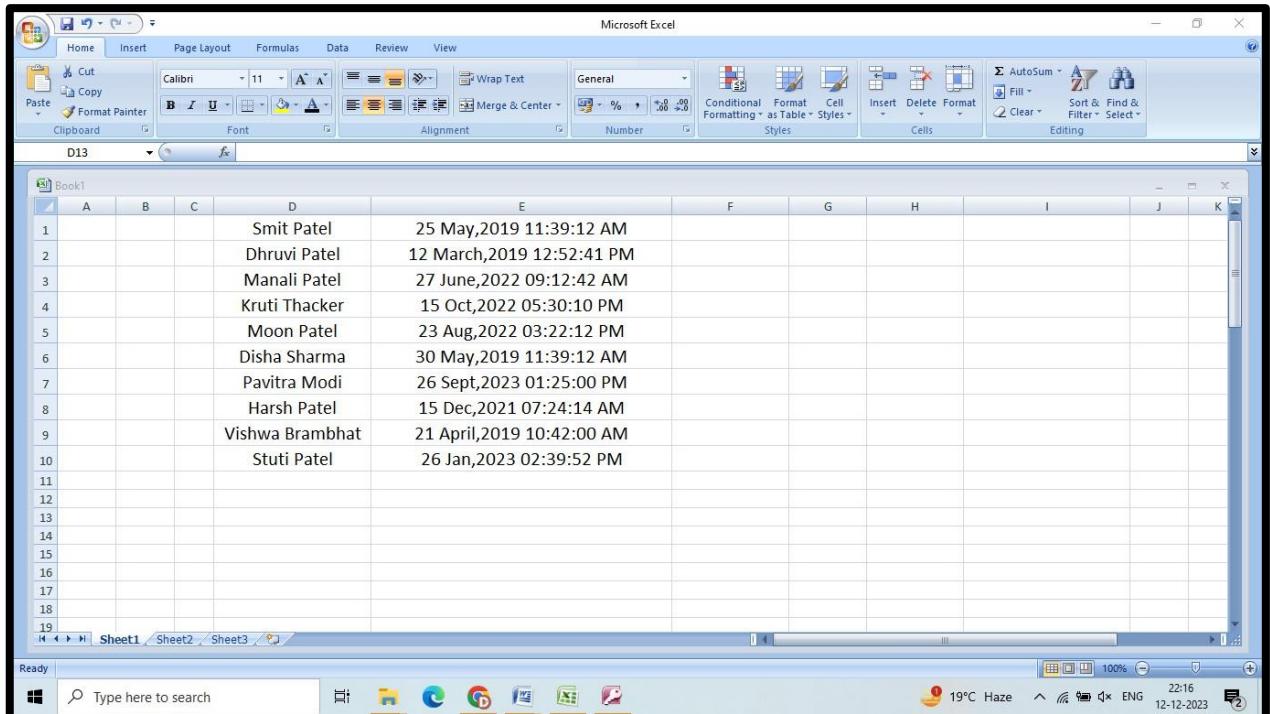
| | Sr.No | Name | Enroll. No | Age | Branch | Phone No |
|---|-------|---------|------------|-----|--------|------------|
| 1 | 1 | Shivani | 101 | 25 | CSE | 9423571256 |
| 2 | 2 | Zalak | 102 | 24 | ME | 9658752345 |
| 3 | 3 | Parth | 103 | 26 | CSE | 9756842365 |
| 4 | 4 | Smit | 104 | 28 | EC | 9245781236 |
| 5 | 5 | Dhruv | 105 | 22 | CSE | 8435624569 |

B. Employees Details using MS Access



| ID | Employee Name | Date of Join | Age | Contact No | Salary | Add New Field |
|----|---------------|--------------|-----|------------|--------|---------------|
| 1 | Dhruv | 26-12-2019 | 25 | 9875234568 | 30000 | |
| 2 | Smit | 12-12-2021 | 29 | 9785423568 | 25000 | |
| 3 | Jhanvi | 15-03-2021 | 28 | 9634278520 | 28000 | |
| 4 | Dhrushi | 29-08-2022 | 22 | 8425796352 | 22000 | |
| 5 | Harsh | 07-07-2023 | 23 | 7852453655 | 30000 | |

C. Facebook using Excel



| | | | | |
|----|--|-----------------|---------------------------|--|
| 1 | | Smit Patel | 25 May,2019 11:39:12 AM | |
| 2 | | Dhrushi Patel | 12 March,2019 12:52:41 PM | |
| 3 | | Manali Patel | 27 June,2022 09:12:42 AM | |
| 4 | | Kruti Thacker | 15 Oct,2022 05:30:10 PM | |
| 5 | | Moon Patel | 23 Aug,2022 03:22:12 PM | |
| 6 | | Disha Sharma | 30 May,2019 11:39:12 AM | |
| 7 | | Pavitra Modi | 26 Sept,2023 01:25:00 PM | |
| 8 | | Harsh Patel | 15 Dec,2021 07:24:14 AM | |
| 9 | | Vishwa Brambhat | 21 April,2019 10:42:00 AM | |
| 10 | | Stuti Patel | 26 Jan,2023 02:39:52 PM | |
| 11 | | | | |
| 12 | | | | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |
| 16 | | | | |
| 17 | | | | |
| 18 | | | | |
| 19 | | | | |

PRACTICAL: 02

Aim: Working with SQL – DDL & DML Commands .

TABLE – 1: EMPLOYEE

```
create table employee (emp_name varchar (50),street varchar (100),city varchar (50));
insert into employee values('adam','spring','pittsfield');
insert into employee values('brooks','senator', 'brooklyn');
insert into employee values('curry','north', 'rye');
insert into employee values('demalo','sunshine','san deago');
select * from employee;
```

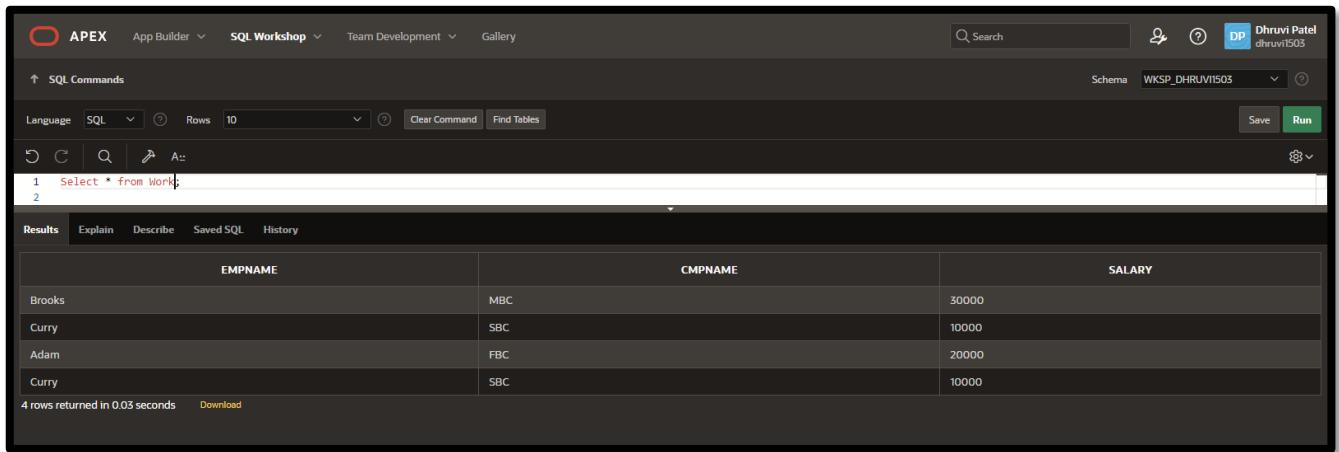
The screenshot shows the Oracle SQL Workshop interface. The SQL command `Select * from Employee;` has been run, and the results are displayed in a grid:

| EMP_NAME | STREET | CITY |
|----------|----------|------------|
| Curry | North | Rye |
| Brooks | Senator | Brooklyn |
| Adam | Spring | Pittsfield |
| Demalo | Sunshine | San Deago |

4 rows returned in 0.00 seconds Download

TABLE – 2: Work

```
create table work (empname varchar (50),cmpname varchar (50),salary number (12));
insert into work values ('adam', 'fbc', 20000);
insert into work values ('brooks', 'mbc', 30000);
insert into work values('curry', 'sbc', 10000);
select * from work;
```



The screenshot shows the Oracle SQL Workshop interface. The SQL command entered is "Select * from WORK;". The results table has three columns: EMPNAME, CMPNAME, and SALARY. The data is as follows:

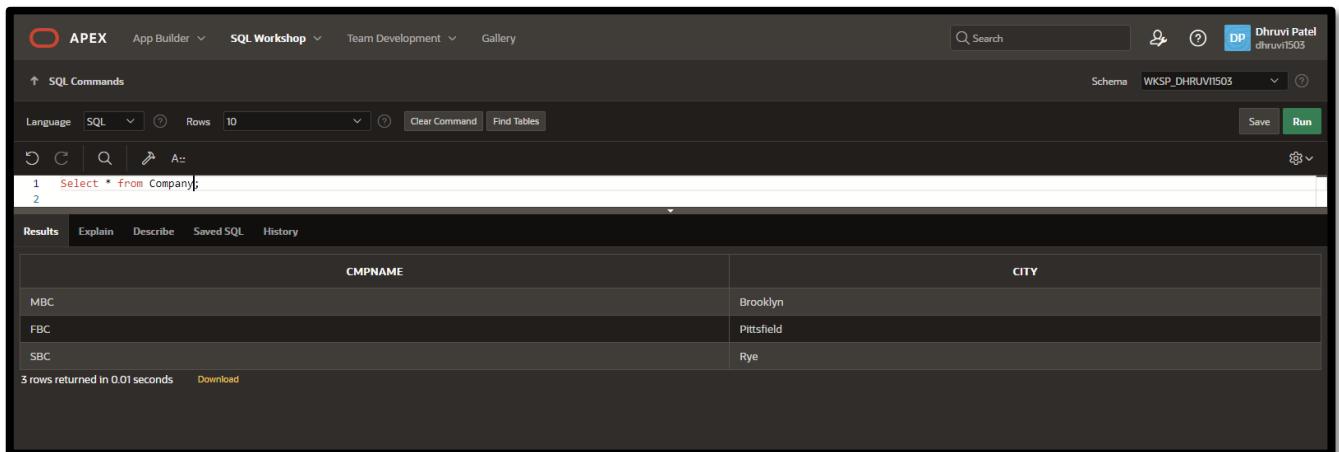
| EMPNAME | CMPNAME | SALARY |
|---------|---------|--------|
| Brooks | MBC | 30000 |
| Curry | SBC | 10000 |
| Adam | FBC | 20000 |
| Curry | SBC | 10000 |

4 rows returned in 0.03 seconds Download

TABLE – 3: Company

```
create table company ( cmpname varchar (50),city varchar (50));
insert into company values(cmpname, city);
insert into company values ('fbc', 'pittsfield');
insert into company values('mbc', 'brooklyn');
insert into company values('sbc', 'rye');
```

```
select * from company;
```



The screenshot shows the Oracle SQL Workshop interface. The SQL command entered is "Select * from COMPANY;". The results table has two columns: CMPNAME and CITY. The data is as follows:

| CMPNAME | CITY |
|---------|------------|
| MBC | Brooklyn |
| FBC | Pittsfield |
| SBC | Rye |

3 rows returned in 0.01 seconds Download

TABLE – 4: Manager

```
create table manager (empname varchar (50), manname varchar (50));
insert into manager values('adam', 'smith');
insert into manager values('brooks', 'jones');
insert into manager values('curry', 'hayes');
select * from manager;
```

The screenshot shows the Oracle SQL Workshop interface. The query `Select * from Manager;` has been run, returning 3 rows. The results are displayed in a grid with columns `EMPNAME` and `MANNAME`. The data is as follows:

| EMPNAME | MANNAME |
|---------|---------|
| Adam | Smith |
| Brooks | Jones |
| Curry | Hayes |

3 rows returned in 0.01 seconds Download

TABLE – 5: Sailors

```
create table sailors ( sid number (12),sname varchar (50),rating int,age number (10));
insert into sailors values (22, 'dustin', 7, 45.0);
insert into sailors values (29, 'brutus', 1, 33.0);
insert into sailors values (31, 'lubber', 8, 55.5);
insert into sailors values (32, 'andy', 8, 25.5);
insert into sailors values (58, 'rusty', 10, 35.0);
insert into sailors values (64, 'horatio', 7, 35.0);
insert into sailors values (71, 'zebra', 10, 16.0);
insert into sailors values (74, 'horatio', 9, 35.0);
insert into sailors values (85, 'art', 3, 25.5);
insert into sailors values (95, 'bob', 3, 63.5);
select * from sailors;
```

The screenshot shows the Oracle SQL Workshop interface. The query `Select * from Sailors;` has been run, returning 10 rows. The results are displayed in a grid with columns `SID`, `SNAME`, `RATING`, and `AGE`. The data is as follows:

| SID | SNAME | RATING | AGE |
|-----|---------|--------|-----|
| 85 | Art | 5 | 26 |
| 95 | Bob | 5 | 64 |
| 32 | Andy | 8 | 26 |
| 74 | Horatio | 9 | 35 |
| 31 | Lubber | 8 | 56 |
| 64 | Horatio | 7 | 55 |
| 58 | Rusty | 10 | 35 |
| 22 | Dustin | 7 | 45 |
| 29 | Brutus | 1 | 33 |
| 71 | Zebra | 10 | 16 |

10 rows returned in 0.02 seconds Download

TABLE – 6: Reserves

```
create table reserves (sid number (10),bid number (10),day varchar (50));
insert into reserves values (22, 101, '10-oct-98');
insert into reserves values(22, 102, '10-oct-98');
insert into reserves values(22, 103, '10-aug-98');
insert into reserves values(22, 104, '10-jul-98');
insert into reserves values(31, 102, '11-oct-98');
insert into reserves values(31, 103, '11-jun-98');
insert into reserves values(31, 104, '11-dec-98');
insert into reserves values(64, 101, '9-may-98');
insert into reserves values(64, 102, '9-aug-98');
insert into reserves values(74, 103, '9-aug-98');
select * from reserves;
```

The screenshot shows the Oracle SQL Workshop interface. The SQL command 'select * from Reserves;' has been run, and the results are displayed in a table with three columns: SID, BID, and DAY.

| SID | BID | DAY |
|-----|-----|-----------|
| 22 | 102 | 10-Oct-98 |
| 22 | 103 | 10-Aug-98 |
| 31 | 102 | 11-Oct-98 |
| 31 | 104 | 11-Dec-98 |
| 22 | 101 | 10-Oct-98 |
| 64 | 101 | 9-May-98 |
| 74 | 103 | 9-Aug-98 |
| 22 | 104 | 10-Jul-98 |
| 31 | 103 | 11-Jun-98 |
| 64 | 102 | 9-Aug-98 |

10 rows returned in 0.01 seconds

TABLE – 7: Boats

```
create table boats(bid number(20),bname varchar(20),color varchar(20));
insert into boats values ('101','interlake','blue');
insert into boats values ('102','interlake','red');
insert into boats values ('103','clipper','green');
insert into boats values ('104','marine','red');
select * from boats;
```

The screenshot shows the Oracle SQL Workshop interface. The top navigation bar includes links for APEX, App Builder, SQL Workshop, Team Development, and Gallery. On the right, there's a search bar, a user icon for 'Dhruvi Patel', and a schema dropdown set to 'WKSP_DHRUVI1503'. The main area is titled 'SQL Commands' and contains a SQL editor with the following code:

```
1  select * from Boats;
```

Below the editor, there are tabs for Results, Explain, Describe, Saved SQL, and History. The Results tab displays a table with four rows of data:

| BID | BNAME | COLOR |
|-----|-----------|-------|
| 102 | Interlake | Red |
| 101 | Interlake | Blue |
| 103 | Clipper | Green |
| 104 | Marine | Red |

At the bottom of the results pane, it says '4 rows returned in 0.01 seconds' and has a 'Download' link.

TABLE – 8: Client

```
create table client (cl_no varchar(10), name varchar (50), city varchar (50), pincode varchar (10), state varchar(50), baldue number(10));
```

```
insert into client values ('c00001','ivanbayross','mumbai','400054','maharashtra',15000);
```

```
insert into client values ('c00002','mamtamuzumdar','madras','780001','tamilnadu',100);
```

```
insert into client values ('c00003','chhayabankar','mumbai','400057','maharashtra',5000);
```

```
insert into client values ('c00004','ashwinijsoshi','bangalore','560001','karnataka',500);
```

```
insert into client values ('c00005','hanselcolaco','mumbai','400060','maharashtra',2000);
```

```
insert into client values ('c00006','deepaksharma','mangalore','560050','karnataka',1000);
```

```
select*from client;
```

The screenshot shows the Oracle SQL Workshop interface. The top navigation bar includes links for APEX, App Builder, SQL Workshop, Team Development, and Gallery. On the right, there's a search bar, a user icon for 'Dhruvi Patel', and a schema dropdown set to 'WKSP_DHRUVI1503'. The main area is titled 'SQL Commands' and contains a SQL editor with the following code:

```
1  SELECT*FROM Client;
2
```

Below the editor, there are tabs for Results, Explain, Describe, Saved SQL, and History. The Results tab displays a table with six rows of data:

| CL_NO | NAME | CITY | PINCODE | STATE | BALDUE |
|--------|---------------|-----------|---------|-------------|--------|
| C00002 | MamtaMuzumdar | Madras | 780001 | TamilNadu | 100 |
| C00001 | IvanBayross | Mumbai | 400054 | Maharashtra | 15000 |
| C00006 | DeepakSharma | Mangalore | 560050 | Karnataka | 1000 |
| C00004 | AshwiniJoshi | Bangalore | 560001 | Karnataka | 500 |
| C00003 | ChhayaBankar | Mumbai | 400057 | Maharashtra | 5000 |
| C00005 | HanselColaco | Mumbai | 400060 | Maharashtra | 2000 |

At the bottom of the results pane, it says '6 rows returned in 0.02 seconds' and has a 'Download' link.

TABLE – 9: Product

```
create table product( pr_no varchar (10),dscr varchar(50),profit int,unit varchar(10), qty int,reorder_lvl int,sell_price int,cost_price int);

insert into product values('p00001','t-shirts',5,'piece',200,50,350,250);

insert into product values('p0345','shirts',6,'piece',150,50,500,350);

insert into product values('p06734','cottonjeans',5,'piece',100,20,60, 450);

insert into product values('p07865','jeans',5,'piece',100,20,750,500);

insert into product values('p07868','trousers',2,'piece',150,50,850,550);

insert into product values('p07885','pullovers',3,'piece',80, 30,700,450);

insert into product values('p07965','denimshirts',4,'piece',100,40,350, 250);

insert into product values('p07975','lycratops',5,'piece',70,30,300,175);

insert into product values('p08865','skirts',5,'piece',75,30,450, 300);

select*from product;
```

The screenshot shows the Oracle SQL Workshop interface. The SQL command window contains the following code:

```
1 SELECT*FROM Product;
2 
```

The Results tab displays the following data from the Product table:

| PR_NO | DSCR | PROFIT | UNIT | QTY | REORDER_LVL | SELL_PRICE | COST_PRICE |
|--------|-------------|--------|-------|-----|-------------|------------|------------|
| P0345 | Shirts | 6 | Piece | 150 | 50 | 500 | 350 |
| P07865 | Jeans | 5 | Piece | 100 | 20 | 750 | 500 |
| P07868 | Trousers | 2 | Piece | 150 | 50 | 850 | 550 |
| P06734 | CottonJeans | 5 | Piece | 100 | 20 | 60 | 450 |
| P07885 | PullOvers | 3 | Piece | 80 | 30 | 700 | 450 |
| P07975 | Lycra Tops | 5 | Piece | 70 | 30 | 300 | 175 |
| P07965 | DenimShirts | 4 | Piece | 100 | 40 | 350 | 250 |
| P08865 | Skirts | 5 | Piece | 75 | 30 | 450 | 300 |
| P00001 | T-Shirts | 5 | Piece | 200 | 50 | 350 | 250 |

9 rows returned in 0.01 seconds Download

TABLE – 10: Salesman

```
create table salesman(sl_no varchar (10),name varchar(50),add1 varchar(50),add2 varchar(50),city varchar(50),pin varchar(10),state varchar(50), amt number,tgt number,sales number,rem varchar(50));

insert into salesman values('s00001', 'aman', 'a/14','worli', 'mumbai',
'400002','maharashtra',3000,100,50,'good');
```

```
insert into salesmanvalues('s00002','omkar','65','nariman','mumbai','400001','maharashtra',3000,200
,100, 'good');

insert into salesman values('s00003','raj','p-
7','bandra','mumbai','400032','maharashtra',3000,200,100,'good');

insert into salesman values('s00004','ashish','a/5','juhu','mumbai','400044','maharashtra',3500,200,150,
'good');

select*from salesman;
```

| SL_NO | NAME | ADD1 | ADD2 | CITY | PIN | STATE | AMT | TGT | SALES | REM |
|--------|--------|------|---------|--------|--------|-------------|------|-----|-------|------|
| S00002 | Omkar | 65 | Nariman | Mumbai | 400001 | Maharashtra | 3000 | 200 | 100 | Good |
| S00003 | Raj | P-7 | Bandra | Mumbai | 400032 | Maharashtra | 3000 | 200 | 100 | Good |
| S00004 | Ashish | A/5 | Juhu | Mumbai | 400044 | Maharashtra | 3500 | 200 | 150 | Good |
| S00001 | Aman | A/14 | Worli | Mumbai | 400002 | Maharashtra | 3000 | 100 | 50 | Good |

4 rows returned in 0.02 seconds [Download](#)

TABLE – 11: Salesorder

```
create table salesorder(od_no varchar(10),cl_no varchar(10),o_dat date, sl_no varchar (10), d_type
varchar (1), bill varchar (1), d_dat date,status varchar (50));

insert into salesorder values('o19001','c00001',date'2004-06-12','s00001','f','n',date'2004-07-
20','inprocess');

insert into salesorder values('o19002','c00002',date'2004-06-25','s00002','p','n',date'2004-06-
27','cancelled');

insert into salesorder values('o46865','c00003',date'2004-02-18','s00003','f','y',date'2004-02-20',
'fulfilled');

insert into salesorder values('o19003','c00001',date'2004-04-03','s00001','f','y',date'2004-04-07',
'fulfilled');

insert into salesorder values('o46866','c00004',date'2004-05-20','s00002','p','n',date'2004-05-
22','cancelled');

insert into salesorder values('o19008','c00005',date'2004-05-24','s00004','f','n',date'2004-07-
26','inprocess');

select*from salesorder;
```

The screenshot shows the Oracle SQL Workshop interface. At the top, there are tabs for 'APEX', 'App Builder', 'SQL Workshop' (which is selected), 'Team Development', and 'Gallery'. On the right, there's a search bar, a user icon for 'Dhruvi Patel dhruvit1503', and buttons for 'Save' and 'Run'. Below the tabs, there are filters for 'Language' (set to 'SQL'), 'Rows' (set to 10), and buttons for 'Clear Command' and 'Find Tables'. The main area contains a code editor with the following SQL command:

```
1  SELECT*FROM Salesorder;
```

Below the code editor, there are tabs for 'Results', 'Explain', 'Describe', 'Saved SQL', and 'History'. The 'Results' tab is selected, displaying a table with the following data:

| OD_NO | CL_NO | O_DAT | SL_NO | D_TYPE | BILL | D_DAT | STATUS |
|--------|--------|------------|--------|--------|------|------------|-----------|
| O19003 | C00001 | 04/03/2004 | S00001 | F | Y | 04/07/2004 | Fulfilled |
| O46866 | C00004 | 05/20/2004 | S00002 | P | N | 05/22/2004 | Cancelled |
| O19008 | C00005 | 05/24/2004 | S00004 | F | N | 07/26/2004 | InProcess |
| O19002 | C00002 | 06/25/2004 | S00002 | P | N | 06/27/2004 | Cancelled |
| O46865 | C00003 | 02/18/2004 | S00003 | F | Y | 02/20/2004 | Fulfilled |
| O19001 | C00001 | 06/12/2004 | S00001 | F | N | 07/20/2004 | InProcess |

At the bottom left, it says '6 rows returned in 0.01 seconds' and there is a 'Download' button.

TABLE– 12: Salesorder_details

```
create table salesorder_details(od_no varchar (10), pr_no varchar (10),qty_order number(10),qty_disp number(10),rate number(10));

insert into salesorder_details values('o19001','p00001',4,4,525);
insert into salesorder_details values('o19001','p07965',2,1,8400);
insert into salesorder_details values('o19001','p07885',2,1,5250);
insert into salesorder_details values('o19002','p00001',10,0,525);
insert into salesorder_details values('o46865','p07868',3,3,3150);
insert into salesorder_details values('o46865','p07885',3,1,5250);
insert into salesorder_details values('o46865','p00001',10,10, 525);
insert into salesorder_details values('o46865','p0345',4,4,1050);
insert into salesorder_details values('o19003','p0345',2,2,1050);
insert into salesorder_details values('o19003','p06734',1,1,12000);
insert into salesorder_details values('o46866','p07965',1,0,8400);
insert into salesorder_details values('o46866','p07975',1,0,1050);
insert into salesorder_details values('o19008','p00001',10,5,525);
insert into salesorder_details values('o19008','p07975',5,3,1050);
select*from salesorder_details;
```

The screenshot shows the Oracle SQL Workshop interface with the following details:

- Language:** SQL
- Rows:** 15
- Schema:** WKSP_DHRUVI1503
- Query:** SELECT * FROM Salesorder_Details;
- Results:** A grid displaying 15 rows of data from the Salesorder_Details table.

| OD_NO | PR_NO | QTY_ORDER | QTY_DISP | RATE |
|--------|--------|-----------|----------|-------|
| O46865 | P00001 | 10 | 10 | 525 |
| O46866 | P07965 | 1 | 0 | 8400 |
| O46866 | P07975 | 1 | 0 | 1050 |
| O19001 | P00001 | 4 | 4 | 525 |
| O19008 | P07975 | 5 | 5 | 1050 |
| O19001 | P07965 | 2 | 1 | 8400 |
| O19001 | P07885 | 2 | 1 | 5250 |
| O46865 | P0345 | 4 | 4 | 1050 |
| O19002 | P00001 | 10 | 0 | 525 |
| O46865 | P07885 | 3 | 1 | 5250 |
| O19003 | P0345 | 2 | 2 | 1050 |
| O19008 | P00001 | 10 | 5 | 525 |
| O46865 | P07868 | 3 | 3 | 3150 |
| O19003 | P06754 | 1 | 1 | 12000 |

TABLE– 13: Deposit

```
create table deposit(act_no varchar(50),cname varchar(50),bname varchar(50),amount varchar(50),dates varchar(50));
```

```
insert into deposit values(100,'anil','vrce',1000.00,'1-mar-95');
```

```
insert into deposit values(101,'sunil','ajni',5000.00,'4-jan-96');
```

```
insert into deposit values(102 , 'mehul','karolbagh', 3500.00,'17-nov-95');
```

```
insert into deposit values(104 , 'madhuri','chandi',1200.00,'17-dec-95');
```

```
insert into deposit values(105 , 'prmod','m.g.road',3000.00,'27-mar-96');
```

```
insert into deposit values(106 , 'sandip','andheri',2000.00,'31-mar-96');
```

```
insert into deposit values(107 , 'shivani','virar',1000.00,'5-sep-95');
```

```
insert into deposit values(108 , 'kranti','nehru place', 5000.00,'2-jul-95');
```

```
insert into deposit values(109 , 'minu','powai',7000.00,'10-aug-95');
```

```
select * from deposit;
```

The screenshot shows the Oracle SQL Workshop interface with the following details:

- Language:** SQL
- Rows:** 15
- Schema:** WKSP_DHRUVI1503
- Query:** select * from deposit;
- Results:** A grid displaying 9 rows of data from the deposit table.

| ACT_NO | CNAME | BNAME | AMOUNT | Date |
|--------|---------|------------|--------|------------|
| 107 | SHIVANI | VIRAR | 1000 | 09/05/1995 |
| 106 | SANDIP | ANDHERI | 2000 | 03/31/1996 |
| 109 | MINU | POWAI | 7000 | 08/10/1995 |
| 104 | MADHURI | CHANDI | 1200 | 12/17/1995 |
| 100 | ANIL | VRCE | 1000 | 03/01/1995 |
| 108 | KRANTI | NEHRUPLACE | 5000 | 06/02/1995 |
| 102 | MEHUL | KAROLBAGH | 3500 | 11/17/1995 |
| 101 | SUNIL | AJNI | 5000 | 01/04/1996 |
| 105 | PRMOD | M.G.ROAD | 3000 | 03/27/1996 |

9 rows returned in 0.01 seconds Download

TABLE– 14: Borrow

```
create table borrow (loanno number(10), cname varchar (50), bname varchar (50), amount number(10));
insert into borrow values(201,'anil','vrce',1000.00);
insert into borrow values(206,'mehul','ajni',5000.00);
insert into borrow values(311,'sunil','dharampeth',3000.00);
insert into borrow values(321,'madhuri','andheri',2000.00);
insert into borrow values(375,'prmod','virar',8000.00);
insert into borrow values(481,'kranti','nehruplace',3000.00);
select*from borrow;
```

The screenshot shows the Oracle SQL Workshop interface. In the SQL Commands pane, the following SQL code is entered:

```
1 SELECT*FROM Borrow;
2
3
```

In the Results pane, the output of the query is displayed as a table:

| LOANNO | CNAME | BNAME | AMOUNT |
|--------|---------|-------------|--------|
| 201 | ANIL | VRCE | 1000 |
| 321 | MADHURI | ANDHERI | 2000 |
| 375 | PRMOD | VIRAR | 8000 |
| 311 | SUNIL | DHARAMPETH | 3000 |
| 206 | MEHUL | AJNI | 5000 |
| 481 | KRANTI | NEHRUPPLACE | 3000 |

6 rows returned in 0.01 seconds

TABLE– 15: Branch

```
create table branch( bname varchar (50), city varchar(50));
insert into branch values('vrce','nagpur');
insert into branch values('ajni','nagpur');
insert into branch values('karolbagh','delhi');
insert into branch values('chandi','delhi');
insert into branch values('dharampeth','nagpur');
insert into branch values('m.g.road','banglore');
insert into branch values('andheri','bombay');
insert into branch values('virar','bombay');
insert into branch values('nehruplace','delhi');
insert into branch values('powai','bombay');
select*from branch;
```

The screenshot shows the Oracle SQL Workshop interface. The query `SELECT * FROM Branch;` has been run, returning 10 rows of data. The results are displayed in a grid with two columns: BNAME and CITY.

| BNAME | CITY |
|------------|----------|
| AJNI | NAGPUR |
| KAROLBAGH | DELHI |
| M.G ROAD | BANGLORE |
| VIRAR | BOMBAY |
| POWAI | BOMBAY |
| CHANDI | DELHI |
| DHARAMPETH | NAGPUR |
| ANDHERI | BOMBAY |
| NEHRUPLACE | DELHI |
| VRCE | NAGPUR |

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TABLE– 16: Customers

```
create table customers( cname varchar (50),city varchar(50));
insert into customers values('anil','calcutta');
insert into customers values('sunil','delhi');
insert into customers values('mehul','baroda');
insert into customers values('mandar','patna');
insert into customers values('madhuri','nagpur');
insert into customers values('pramod','nagpur');
insert into customers values('sandip','surat');
insert into customers values('shivani','bombay');
insert into customers values('kranti','bombay');
insert into customers values('naren','bombay');
select*from customer;
```

The screenshot shows the Oracle SQL Workshop interface. The query `SELECT * FROM Customers;` has been run, returning 10 rows of data. The results are displayed in a grid with two columns: CNAME and CITY.

| CNAME | CITY |
|---------|----------|
| ANIL | CALCUTTA |
| SUNIL | DELHI |
| MEHUL | BARODA |
| MADHURI | NAGPUR |
| NAREN | BOMBAY |
| PRAMOD | NAGPUR |
| SHIVANI | BOMBAY |
| KRANTI | BOMBAY |
| SANDIP | SURAT |
| MANDAR | PATNA |

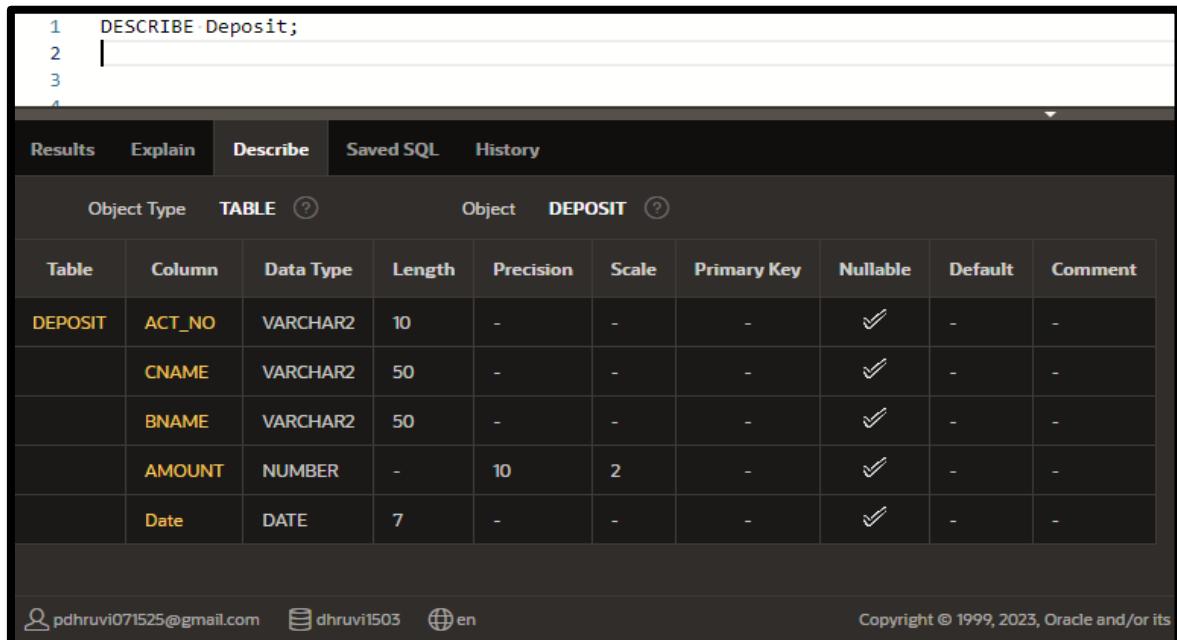
10 rows returned in 0.00 seconds [Download](#)

PRACTICAL: 03

Aim: Simple Queries – Part-1.

1. Describe deposit, branch.

- describe deposit;



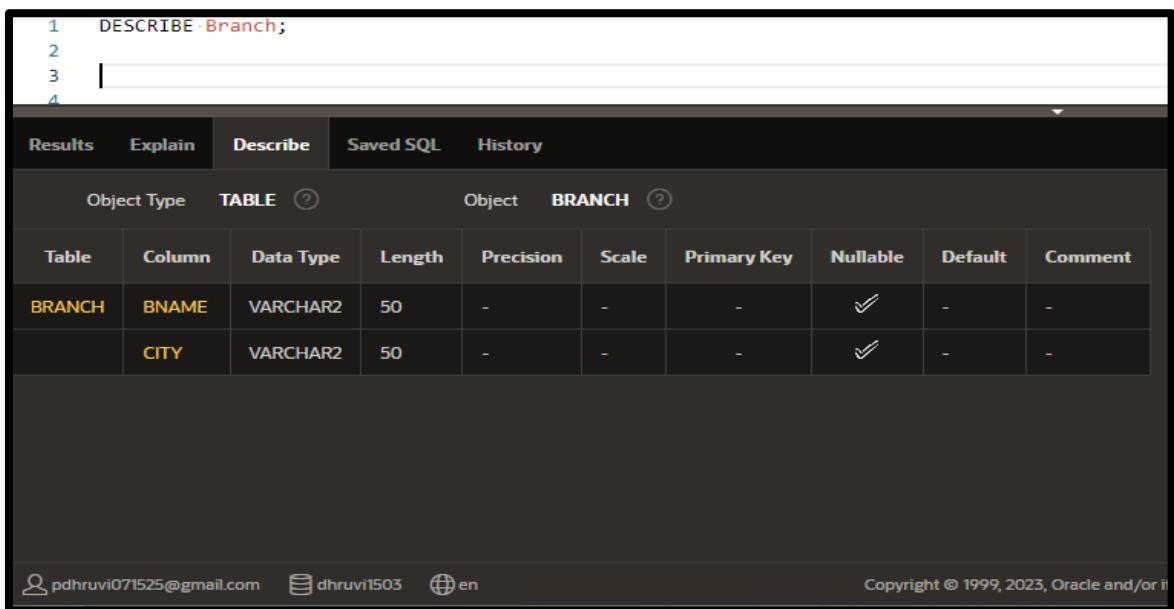
```
1 DESCRIBE Deposit;
2
3
4
```

The screenshot shows the Oracle SQL Developer interface. The top navigation bar has tabs for Results, Explain, **Describe**, Saved SQL, and History. The main area displays the results of the DESCRIBE command for the DEPOSIT table. The table structure is as follows:

| Table | Column | Data Type | Length | Precision | Scale | Primary Key | Nullable | Default | Comment |
|---------|--------|-----------|--------|-----------|-------|-------------|----------|---------|---------|
| DEPOSIT | ACT_NO | VARCHAR2 | 10 | - | - | - | ✓ | - | - |
| | CNAME | VARCHAR2 | 50 | - | - | - | ✓ | - | - |
| | BNAME | VARCHAR2 | 50 | - | - | - | ✓ | - | - |
| | AMOUNT | NUMBER | - | 10 | 2 | - | ✓ | - | - |
| | Date | DATE | 7 | - | - | - | ✓ | - | - |

At the bottom of the interface, there are user profile icons and the text "Copyright © 1999, 2023, Oracle and/or its affiliates".

- describe branch;



```
1 DESCRIBE Branch;
2
3
4
```

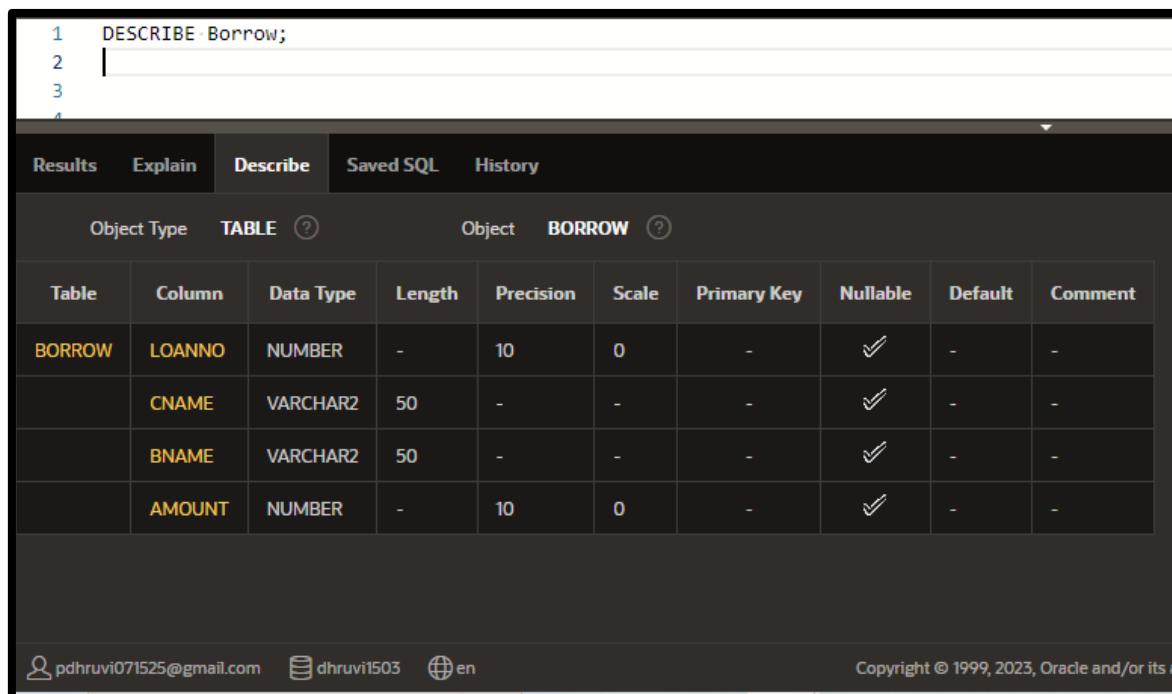
The screenshot shows the Oracle SQL Developer interface. The top navigation bar has tabs for Results, Explain, **Describe**, Saved SQL, and History. The main area displays the results of the DESCRIBE command for the BRANCH table. The table structure is as follows:

| Table | Column | Data Type | Length | Precision | Scale | Primary Key | Nullable | Default | Comment |
|--------|--------|-----------|--------|-----------|-------|-------------|----------|---------|---------|
| BRANCH | BNAME | VARCHAR2 | 50 | - | - | - | ✓ | - | - |
| | CITY | VARCHAR2 | 50 | - | - | - | ✓ | - | - |

At the bottom of the interface, there are user profile icons and the text "Copyright © 1999, 2023, Oracle and/or its affiliates".

2. Describe borrow, customers.

- describe borrow;

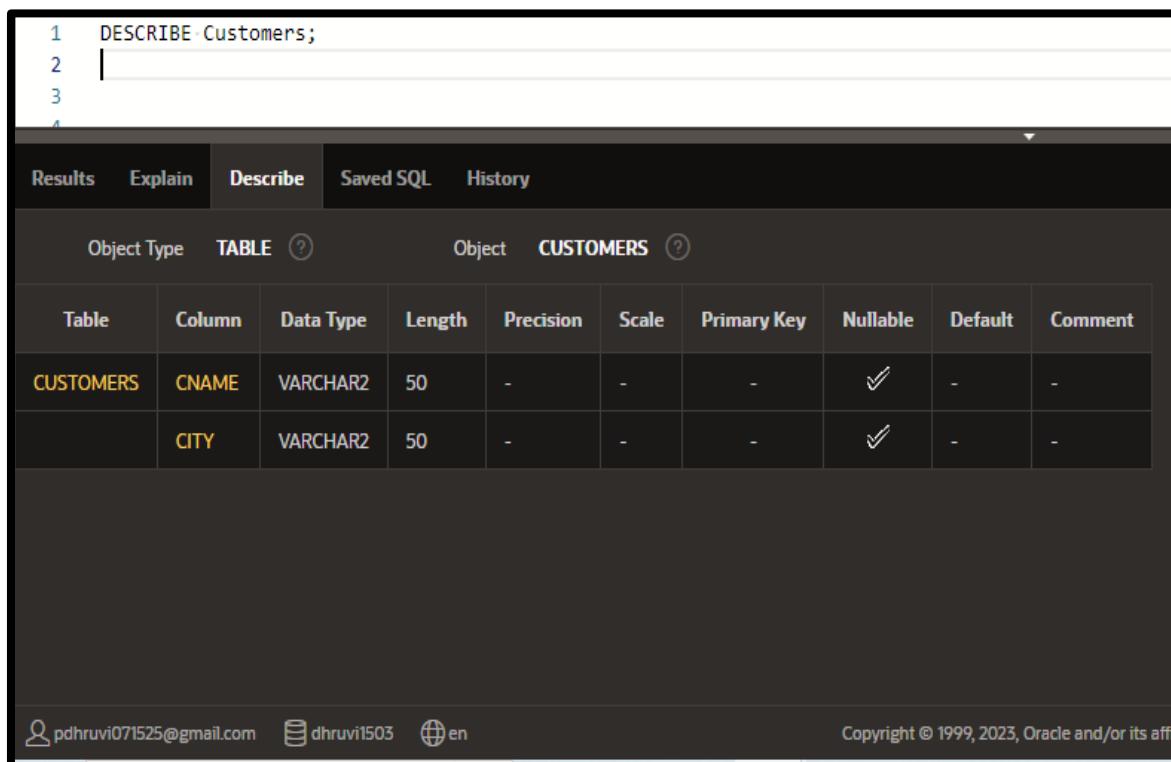


The screenshot shows the Oracle SQL Developer interface. In the top-left query editor, the command `DESCRIBE Borrow;` is entered. Below the editor, the results pane displays the structure of the `BORROW` table. The table has four columns: `LOANNO` (NUMBER, length 10, precision 0), `CNAME` (VARCHAR2, length 50), `BNAME` (VARCHAR2, length 50), and `AMOUNT` (NUMBER, length 10, precision 0). The `Primary Key` column shows '-' for all columns, indicating no primary key is defined. The `Nullable` column shows checkmarks for all columns, indicating they are nullable. The `Default` and `Comment` columns show '-' for all columns.

| Table | Column | Data Type | Length | Precision | Scale | Primary Key | Nullable | Default | Comment |
|--------|--------|-----------|--------|-----------|-------|-------------|----------|---------|---------|
| BORROW | LOANNO | NUMBER | - | 10 | 0 | - | ✓ | - | - |
| | CNAME | VARCHAR2 | 50 | - | - | - | ✓ | - | - |
| | BNAME | VARCHAR2 | 50 | - | - | - | ✓ | - | - |
| | AMOUNT | NUMBER | - | 10 | 0 | - | ✓ | - | - |

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- describe customers;



The screenshot shows the Oracle SQL Developer interface. In the top-left query editor, the command `DESCRIBE Customers;` is entered. Below the editor, the results pane displays the structure of the `CUSTOMERS` table. The table has two columns: `CNAME` (VARCHAR2, length 50) and `CITY` (VARCHAR2, length 50). The `Primary Key` column shows '-' for both columns, indicating no primary key is defined. The `Nullable` column shows checkmarks for both columns, indicating they are nullable. The `Default` and `Comment` columns show '-' for both columns.

| Table | Column | Data Type | Length | Precision | Scale | Primary Key | Nullable | Default | Comment |
|-----------|--------|-----------|--------|-----------|-------|-------------|----------|---------|---------|
| CUSTOMERS | CNAME | VARCHAR2 | 50 | - | - | - | ✓ | - | - |
| | CITY | VARCHAR2 | 50 | - | - | - | ✓ | - | - |

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3. List all data from table Deposit.

- Select * from Deposit;

The screenshot shows the Oracle APEX interface with a SQL editor at the top containing the query: `Select * from Deposit;`. Below the editor is a results grid with the following data:

| ACT_NO | CNAME | BNAME | AMOUNT | Date |
|--------|---------|------------|--------|------------|
| 107 | SHIVANI | VIRAR | 1000 | 09/05/1995 |
| 106 | SANDIP | ANDHERI | 2000 | 03/31/1996 |
| 109 | MINU | POWAI | 7000 | 08/10/1995 |
| 104 | MADHURI | CHANDI | 1200 | 12/17/1995 |
| 100 | ANIL | VRCE | 1000 | 03/01/1995 |
| 108 | KRANTI | NEHRUPLACE | 5000 | 06/02/1995 |
| 102 | MEHUL | KAROLBAGH | 3500 | 11/17/1995 |
| 101 | SUNIL | AJNI | 5000 | 01/04/1996 |
| 105 | PRMOD | M.G.ROAD | 3000 | 03/27/1996 |

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4. List all data from table Borrow.

- Select * from Borrow;

The screenshot shows the Oracle APEX interface with a SQL editor at the top containing the query: `Select * from Borrow;`. Below the editor is a results grid with the following data:

| LOANNO | CNAME | BNAME | AMOUNT |
|--------|---------|------------|--------|
| 201 | ANIL | VRCE | 1000 |
| 321 | MADHURI | ANDHERI | 2000 |
| 375 | PRMOD | VIRAR | 8000 |
| 311 | SUNIL | DHARAMPETH | 3000 |
| 206 | MEHUL | AJNI | 5000 |
| 481 | KRANTI | NEHRUPLACE | 3000 |

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5. List all data from table Customers.

- Select * from Customers;

The screenshot shows the Oracle APEX interface with a SQL query in the top text area:

```
Select * from customers;
```

The results are displayed in a table with two columns: CNAME and CITY. The data is as follows:

| CNAME | CITY |
|---------|----------|
| ANIL | CALCUTTA |
| SUNIL | DELHI |
| MEHUL | BARODA |
| MADHURI | NAGPUR |
| NAREN | BOMBAY |
| PRAMOD | NAGPUR |
| SHIVANI | BOMBAY |
| KRANTI | BOMBAY |
| SANDIP | SURAT |
| MANDAR | PATNA |

Below the table, it says "10 rows returned in 0.01 seconds" and has a "Download" link. At the bottom, there are user details (pdhruvi071525@gmail.com, dhrushi1503), copyright information (Copyright © 1999, 2023, Oracle and/or its affiliates.), and the version (Oracle APEX 23.2.1).

6. List all data from table Branch.

- Select * from Branch;

The screenshot shows the Oracle APEX interface with a SQL query in the top text area:

```
Select * from Branch;
```

The results are displayed in a table with two columns: BNAME and CITY. The data is as follows:

| BNAME | CITY |
|------------|----------|
| AJNI | NAGPUR |
| KAROLBAGH | DELHI |
| M.G.ROAD | BANGLORE |
| VIRAR | BOMBAY |
| POWAI | BOMBAY |
| CHANDI | DELHI |
| DHARAMPETH | NAGPUR |
| ANDHERI | BOMBAY |
| NEHRUPLACE | DELHI |
| VRCE | NAGPUR |

Below the table, it says "10 rows returned in 0.00 seconds" and has a "Download" link. At the bottom, there are user details (pdhruvi071525@gmail.com, dhrushi1503), copyright information (Copyright © 1999, 2023, Oracle and/or its affiliates.), and the version (Oracle APEX 23.2.1).

7. Give account no and amount of depositors.

- select act_no,amount from deposit;

SELECT Act_no,Amount FROM Deposit;

| ACT_NO | AMOUNT |
|--------|--------|
| 107 | 1000 |
| 106 | 2000 |
| 109 | 7000 |
| 104 | 1200 |
| 100 | 1000 |
| 108 | 5000 |
| 102 | 3500 |
| 101 | 5000 |
| 105 | 3000 |

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8. List all data from SAILORS.

- Select * from Sailors;

Select * from Sailors;

| SID | SNAME | RATING | AGE |
|-----|---------|--------|-----|
| 85 | Art | 3 | 26 |
| 95 | Bob | 3 | 64 |
| 32 | Andy | 8 | 26 |
| 74 | Horatio | 9 | 35 |
| 31 | Lubber | 8 | 56 |
| 64 | Horatio | 7 | 35 |
| 58 | Rusty | 10 | 35 |
| 22 | Dustin | 7 | 45 |
| 29 | Brutus | 1 | 33 |
| 71 | Zebra | 10 | 16 |

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9. List Boat Name and its color.

- Select Bname,Color from Boats;

1 Select Bname,Color From Boats;

| Results | Explain | Describe | Saved SQL | History |
|-----------|---------|----------|-----------|---------|
| | | BNAME | COLOR | |
| Interlake | | | Red | |
| Interlake | | | Blue | |
| Clipper | | | Green | |
| Marine | | | Red | |

4 rows returned in 0.01 seconds [Download](#)

10. List Employee name and its city.

- Select Emp_name, City from Employee;

1 Select Emp_name, City from Employee;
2 |

Results Explain Describe Saved SQL History

| EMP_NAME | CITY |
|----------|------------|
| Curry | Rye |
| Brooks | Brooklyn |
| Adam | Pittsfield |
| Demaldo | San Deago |

4 rows returned in 0.03 seconds [Download](#)

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11. List all the details of Clients.

- Select *from Client;

The screenshot shows the Oracle APEX interface with a SQL query in the top panel:

```
1  Select *from Client;
2
```

The results are displayed in a table:

| CL_NO | NAME | CITY | PINCODE | STATE | BALDUE |
|--------|----------------|-----------|---------|-------------|--------|
| C00002 | MarthaMuzumdar | Madras | 780001 | TamilNadu | 100 |
| C00001 | IvanBayross | Mumbai | 400054 | Maharashtra | 15000 |
| C00006 | DeepakSharma | Mangalore | 560050 | Karnataka | 1000 |
| C00004 | AshwiniJoshi | Bangalore | 560001 | Karnataka | 500 |
| C00003 | ChhayaBankar | Mumbai | 400057 | Maharashtra | 5000 |
| C00005 | HanselColaco | Mumbai | 400060 | Maharashtra | 2000 |

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12. Describe various products and its price.

- Select DSCR,SELL_PRICE from Product;

The screenshot shows the Oracle APEX interface with a SQL query in the top panel:

```
1  Select DSCR,SELL_PRICE from Product;
2
```

The results are displayed in a table:

| DSCR | SELL_PRICE |
|-------------|------------|
| Shirts | 500 |
| Jeans | 750 |
| Trousers | 850 |
| CottonJeans | 60 |
| PullOvers | 700 |
| LycraTops | 300 |
| DenimShirts | 350 |
| Skirts | 450 |
| T-Shirts | 350 |

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13. Describe sailor's name, age and its rating.

- Select Sname,Age,Rating from Sailors;

| SNAME | AGE | RATING |
|---------|-----|--------|
| Art | 26 | 3 |
| Bob | 64 | 3 |
| Andy | 26 | 8 |
| Horatio | 35 | 9 |
| Lubber | 56 | 8 |
| Horatio | 35 | 7 |
| Rusty | 35 | 10 |
| Dustin | 45 | 7 |
| Brutus | 33 | 1 |
| Zebra | 16 | 10 |

10 rows returned in 0.01 seconds Download

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14. Describe the managers of various employees.

- SELECT EmpName,ManName FROM Manager;

| EMPNAME | MANNAME |
|---------|---------|
| Adam | Smith |
| Brooks | Jones |
| Curry | Hayes |

3 rows returned in 0.02 seconds Download

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15. Describe the details of Loan for customers.

- SELECT * FROM Borrow;

| LOANNO | CNAME | BNAME | AMOUNT |
|--------|---------|------------|--------|
| 201 | ANIL | VRCE | 1000 |
| 321 | MADHURI | ANDHERI | 2000 |
| 375 | PRMOD | VIRAR | 8000 |
| 311 | SUNIL | DHARAMPETH | 3000 |
| 206 | MEHUL | AJNI | 5000 |
| 481 | KRANTI | NEHRUPLACE | 3000 |

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16. Describe the date of travel of various sailors.

- SELECT Sid,Day FROM Reserves;

| SID | DAY |
|-----|-----------|
| 22 | 10-Oct-98 |
| 22 | 10-Aug-98 |
| 31 | 11-Oct-98 |
| 31 | 11-Dec-98 |
| 22 | 10-Oct-98 |
| 64 | 9-May-98 |
| 74 | 9-Aug-98 |
| 22 | 10-Jul-98 |
| 31 | 11-Jun-98 |
| 64 | 9-Aug-98 |

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PRACTICAL: 04

Aim: Simple Queries – Part-2.

1. Give name of depositors having amount greater than 4000.

- SELECT Cname FROM Deposit WHERE Amount >4000;

The screenshot shows the Oracle APEX interface. At the top, there is a code editor with two lines of SQL:

```
1  SELECT Cname FROM Deposit WHERE Amount >4000;
2  |
```

Below the code editor is a navigation bar with tabs: Results, Explain, Describe, Saved SQL, and History. The Results tab is selected. The main area displays a table with one column labeled "CNAME". The data in the table is:

| CNAME |
|--------|
| MINU |
| KRANTI |
| SUNIL |

At the bottom of the results area, it says "3 rows returned in 0.01 seconds" and has a "Download" link. At the very bottom of the page, there is footer information:

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2. List the employees having salary less than 22000.

- SELECT*FROM work WHERE Salary< 22000;

The screenshot shows the Oracle APEX interface. At the top, there is a code editor with two lines of SQL:

```
1  SELECT*FROM work WHERE Salary< 22000;
2  |
```

Below the code editor is a navigation bar with tabs: Results, Explain, Describe, Saved SQL, and History. The Results tab is selected. The main area displays a table with three columns: "EMPNAME", "CMPNAME", and "SALARY". The data in the table is:

| EMPNAME | CMPNAME | SALARY |
|---------|---------|--------|
| Curry | SBC | 10000 |
| Adam | FBC | 20000 |
| Curry | SBC | 10000 |

At the bottom of the results area, it says "3 rows returned in 0.03 seconds" and has a "Download" link. At the very bottom of the page, there is footer information:

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3. List the sailors having age more than 25.

- SELECT*FROM Sailors WHERE Age>25;

The screenshot shows the Oracle APEX interface with a SQL query in the top bar: "1 SELECT*FROM Sailors WHERE Age>25;". Below it is a table titled "Results" with columns SID, SNAME, RATING, and AGE. The data is as follows:

| SID | SNAME | RATING | AGE |
|-----|---------|--------|-----|
| 85 | Art | 3 | 26 |
| 95 | Bob | 3 | 64 |
| 32 | Andy | 8 | 26 |
| 74 | Horatio | 9 | 35 |
| 31 | Lubber | 8 | 56 |
| 64 | Horatio | 7 | 35 |
| 58 | Rusty | 10 | 35 |
| 22 | Dustin | 7 | 45 |
| 29 | Brutus | 1 | 33 |

At the bottom, it says "9 rows returned in 0.01 seconds" and "Download". The footer includes user information (pdhruvi071525@gmail.com, dhruv1503, en), copyright (Copyright © 1999, 2023, Oracle and/or its affiliates.), and version (Oracle APEX 23.2.1).

4. List the boats travelling on 10-oct-98

- SELECT Bid FROM Reserves WHERE Day='10-Oct-98';

The screenshot shows the Oracle APEX interface with a SQL query in the top bar: "1 SELECT Bid FROM Reserves WHERE Day='10-Oct-98';". Below it is a table titled "Results" with a single column "BID". The data is as follows:

| BID |
|-----|
| 102 |
| 101 |

At the bottom, it says "2 rows returned in 0.01 seconds" and "Download". The footer includes user information (pdhruvi071525@gmail.com, dhruv1503, en), copyright (Copyright © 1999, 2023, Oracle and/or its affiliates.), and version (Oracle APEX 23.2.1).

5. List the details of boat “Interlake”.

- SELECT*FROM Boats WHERE Bname= 'Interlake';

```
1  SELECT*FROM Boats WHERE Bname= 'Interlake';
```

Results Explain Describe Saved SQL History

| BID | BNAME | COLOR |
|-----|-----------|-------|
| 102 | Interlake | Red |
| 101 | Interlake | Blue |

2 rows returned in 0.01 seconds [Download](#)

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6. List the details of the red colored boat.

- SELECT*FROM Boats WHERE Color= 'Red';

```
1  SELECT*FROM Boats WHERE Color= 'Red';
```

Results Explain Describe Saved SQL History

| BID | BNAME | COLOR |
|-----|-----------|-------|
| 102 | Interlake | Red |
| 104 | Marine | Red |

2 rows returned in 0.01 seconds [Download](#)

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7. List the details of clients whose city is Mumbai

- SELECT*FROM Client WHERE City= 'Mumbai';

```
1  SELECT*FROM Client WHERE City= 'Mumbai';
```

| CL_NO | NAME | CITY | PINCODE | STATE | BALDUE |
|--------|--------------|--------|---------|-------------|--------|
| C00001 | IvanBayross | Mumbai | 400054 | Maharashtra | 15000 |
| C00003 | ChhayaBankar | Mumbai | 400057 | Maharashtra | 5000 |
| C00005 | HanselColaco | Mumbai | 400060 | Maharashtra | 2000 |

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8. List Client Name, due balance and city of the clients having balance greater than 1500.

- S ELECT Name,Baldue,City FROM Client WHERE Baldue>1500';

```
1  SELECT Name,Baldue,City FROM Client WHERE Baldue>1500;
```

| NAME | BALDUE | CITY |
|--------------|--------|--------|
| IvanBayross | 15000 | Mumbai |
| ChhayaBankar | 5000 | Mumbai |
| HanselColaco | 2000 | Mumbai |

3 rows returned in 0.01 seconds [Download](#)

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9. Describe the details of products having selling price less than 500.

- SELECT*FROM Product WHERE Sell_Price<500;

```
1  SELECT*FROM Product WHERE Sell_Price<500;
```

| PR_NO | DSCR | PROFIT | UNIT | QTY | REORDER_LVL | SELL_PRICE | COST_PRICE |
|--------|-------------|--------|-------|-----|-------------|------------|------------|
| P06734 | CottonJeans | 5 | Piece | 100 | 20 | 60 | 450 |
| P07975 | LycraTops | 5 | Piece | 70 | 30 | 300 | 175 |
| P07965 | DenimShirts | 4 | Piece | 100 | 40 | 350 | 250 |
| P08865 | Skirts | 5 | Piece | 75 | 30 | 450 | 300 |
| P00001 | T-Shirts | 5 | Piece | 200 | 50 | 350 | 250 |

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10. List the products for which quantity ordered is less than 120 and cost price is greater than 250.

- SELECT*FROM Product WHERE Qty<120 AND Cost_Price>250;

```
1  SELECT*FROM Product WHERE Qty<120 AND Cost_Price>250;
```

| PR_NO | DSCR | PROFIT | UNIT | QTY | REORDER_LVL | SELL_PRICE | COST_PRICE |
|--------|-------------|--------|-------|-----|-------------|------------|------------|
| P07865 | Jeans | 5 | Piece | 100 | 20 | 750 | 500 |
| P06734 | CottonJeans | 5 | Piece | 100 | 20 | 60 | 450 |
| P07885 | PullOvers | 3 | Piece | 80 | 30 | 700 | 450 |
| P08865 | Skirts | 5 | Piece | 75 | 30 | 450 | 300 |

4 rows returned in 0.01 seconds
 [Download](#)

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11. Display account details having amount greater 2200.

- SELECT*FROM Deposit WHERE Amount > 2200;

```
1   SELECT*FROM Deposit WHERE Amount > 2200;
```

| ACT_NO | CNAME | BNAME | AMOUNT | Date |
|--------|--------|-------------|--------|------------|
| 109 | MINU | POWAI | 7000 | 08/10/1995 |
| 108 | KRANTI | NEHRUPPLACE | 5000 | 06/02/1995 |
| 102 | MEHUL | KAROLBAGH | 3500 | 11/17/1995 |
| 101 | SUNIL | AJNI | 5000 | 01/04/1996 |
| 105 | PRMOD | M.G.ROAD | 3000 | 03/27/1996 |

5 rows returned in 0.01 seconds [Download](#)

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12. Display all the customers staying in Nagpur.

- SELECT*FROM Customers WHERE City='NAGPUR';

```
1   SELECT*FROM Customers WHERE City='NAGPUR';
```

| CNAME | CITY |
|---------|--------|
| MADHURI | NAGPUR |
| PRAMOD | NAGPUR |

2 rows returned in 0.01 seconds [Download](#)

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13. Display the names of sailors having rating greater than 7

- SELECT Sname FROM Sailors WHERE Rating>7;

```
1  SELECT Sname FROM Sailors WHERE Rating>7;
```

| SNAME |
|---------|
| Andy |
| Horatio |
| Lubber |
| Rusty |
| Zebra |

5 rows returned in 0.00 seconds [Download](#)

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14. Display the orders made in the month of June

- SELECT*FROM Salesorder WHERE EXTRACT(MONTH FROM O_dat)=6;

```
1  SELECT*FROM Salesorder WHERE EXTRACT(MONTH FROM O_dat)=6;
```

| OD_NO | CL_NO | O_DAT | SL_NO | D_TYPE | BILL | D_DAT | STATUS |
|--------|--------|------------|--------|--------|------|------------|-----------|
| O19002 | C00002 | 06/25/2004 | S00002 | P | N | 06/27/2004 | Cancelled |
| O19001 | C00001 | 06/12/2004 | S00001 | F | N | 07/20/2004 | InProcess |

2 rows returned in 0.02 seconds [Download](#)

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15. List all the accounts created in the month of March.

- SELECT * FROM Deposit WHERE Dates = '1-MAR-95' OR Dates = '27-MAR-96' OR Dates = '31-MAR-96';

```
1  SELECT * FROM Deposit WHERE Dates = '1-MAR-95' OR Dates = '27-MAR-96'
2  OR Dates = '31-MAR-96';

Results Explain Describe Saved SQL History
```

| ACT_NO | CNAME | BNAME | AMOUNT | DATES |
|--------|--------|----------|--------|-----------|
| 106 | SANDIP | ANDHERI | 2000 | 31-MAR-96 |
| 105 | PRMOD | M.G.ROAD | 3000 | 27-MAR-96 |
| 100 | ANIL | VRCE | 1000 | 1-MAR-95 |

3 rows returned in 0.01 seconds [Download](#)

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 en

PRACTICAL: 05

Aim: “Like” Queries

1. Display all customers whose name start with ‘M’

- SELECT*FROM Customers WHERE Cname LIKE'M%';

| CNAME | CITY |
|---------|--------|
| MEHUL | BARODA |
| MADHURI | NAGPUR |
| MANDAR | PATNA |

3 rows returned in 0.01 seconds [Download](#)

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2. Display all customers whose name ends with ‘L’

- SELECT*FROM Customers WHERE Cname LIKE '%L';

| CNAME | CITY |
|-------|----------|
| ANIL | CALCUTTA |
| SUNIL | DELHI |
| MEHUL | BARODA |

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3. Display all Loan whose Branch name start with ‘A’

- SELECT*FROM Borrow WHERE Bname LIKE 'A%';

The screenshot shows the Oracle APEX interface. At the top, there is a code editor window containing the SQL query:

```
1  SELECT*FROM Borrow WHERE Bname LIKE 'A%';
```

Below the code editor is a results grid table with four columns: LOANNO, CNAME, BNAME, and AMOUNT. The data returned is:

| LOANNO | CNAME | BNAME | AMOUNT |
|--------|---------|---------|--------|
| 321 | MADHURI | ANDHERI | 2000 |
| 206 | MEHUL | AJNI | 5000 |

Below the table, it says "2 rows returned in 0.02 seconds" and has a "Download" link.

At the bottom of the interface, there are user details (pdhruvi071525@gmail.com, dhrushi1503), copyright information (Copyright © 1999, 2023, Oracle and/or its affiliates.), and the version (Oracle APEX 23.2.1).

4. Display the details of sailors whose name is minimum 6 characters long.

- SELECT*FROM Sailors WHERE LENGTH(Sname)>=6;

The screenshot shows the Oracle APEX interface. At the top, there is a code editor window containing the SQL query:

```
1  SELECT*FROM Sailors WHERE LENGTH(Sname)>=6;
```

Below the code editor is a results grid table with four columns: SID, SNAME, RATING, and AGE. The data returned is:

| SID | SNAME | RATING | AGE |
|-----|---------|--------|-----|
| 74 | Horatio | 9 | 35 |
| 31 | Lubber | 8 | 56 |
| 64 | Horatio | 7 | 35 |
| 22 | Dustin | 7 | 45 |
| 29 | Brutus | 1 | 33 |

Below the table, it says "5 rows returned in 0.01 seconds" and has a "Download" link.

At the bottom of the interface, there are user details (pdhruvi071525@gmail.com, dhrushi1503), copyright information (Copyright © 1999, 2023, Oracle and/or its affiliates.), and the version (Oracle APEX 23.2.1).

5. Display the details of Employees whose address starts with ‘S’.

- SELECT*FROM Employee WHERE Street LIKE 'S%';

| EMP_NAME | STREET | CITY |
|----------|----------|------------|
| Brooks | Senator | Brooklyn |
| Adam | Spring | Pittsfield |
| Demalo | Sunshine | San Deago |

3 rows returned in 0.03 seconds [Download](#)

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6. List the details of the boat ending with ‘e’.

- SELECT*FROM Boats WHERE Bname LIKE '%e';

| BID | BNAME | COLOR |
|-----|-----------|-------|
| 102 | Interlake | Red |
| 101 | Interlake | Blue |
| 104 | Marine | Red |

3 rows returned in 0.00 seconds [Download](#)

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7. List the details of clients having 'h' as a 3rd character in his/her name.

- SELECT*FROM Client WHERE Name LIKE '__h%';

1 `SELECT*FROM Client WHERE Name LIKE '__h%';`

Results Explain Describe Saved SQL History

| CL_NO | NAME | CITY | PINCODE | STATE | BALDUE |
|--------|--------------|-----------|---------|-------------|--------|
| C00004 | AshwiniJoshi | Bangalore | 560001 | Karnataka | 500 |
| C00003 | ChhayaBankar | Mumbai | 400057 | Maharashtra | 5000 |

2 rows returned in 0.01 seconds [Download](#)

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8. List Client Name, due balance and city whose pin code starts with 4.

- SELECT Name,Baldue,City FROM Client WHERE Pincode LIKE '4%';

1 `SELECT Name,Baldue,City FROM Client WHERE Pincode LIKE '4%';`

Results Explain Describe Saved SQL History

| NAME | BALDUE | CITY |
|--------------|--------|--------|
| IvanBayross | 15000 | Mumbai |
| ChhayaBankar | 5000 | Mumbai |
| HanselColaco | 2000 | Mumbai |

3 rows returned in 0.01 seconds [Download](#)

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9. List all customers whose city contains ‘a’ as second character.

- SELECT*FROM Customers WHERE City LIKE '_A%';

The screenshot shows the Oracle APEX SQL Developer interface. At the top, there is a code editor with the following SQL query:

```
1  SELECT*FROM Customers WHERE City LIKE '_A%';
```

Below the code editor is a toolbar with tabs: Results, Explain, Describe, Saved SQL, and History. The Results tab is selected. The main area displays a table with two columns: CNAME and CITY. The data is as follows:

| CNAME | CITY |
|---------|----------|
| ANIL | CALCUTTA |
| MEHUL | BARODA |
| MADHURI | NAGPUR |
| PRAMOD | NAGPUR |
| MANDAR | PATNA |

At the bottom of the results area, it says "5 rows returned in 0.00 seconds" and has a "Download" link. The footer of the interface includes the user information "pdhruvi071525@gmail.com dhruv1503", the copyright notice "Copyright © 1999, 2023, Oracle and/or its affiliates.", and the version "Oracle APEX 23.2.1".

10. List client names and city whose state has ‘a’ as fourth or fifth character.

- SELECT Name,City FROM Client WHERE State LIKE'___a%'OR State LIKE'____a%';

The screenshot shows the Oracle APEX SQL Developer interface. At the top, there is a code editor with the following SQL query:

```
1  SELECT Name,City FROM Client WHERE State LIKE'___a%'OR State
2  LIKE'____a%';
```

Below the code editor is a toolbar with tabs: Results, Explain, Describe, Saved SQL, and History. The Results tab is selected. The main area displays a table with two columns: NAME and CITY. The data is as follows:

| NAME | CITY |
|--------------|-----------|
| IvanBayross | Mumbai |
| DeepakSharma | Mangalore |
| AshwiniJoshi | Bangalore |
| ChhayaBankar | Mumbai |
| HanselColaco | Mumbai |

At the bottom of the results area, it says "5 rows returned in 0.01 seconds" and has a "Download" link. The footer of the interface includes the user information "pdhruvi071525@gmail.com dhruv1503", the copyright notice "Copyright © 1999, 2023, Oracle and/or its affiliates.", and the version "Oracle APEX 23.2.1".

PRACTICAL: 06

Aim: “Aggregate Functions & DML” Queries

1. List total deposit from deposit.

- SELECT SUM(Amount) AS Total_Deposit FROM Deposit;

The screenshot shows the Oracle APEX interface. At the top, there is a code editor window containing the following SQL query:

```
1  SELECT SUM(Amount) AS Total_Deposit FROM Deposit;
2
```

Below the code editor is a results grid. The first row of the grid has a header "TOTAL_DEPOSIT". The second row contains the value "28700". Below the grid, it says "1 rows returned in 0.01 seconds" and there is a "Download" link. At the bottom of the interface, there is user information ("pdhruvi071525@gmail.com", "dhruvi1503", "en") and copyright information ("Copyright © 1999, 2023, Oracle and/or its affiliates.", "Oracle APEX 23.2.1").

2. Give maximum loan given to the customer.

- SELECT MAX(Amount) AS MaximumLoan FROM Borrow;

The screenshot shows the Oracle APEX interface. At the top, there is a code editor window containing the following SQL query:

```
1  SELECT MAX(Amount) AS MaximumLoan FROM Borrow;
```

Below the code editor is a results grid. The first row of the grid has a header "MAXIMUMLOAN". The second row contains the value "8000". Below the grid, it says "1 rows returned in 0.01 seconds" and there is a "Download" link. At the bottom of the interface, there is user information ("pdhruvi071525@gmail.com", "dhruvi1503", "en") and copyright information ("Copyright © 1999, 2023, Oracle and/or its affiliates.", "Oracle APEX 23.2.1").

3. Describe the average age of all the sailors.

- SELECT AVG(Age) AS Average_Age FROM Sailors;

The screenshot shows the Oracle APEX interface. At the top, there is a code editor window containing the SQL query:

```
1  SELECT AVG(Age) AS Average_Age FROM Sailors;
```

Below the code editor is a toolbar with tabs: Results, Explain, Describe, Saved SQL, and History. The Results tab is selected. The results section displays the output of the query:

| AVERAGE_AGE |
|-------------|
| 37.1 |

Below the results, it says "1 rows returned in 0.01 seconds" and has a "Download" link. At the bottom of the page, there is user information (pdhruvi071525@gmail.com, dhruvi1503, en), copyright information (Copyright © 1999, 2023, Oracle and/or its affiliates.), and the text "Oracle APEX 23.2.1".

4. Count total number of customers.

- SELECT COUNT(*) AS Total_Customers FROM Customers;

The screenshot shows the Oracle APEX interface. At the top, there is a code editor window containing the SQL query:

```
1  SELECT COUNT(*) AS Total_Customers FROM Customers;
```

Below the code editor is a toolbar with tabs: Results, Explain, Describe, Saved SQL, and History. The Results tab is selected. The results section displays the output of the query:

| TOTAL_CUSTOMERS |
|-----------------|
| 10 |

Below the results, it says "1 rows returned in 0.00 seconds" and has a "Download" link. At the bottom of the page, there is user information (pdhruvi071525@gmail.com, dhruvi1503, en), copyright information (Copyright © 1999, 2023, Oracle and/or its affiliates.), and the text "Oracle APEX 23.2.1".

5. Count total number of customer's cities

- SELECT COUNT(DISTINCT City) AS Total_Cities FROM Customers;

The screenshot shows the Oracle APEX SQL developer interface. At the top, there is a code editor window containing the following SQL query:

```
1  SELECT COUNT(DISTINCT City) AS Total_Cities FROM Customers;
```

Below the code editor is a navigation bar with tabs: Results, Explain, Describe, Saved SQL, and History. The Results tab is selected. The main results area displays a single row with the heading "TOTAL_CITIES" and the value "7". Below the results, it says "1 rows returned in 0.00 seconds" and has a "Download" link. At the bottom of the interface, there is a footer with user information (pdhruvi071525@gmail.com, dhrushi1503, en), copyright information (Copyright © 1999, 2023, Oracle and/or its affiliates.), and the text "Oracle APEX 23.2.1".

6. Display total target for the salesman.

- SELECT SUM (Tgt) AS Total_Target FROM Salesman;

The screenshot shows the Oracle APEX SQL developer interface. At the top, there is a code editor window containing the following SQL query:

```
1  SELECT SUM (Tgt) AS Total_Target FROM Salesman;
```

Below the code editor is a navigation bar with tabs: Results, Explain, Describe, Saved SQL, and History. The Results tab is selected. The main results area displays a single row with the heading "TOTAL_TARGET" and the value "700". Below the results, it says "1 rows returned in 0.01 seconds" and has a "Download" link. At the bottom of the interface, there is a footer with user information (pdhruvi071525@gmail.com, dhrushi1503, en), copyright information (Copyright © 1999, 2023, Oracle and/or its affiliates.), and the text "Oracle APEX 23.2.1".

7. Update the salary of the employee having 10000 to 11500 .

- UPDATE Work SET Salary=11500 WHERE Salary=10000;

The screenshot shows the Oracle APEX interface. At the top, there is a toolbar with various icons. Below it is a menu bar with tabs: Results, Explain, Describe, Saved SQL, and History. The main area contains the following text:

```
1 UPDATE Work SET Salary=11500 WHERE Salary=10000;
```

2 row(s) updated.

0.01 seconds

In the bottom left corner, there is a user profile icon and the email address pdhruvi071525@gmail.com. Next to it is another icon with the text "dhruvil503". On the right side, there is a copyright notice: "Copyright © 1999, 2023, Oracle and/or its affiliates." and the text "Oracle APEX 23.2.1".

8. Update the city of client from Bangalore to Bengaluru

- UPDATE Client SET City='Bengaluru' WHERE City='Bangalore';

The screenshot shows the Oracle APEX interface. At the top, there is a toolbar with various icons. Below it is a menu bar with tabs: Results, Explain, Describe, Saved SQL, and History. The main area contains the following text:

```
1 UPDATE Client SET City='Bengaluru' WHERE City='Bangalore';
```

1 row(s) updated.

0.01 seconds

In the bottom left corner, there is a user profile icon and the email address pdhruvi071525@gmail.com. Next to it is another icon with the text "dhruvil503". On the right side, there is a copyright notice: "Copyright © 1999, 2023, Oracle and/or its affiliates." and the text "Oracle APEX 23.2.1".

9. Give the 15% hike in the salary of all the Employees. Rename that column to “New Salary”

- SELECT Salary*1.15 AS "NewSalary"from Work;

The screenshot shows the Oracle APEX interface with the following details:

- SQL Statement:** 1 `SELECT Salary*1.15 AS "NewSalary"from Work;`
- Results Tab:** Shows the output of the query, which contains four rows of data: 34500, 13225, 23000, and 13225.
- Timing:** 4 rows returned in 0.01 seconds
- Download:** A link to download the results.
- User Information:** pdhruvi071525@gmail.com, dhruvi1503, en
- Copyright:** Copyright © 1999, 2023, Oracle and/or its affiliates.
- Version:** Oracle APEX 23.2.1

10. Increase the sell price of all products by 20% and label new column as “New Sell Price”.

- Select Sell_price*1.15 AS "New_Sell_Price" from Product;

The screenshot shows the Oracle APEX interface with the following details:

- SQL Statement:** 1 `Select Sell_price*1.15 AS "New_Sell_Price" from Product;`
- Results Tab:** Shows the output of the query, which contains nine rows of data: 575, 862.5, 977.5, 69, 805, 345, 402.5, 517.5, and 402.5.
- Timing:** 9 rows returned in 0.01 seconds
- Download:** A link to download the results.
- User Information:** pdhruvi071525@gmail.com, dhruvi1503, en
- Copyright:** Copyright © 1999, 2023, Oracle and/or its affiliates.
- Version:** Oracle APEX 23.2.1

PRACTICAL: 07

Aim: “Join” Queries

1. Find the salary of Adam.

- SELECT Salary FROM Work WHERE Empname ='Adam';

The screenshot shows a SQL query execution interface. The query is:

```
1  SELECT Salary FROM Work WHERE Empname = 'Adam' ;
```

The results section displays a single row with the value "20000". Below the results, it says "1 rows returned in 0.01 seconds" and provides a "Download" link. At the bottom, there are user profile icons and copyright information: "pdhruvi071525@gmail.com dhruvil503", "Copyright © 1999, 2023, Oracle and/or its affiliates.", and "Oracle APEX 23.2.1".

2. Find the city where Brooks work.

- SELECT City FROM Employee JOIN Work ON Employee.Empname=Work.Empname WHERE Work.Empname = 'Brooks';

The screenshot shows a SQL query execution interface. The query is:

```
1  SELECT City FROM Employee JOIN Work ON Employee.Empname=Work.Empname
2  WHERE Work.Empname = 'Brooks' ;
```

The results section displays a single row with the value "Brooklyn". Below the results, it says "1 rows returned in 0.01 seconds" and provides a "Download" link. At the bottom, there are user profile icons and copyright information: "pdhruvi071525@gmail.com dhruvil503", "Copyright © 1999, 2023, Oracle and/or its affiliates.", and "Oracle APEX 23.2.1".

3. Display the sailor's details whose boat is booked for 9th May, 98.

- SELECT S.* FROM Sailors S JOIN Reserves R ON S.Sid = R.Sid WHERE R.Day = '9-May-98';

```
1  SELECT S.* FROM Sailors S JOIN Reserves R ON S.Sid = R.Sid
2  WHERE R.Day = '9-May-98';
3
```

Results [Explain](#) [Describe](#) [Saved SQL](#) [History](#)

| SID | SNAME | RATING | AGE |
|-----|---------|--------|-----|
| 64 | Horatio | 7 | 35 |

1 rows returned in 0.00 seconds [Download](#)

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4. Display the day of ride and sailor name for boat 103.

- SELECT R.Day,S.Sname FROM Reserves R JOIN Sailors S ON R.Sid=S.Sid WHERE R.Bid=103;

```
1  SELECT R.Day,S.Sname FROM Reserves R JOIN Sailors S ON
2  R.Sid=S.Sid WHERE R.Bid=103;
```

Results [Explain](#) [Describe](#) [Saved SQL](#) [History](#)

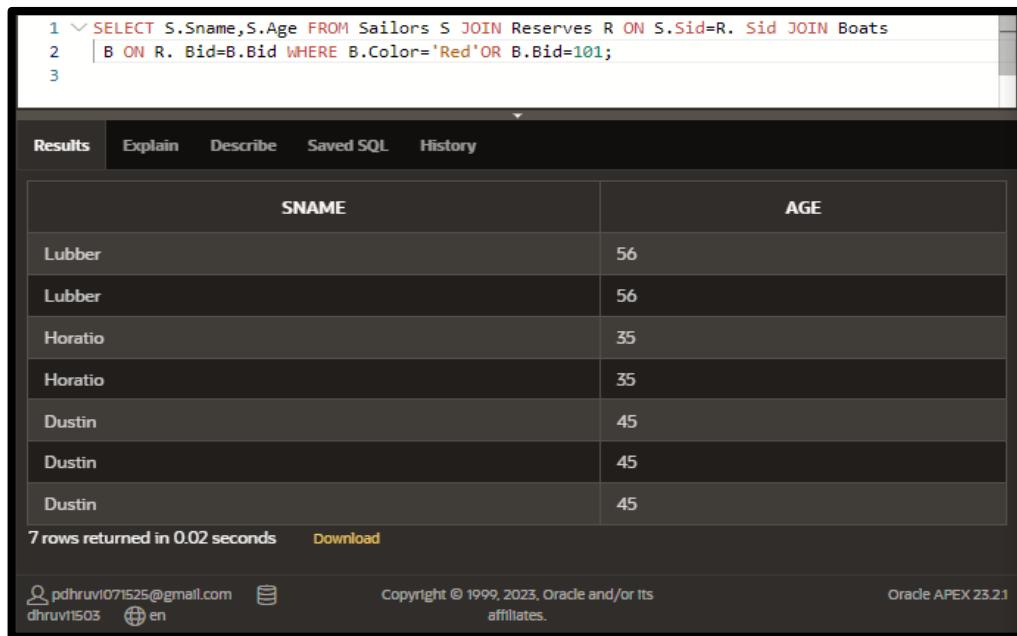
| DAY | SNAME |
|-----------|---------|
| 9-Aug-98 | Horatio |
| 11-Jun-98 | Lubber |
| 10-Aug-98 | Dustin |

3 rows returned in 0.01 seconds [Download](#)

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5. Display the sailor name and its age for Red colored and 101 boat.

- SELECT S.Sname,S.Age FROM Sailors S JOIN Reserves R ON S.Sid=R. Sid JOIN Boats B ON R.Bid=B.Bid WHERE B.Color='Red'OR B.Bid=101;



```

1 ✓ SELECT S.Sname,S.Age FROM Sailors S JOIN Reserves R ON S.Sid=R. Sid JOIN Boats
2   | B ON R. Bid=B.Bid WHERE B.Color='Red'OR B.Bid=101;
3

```

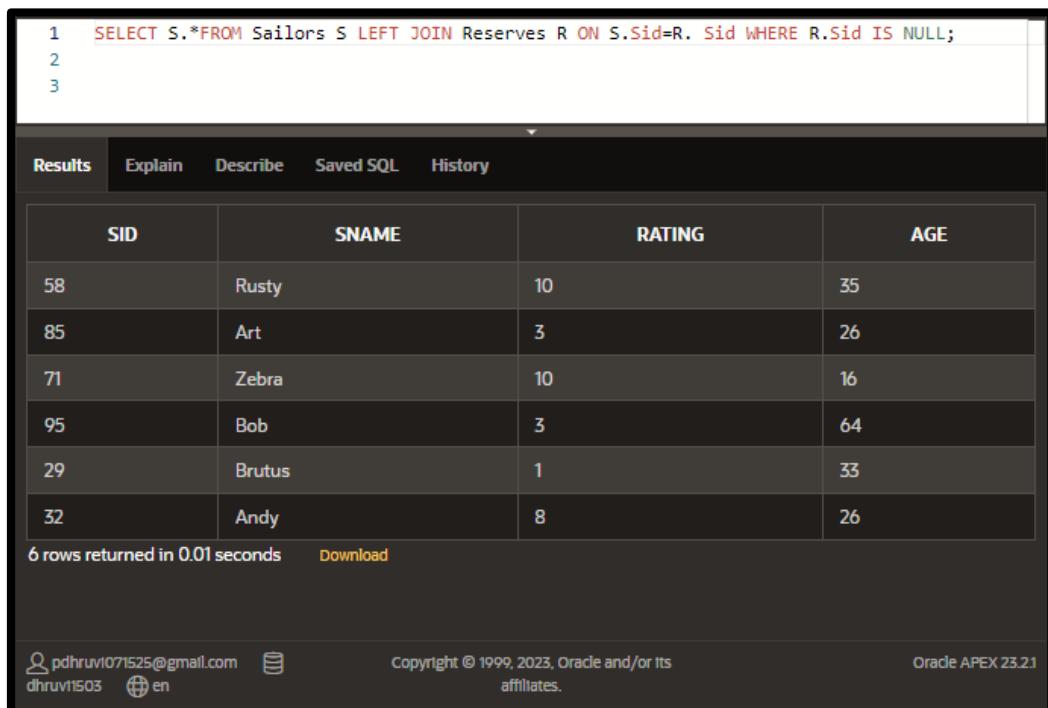
| SNAME | AGE |
|---------|-----|
| Lubber | 56 |
| Lubber | 56 |
| Horatio | 35 |
| Horatio | 35 |
| Dustin | 45 |
| Dustin | 45 |
| Dustin | 45 |

7 rows returned in 0.02 seconds [Download](#)

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6. Display the sailor details whose boat is never booked.

- SELECT S.*FROM Sailors S LEFT JOIN Reserves R ON S.Sid=R. Sid WHERE R.Sid IS NULL;



```

1 SELECT S.*FROM Sailors S LEFT JOIN Reserves R ON S.Sid=R. Sid WHERE R.Sid IS NULL;
2
3

```

| SID | SNAME | RATING | AGE |
|-----|--------|--------|-----|
| 58 | Rusty | 10 | 35 |
| 85 | Art | 3 | 26 |
| 71 | Zebra | 10 | 16 |
| 95 | Bob | 3 | 64 |
| 29 | Brutus | 1 | 33 |
| 32 | Andy | 8 | 26 |

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7. Display the sailor name that has Red or Green Boat.

- SELECT DISTINCT S.Sname FROM Sailors S JOIN Reserves R ON S.Sid = R.Sid JOIN Boats B ON R.Bid = B.Bid WHERE B.Color IN('Red','Green');

```

1  SELECT DISTINCT S.Sname FROM Sailors S JOIN Reserves R ON S.Sid = R.Sid
2  | JOIN Boats B ON R.Bid = B.Bid WHERE B.Color IN('Red','Green');
3

```

| SNAME |
|---------|
| Horatio |
| Lubber |
| Dustin |

3 rows returned in 0.02 seconds [Download](#)

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8. Display all sailor details and boat details and who has Interlake boat

- SELECT S.* , B.* FROM Sailors S JOIN Reserves R ON S.Sid=R.Sid JOIN Boats B ON R.Bid = B.Bid WHERE B.Bname = 'Interlake';

```

1  SELECT S.* , B.* FROM Sailors S JOIN Reserves R ON S.Sid=R.Sid JOIN
2  | Boats B ON R.Bid = B.Bid WHERE B.Bname = 'Interlake';
3

```

| SID | SNAME | RATING | AGE | BID | BNAME | COLOR |
|-----|---------|--------|-----|-----|-----------|-------|
| 31 | Lubber | 8 | 56 | 102 | Interlake | Red |
| 64 | Horatio | 7 | 35 | 101 | Interlake | Blue |
| 64 | Horatio | 7 | 35 | 102 | Interlake | Red |
| 22 | Dustin | 7 | 45 | 102 | Interlake | Red |
| 22 | Dustin | 7 | 45 | 101 | Interlake | Blue |

5 rows returned in 0.01 seconds [Download](#)

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9. Display sailor's rating with boat details or the trip on 10th October, 98.

- SELECT S.Rating, B.Bid, B.Bname, B.Color FROM Sailors S JOIN Reserves R ON S.Sid = R.Sid JOIN Boats B ON R.Bid = B.Bid WHERE R.Day = '10-Oct-98';

```

1  SELECT S.Rating, B.Bid, B.Bname, B.Color
2  FROM Sailors S
3  JOIN Reserves R ON S.Sid = R.Sid
4  JOIN Boats B ON R.Bid = B.Bid
5  WHERE R.Day = '10-Oct-98';
6

```

| Results | Explain | Describe | Saved SQL | History | | | | | | | | | | | | |
|---|---------|-----------|-----------|---------|---|-----|-----------|-----|---|-----|-----------|------|--|--|--|--|
| | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>RATING</th> <th>BID</th> <th>BNAME</th> <th>COLOR</th> </tr> </thead> <tbody> <tr> <td>7</td> <td>102</td> <td>Interlake</td> <td>Red</td> </tr> <tr> <td>7</td> <td>101</td> <td>Interlake</td> <td>Blue</td> </tr> </tbody> </table> <p>2 rows returned in 0.01 seconds Download</p> | RATING | BID | BNAME | COLOR | 7 | 102 | Interlake | Red | 7 | 101 | Interlake | Blue | | | | |
| RATING | BID | BNAME | COLOR | | | | | | | | | | | | | |
| 7 | 102 | Interlake | Red | | | | | | | | | | | | | |
| 7 | 101 | Interlake | Blue | | | | | | | | | | | | | |
| <p> pdhruvil071525@gmail.com dhruvil0503 en</p> <p>Copyright © 1999, 2023, Oracle and/or its affiliates.</p> <p>Oracle APEX 23.2.1</p> | | | | | | | | | | | | | | | | |

10. Display the sailor id and name whose age is more than 42 or who has Blue colored boat.

- SELECT S.Sid,S.Sname FROM Sailors S JOIN Reserves R ON S.Sid=R. Sid JOIN Boats B ON R. Bid=B.Bid WHERE S.Age>42 OR B. Color = 'Blue';

```

1  SELECT S.Sid,S.Sname FROM Sailors S JOIN Reserves R ON S.Sid=R. Sid JOIN
2  | Boats B ON R. Bid=B.Bid WHERE S.Age>42 OR B. Color = 'Blue';
3

```

| Results | Explain | Describe | Saved SQL | History | | | | | | | | | | | | | | | | |
|---|---------|----------|-----------|---------|----|--------|----|--------|----|---------|----|--------|----|--------|----|--------|--|--|--|--|
| <table border="1"> <thead> <tr> <th>SID</th> <th>SNAME</th> </tr> </thead> <tbody> <tr> <td>31</td> <td>Lubber</td> </tr> <tr> <td>31</td> <td>Lubber</td> </tr> <tr> <td>31</td> <td>Lubber</td> </tr> <tr> <td>64</td> <td>Horatio</td> </tr> <tr> <td>22</td> <td>Dustin</td> </tr> <tr> <td>22</td> <td>Dustin</td> </tr> <tr> <td>22</td> <td>Dustin</td> </tr> </tbody> </table> <p>8 rows returned in 0.02 seconds Download</p> | SID | SNAME | 31 | Lubber | 31 | Lubber | 31 | Lubber | 64 | Horatio | 22 | Dustin | 22 | Dustin | 22 | Dustin | | | | |
| SID | SNAME | | | | | | | | | | | | | | | | | | | |
| 31 | Lubber | | | | | | | | | | | | | | | | | | | |
| 31 | Lubber | | | | | | | | | | | | | | | | | | | |
| 31 | Lubber | | | | | | | | | | | | | | | | | | | |
| 64 | Horatio | | | | | | | | | | | | | | | | | | | |
| 22 | Dustin | | | | | | | | | | | | | | | | | | | |
| 22 | Dustin | | | | | | | | | | | | | | | | | | | |
| 22 | Dustin | | | | | | | | | | | | | | | | | | | |
| <p> pdhruvil071525@gmail.com dhruvil0503 en</p> <p>Copyright © 1999, 2023, Oracle and/or its affiliates.</p> <p>Oracle APEX 23.2.1</p> | | | | | | | | | | | | | | | | | | | | |

11. Display name and rating of sailor whose boat name is Clipper.

- SELECT S.Sname,S.Rating FROM Sailors S JOIN Reserves R ON S.Sid=R.Sid JOIN Boats B ON R. Bid = B. Bid WHERE B. Bname = 'Clipper';

```

1  SELECT S.Sname,S.Rating FROM Sailors S JOIN Reserves R ON S.Sid=R.Sid JOIN
2  Boats B ON R. Bid = B. Bid WHERE B. Bname = 'Clipper'
3

```

| SNAME | RATING |
|---------|--------|
| Dustin | 7 |
| Horatio | 9 |
| Lubber | 8 |

3 rows returned in 0.01 seconds [Download](#)

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 dhruvi1503 en

12. List products whose selling price is more than 500 and less than equal to 750.

- SELECT DSCR,Sell_Price FROM Product WHERE Sell_Price>500 AND Sell_Price<=750;

```

1  SELECT MAX(Salary) AS Second_Highest_Salary FROM Work WHERE
2  Salary<(SELECT MAX(Salary)FROM Work);

```

| SECOND_HIGHEST_SALARY |
|-----------------------|
| 20000 |

1 rows returned in 0.01 seconds [Download](#)

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13. Describe the second highest salary of an employee.

- SELECT MAX(Salary) AS Second_Highest_Salary FROM Work WHERE Salary<(SELECT MAX(Salary)FROM Work);

The screenshot shows the Oracle APEX interface with a SQL editor window containing the following code:

```

1  SELECT MAX(Salary) AS Second_Highest_Salary FROM Work WHERE
2  Salary<(SELECT MAX(Salary)FROM Work);

```

Below the code, there are tabs for Results, Explain, Describe, Saved SQL, and History. The Results tab is selected, displaying the output:

| SECOND_HIGHEST_SALARY | |
|-----------------------|--|
| 20000 | |

Below the table, it says "1 rows returned in 0.01 seconds" and has a "Download" link. At the bottom of the interface, it shows the user information pdhruvi071525@gmail.com, dhruvi1503, and en, along with copyright information for Oracle and the APEX version Oracle APEX 23.2.1.

14. Display the date of travel and sailor's name whose age is between 35 and 65.

- SELECT R.Day AS Date_Of_Travel,S.Sname AS Sailor_Name FROM Sailors S JOIN Reserves R ON S.Sid=R. Sid WHERE S.Age BETWEEN 35 AND 65;

The screenshot shows the Oracle APEX interface with a SQL editor window containing the following code:

```

1  SELECT R.Day AS Date_Of_Travel,S.Sname AS Sailor_Name FROM Sailors S
2  JOIN Reserves R ON S.Sid=R. Sid WHERE S.Age BETWEEN 35 AND 65;

```

Below the code, there are tabs for Results, Explain, Describe, Saved SQL, and History. The Results tab is selected, displaying the output:

| DATE_OF_TRAVEL | | SAILOR_NAME |
|----------------|--|-------------|
| 10-Oct-98 | | Dustin |
| 10-Aug-98 | | Dustin |
| 11-Oct-98 | | Lubber |
| 11-Dec-98 | | Lubber |
| 10-Oct-98 | | Dustin |
| 9-May-98 | | Horatio |
| 9-Aug-98 | | Horatio |
| 10-Jul-98 | | Dustin |
| 11-Jun-98 | | Lubber |
| 9-Aug-98 | | Horatio |

Below the table, it says "10 rows returned in 0.01 seconds" and has a "Download" link. At the bottom of the interface, it shows the user information pdhruvi071525@gmail.com, dhruvi1503, and en, along with copyright information for Oracle and the APEX version Oracle APEX 23.2.1.

15. List all the employees working for “FBC”.

- SELECT E.Empname,E.Street,E.City FROM Employee E JOIN Work W ON E.Empname=W.Empname WHERE W.Cmpname='FBC';

```
1  SELECT E.Empname,E.Street,E.City
2  FROM Employee E
3  JOIN Work W ON E.Empname= W.Empname WHERE
4  W.Cmpname='FBC';
5
```

Results Explain Describe Saved SQL History

| EMPNAME | STREET | CITY |
|---------|--------|------------|
| Adam | Spring | Pittsfield |

1 rows returned in 0.02 seconds [Download](#)

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PRACTICAL: 08

Aim: “Join” Queries

1. Display all the employee name and the city where they work.

- SELECT Empname,City from Employee;

The screenshot shows the Oracle APEX interface with a SQL editor and a results grid. The SQL query is:

```
1  Select Empname,City from Employee;
2  |
```

The results grid has columns 'EMPNAME' and 'CITY'. The data is:

| EMPNAME | CITY |
|---------|------------|
| Curry | Rye |
| Brooks | Brooklyn |
| Adam | Pittsfield |
| Demalo | San Deago |

4 rows returned in 0.01 seconds [Download](#)

At the bottom, it shows the user information pdhruvi071525@gmail.com dhrushi1503, the environment en, the copyright notice Copyright © 1999, 2023, Oracle and/or its affiliates., and the version Oracle APEX 23.2.1.

2. Display the employee name and company's name having salary more than 15000.

- SELECT Empname,Cmpname from Work where salary>15000;

The screenshot shows the Oracle APEX interface with a SQL editor and a results grid. The SQL query is:

```
1  Select Empname,Cmpname from Work where salary>15000;
2  |
```

The results grid has columns 'EMPNAME' and 'CMPNAME'. The data is:

| EMPNAME | CMPNAME |
|---------|---------|
| Brooks | MBC |
| Adam | FBC |

2 rows returned in 0.01 seconds [Download](#)

At the bottom, it shows the user information pdhruvi071525@gmail.com dhrushi1503, the environment en, the copyright notice Copyright © 1999, 2023, Oracle and/or its affiliates., and the version Oracle APEX 23.2.1.

3. Find the average rating and age of all sailors.

- SELECT avg(Rating),avg(Age)from Sailors;

The screenshot shows the Oracle APEX interface with a SQL query executed:

```
1 Select avg(Rating),avg(Age)from Sailors;
```

The results table displays the following data:

| AVG(RATING) | AVG(AGE) |
|-------------|----------|
| 6.6 | 37.1 |

Below the results, it says "1 rows returned in 0.00 seconds" and provides a "Download" link. At the bottom, it shows the user information pdhruvi071525@gmail.com, dhruv1503, and language en, along with copyright information for Oracle and Oracle APEX 23.2.1.

4. List various products available.

- SELECT dscr from Product;

The screenshot shows the Oracle APEX interface with a SQL query executed:

```
1 Select dscr from Product;
```

The results table displays the following data:

| DSCR |
|-------------|
| Shirts |
| Jeans |
| Trousers |
| CottonJeans |
| PullOvers |
| LycraTops |
| DenimShirts |
| Skirts |
| T-Shirts |

Below the results, it says "9 rows returned in 0.01 seconds" and provides a "Download" link. At the bottom, it shows the user information pdhruvi071525@gmail.com, dhruv1503, and language en, along with copyright information for Oracle and Oracle APEX 23.2.1.

5. Display the names of salesman who have salary more than 2850.

- SELECT Name from Salesman where Amt>2850;

The screenshot shows a database query interface. At the top, a code editor contains the SQL command: `1 Select Name from Salesman where Amt>2850;`. Below the code editor is a toolbar with tabs: Results, Explain, Describe, Saved SQL, and History. The Results tab is selected. The main area displays a table with a single column labeled "NAME". The table contains four rows with the values "Omkar", "Raj", "Ashish", and "Aman". At the bottom of the results area, it says "4 rows returned in 0.01 seconds" and has a "Download" link. The footer of the interface includes user information (pdhruvi071525@gmail.com, dhrushi1503, en), copyright notice (Copyright © 1999, 2023, Oracle and/or its affiliates.), and the version (Oracle APEX 23.2.1).

6. Change the cost price of Trousers to 950.

- Update Product set Cost_price=950 where Dscr='Trousers';

The screenshot shows a database query interface. At the top, a code editor contains the SQL command: `1 Update Product set Cost_price=950 where Dscr='Trousers' ;`. Below the code editor is a toolbar with tabs: Results, Explain, Describe, Saved SQL, and History. The Results tab is selected. The main area displays the message "1 row(s) updated." followed by "0.01 seconds". The footer of the interface includes user information (pdhruvi071525@gmail.com, dhrushi1503, en), copyright notice (Copyright © 1999, 2023, Oracle and/or its affiliates.), and the version (Oracle APEX 23.2.1).

7. List all the clients having “a” as a second character in their names.

- Select Name from Client where Name like '_a%';

```
1  Select Name from Client where Name like '_a%'
```

| NAME |
|---------------|
| MamtaMuzumdar |
| HanselColaco |

2 rows returned in 0.03 seconds [Download](#)

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8. List all the products whose Qty on Hand is less than ReorderLvl.

- Select Dscr from Product where 'Qty'<'Reorder_Lvl';

```
1  select Dscr from Product where 'Qty'<'Reorder_Lvl';
```

| DSCR |
|-------------|
| Shirts |
| Jeans |
| Trousers |
| CottonJeans |
| PullOvers |
| LycraTops |
| DenimShirts |
| Skirts |
| T-Shirts |

9 rows returned in 0.01 seconds [Download](#)

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9. Print the description and total qty sold for each product.

- Select Dscr,Qty from Product;

```
1 select Dscr,Qty from Product;
```

| DSCR | QTY |
|-------------|-----|
| Shirts | 150 |
| Jeans | 100 |
| Trousers | 150 |
| CottonJeans | 100 |
| PullOvers | 80 |
| LycraTops | 70 |
| DenimShirts | 100 |
| Skirts | 75 |
| T-Shirts | 200 |

9 rows returned in 0.00 seconds Download

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10. Find out all the products which have been sold to “Ivan Bayross”.

- Select DISTINCT P.Dscr FROM Product P JOIN Salesorder_Details SD ON P.Pr_no = SD.Pr_no JOIN Salesorder SO ON SD.Od_no = SO.Od_no JOIN Client C ON SO.Cl_no = C.Cl_no WHERE C.Name = 'IvanBayross';

```
1 SELECT DISTINCT P.Dscr
2 FROM Product P
3 JOIN Salesorder_Details SD ON P.Pr_no = SD.Pr_no
4 JOIN Salesorder SO ON SD.Od_no = SO.Od_no
5 JOIN Client C ON SO.Cl_no = C.Cl_no
6 WHERE C.Name = 'IvanBayross';
7
```

| DSCR |
|-------------|
| T-Shirts |
| DenimShirts |
| CottonJeans |
| PullOvers |
| Shirts |

5 rows returned in 0.03 seconds Download

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11. Find the names of all clients who have purchased Trousers.

- Select DISTINCT C.Name FROM Client C JOIN Salesorder SO ON C.Cl_no = SO.Cl_no JOIN Salesorder_Detail;

```

2  FROM Client C
3  JOIN Salesorder SO ON C.Cl_no = SO.Cl_no
4  JOIN Salesorder_Details SD ON SO.Od_no = SD.Od_no
5  JOIN Product P ON SD.Pr_no = P.Pr_no
6  WHERE P.Dscr = 'Trousers';
7

```

The screenshot shows the Oracle APEX SQL developer interface. The SQL code is displayed in the top pane, and the results are shown in the bottom pane. The results table has a single column named 'NAME' with one row: 'ChhayaBankar'. Below the table, it says '1 rows returned in 0.03 seconds' and has a 'Download' button. The interface includes tabs for Results, Explain, Describe, Saved SQL, and History. At the bottom, it shows the user information 'pdhruvi071525@gmail.com' and 'dhruvi1503', the language 'en', copyright information 'Copyright © 1999, 2023, Oracle and/or its affiliates.', and the version 'Oracle APEX 23.2.1'.

12. Find the products and their quantities for the orders placed by client C00001 and C00002.

- Select P.Dscr, SD.Qty_order FROM Client C JOIN Salesorder SO ON C.Cl_no = SO.Cl_no JOIN Salesorder_Details SD ON SO.Od_no = SD.Od_no JOIN Product P ON SD.Pr_no = P.Pr_no WHERE C.Cl_no IN ('C00001', 'C00002');

```

1  SELECT P.Dscr, SD.Qty_order FROM Client C JOIN Salesorder SO ON C.Cl_no =
2  SO.Cl_no JOIN Salesorder_Details SD ON SO.Od_no = SD.Od_no
3  JOIN Product P ON SD.Pr_no = P.Pr_no WHERE C.Cl_no IN ('C00001', 'C00002');
4

```

The screenshot shows the Oracle APEX SQL developer interface. The SQL code is displayed in the top pane, and the results are shown in the bottom pane. The results table has two columns: 'DSCR' and 'QTY_ORDER'. The data is as follows:

| DSCR | QTY_ORDER |
|-------------|-----------|
| Shirts | 2 |
| CottonJeans | 1 |
| PullOvers | 2 |
| DenimShirts | 2 |
| T-Shirts | 4 |
| T-Shirts | 10 |

Below the table, it says '6 rows returned in 0.01 seconds' and has a 'Download' button. The interface includes tabs for Results, Explain, Describe, Saved SQL, and History. At the bottom, it shows the user information 'pdhruvi071525@gmail.com' and 'dhruvi1503', the language 'en', copyright information 'Copyright © 1999, 2023, Oracle and/or its affiliates.', and the version 'Oracle APEX 23.2.1'.

13. List the client details who place order no. O19001.

- Select C.* FROM Client C JOIN Salesorder SO ON C.Cl_no = SO.Cl_no WHERE SO.Od_no = 'O19001';

```

1  SELECT C.*
2  FROM Client C
3  JOIN Salesorder SO ON C.Cl_no = SO.Cl_no
4  WHERE SO.Od_no = 'O19001';
5

```

The screenshot shows the Oracle APEX SQL developer interface. The SQL query is displayed in the top pane, and the results are shown in the bottom pane. The results table has columns: CL_NO, NAME, CITY, PINCODE, STATE, and BALDUE. One row is returned, showing CL_NO 'C00001', NAME 'IvanBayross', CITY 'Mumbai', PINCODE '400054', STATE 'Maharashtra', and BALDUE '15000'. Below the table, it says '1 rows returned in 0.01 seconds' and has a 'Download' link. The bottom of the interface shows user information (pdhruvi071525@gmail.com, dhruvi1503, en) and copyright information (Copyright © 1999, 2023, Oracle and/or Its affiliates). The version is Oracle APEX 23.2.1.

| CL_NO | NAME | CITY | PINCODE | STATE | BALDUE |
|--------|-------------|--------|---------|-------------|--------|
| C00001 | IvanBayross | Mumbai | 400054 | Maharashtra | 15000 |

1 rows returned in 0.01 seconds Download

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14. List the name of clients who have placed orders worth Rs. 10000 or more.

- Select distinct C.Name from Client C,Salesorder S,Salesorder_Details SD where C.Cl_no=S.Cl_no and S.Od_no=SD.Od_no and (SD.Qty_order*SD.Rate)>10000;

```

1  select distinct C.Name from Client C,Salesorder S,Salesorder_Details SD
2  where C.Cl_no=S.Cl_no and S.Od_no=SD.Od_no and (SD.Qty_order*SD.Rate)>10000;

```

The screenshot shows the Oracle APEX SQL developer interface. The SQL query is displayed in the top pane, and the results are shown in the bottom pane. The results table has a single column: NAME. Two rows are returned, showing 'ChhayaBankar' and 'IvanBayross'. Below the table, it says '2 rows returned in 0.02 seconds' and has a 'Download' link. The bottom of the interface shows user information (pdhruvi071525@gmail.com, dhruvi1503, en) and copyright information (Copyright © 1999, 2023, Oracle and/or Its affiliates). The version is Oracle APEX 23.2.1.

| NAME |
|--------------|
| ChhayaBankar |
| IvanBayross |

2 rows returned in 0.02 seconds Download

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15. Find the total of Qty ordered for each Order

- Select Od_no, sum (Qty_Order) from Salesorder_Details group by Od_no;

```
1  select Od_no,sum(Qty_Order) from Salesorder_Details group by Od_no;
```

| OD_NO | SUM(QTY_ORDER) |
|--------|----------------|
| O46866 | 2 |
| O19002 | 10 |
| O46865 | 20 |
| O19001 | 8 |
| O19008 | 15 |
| O19003 | 3 |

6 rows returned in 0.00 seconds [Download](#)

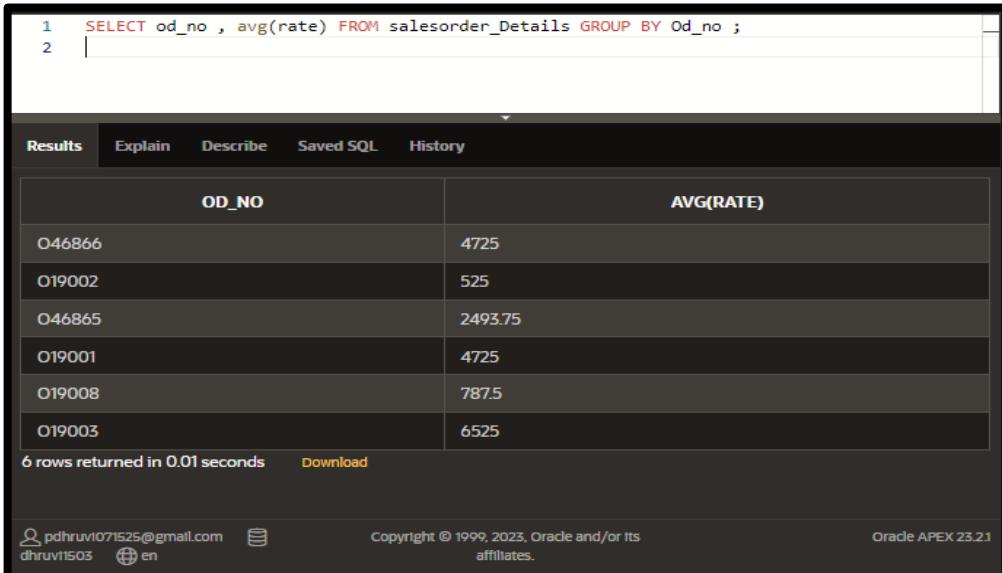
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Release 19.3.0.0.0 - Production Oracle APEX 23.2.1

PRACTICAL: 09

Aim: “Miscellaneous” Queries

1. Find the average rate for each Order.

- SELECT od_no , avg(rate) FROM salesorder_Details GROUP BY Od_no ;



```
1  SELECT od_no , avg(rate) FROM salesorder_Details GROUP BY Od_no ;
2  |
```

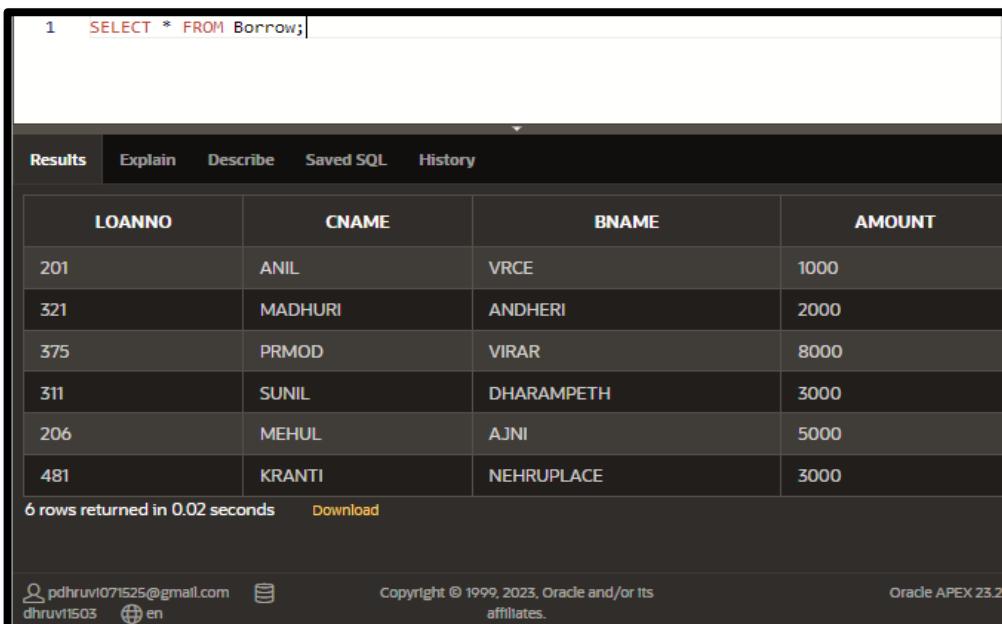
| OD_NO | Avg(RATE) |
|--------|-----------|
| O46866 | 4725 |
| O19002 | 525 |
| O46865 | 2493.75 |
| O19001 | 4725 |
| O19008 | 787.5 |
| O19003 | 6525 |

6 rows returned in 0.01 seconds Download

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2. Give the loan details of all the customers.

- SELECT * FROM Borrow;



```
1  SELECT * FROM Borrow;
```

| LOANNO | CNAME | BNAME | AMOUNT |
|--------|---------|------------|--------|
| 201 | ANIL | VRCE | 1000 |
| 321 | MADHURI | ANDHERI | 2000 |
| 375 | PRMOD | VIRAR | 8000 |
| 311 | SUNIL | DHARAMPETH | 3000 |
| 206 | MEHUL | AJNI | 5000 |
| 481 | KRANTI | NEHRUPLACE | 3000 |

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3. Find List the customer name having loan account in the same branch city they live in.

- SELECT borrow.cname , branch.bname , branch.city from borrow inner join branch on borrow.bname = branch.bname;

```

1  SELECT BORROW.CNAME , BRANCH.BNAME , BRANCH.CITY FROM BORROW
2  INNER JOIN BRANCH ON BORROW.BNAME = BRANCH.BNAME;
3

```

| CNAME | BNAME | CITY |
|---------|------------|--------|
| MEHUL | AJNI | NAGPUR |
| PRMOD | VIRAR | BOMBAY |
| SUNIL | DHARAMPETH | NAGPUR |
| MADHURI | ANDHERI | BOMBAY |
| KRANTI | NEHRUPLACE | DELHI |
| ANIL | VRCE | NAGPUR |

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4. Provide the loan details of all the customers who have opened their accounts after August'95.

- SELECT D.Cname, D.Bname, D.Amount, D.Dates FROM Deposit D JOIN Customers C ON D.Cname = C.Cname WHERE TO_DATE(D.Dates, 'DD-MON-YY') > TO_DATE('10-AUG-95', 'DD-MON-YY');

```

1  SELECT D.Cname, D.Bname, D.Amount, D.Dates
2  FROM Deposit D
3  JOIN Customers C ON D.Cname = C.Cname
4  WHERE TO_DATE(D.Dates, 'DD-MON-YY') > TO_DATE('10-AUG-95', 'DD-MON-YY');
5
6

```

| CNAME | BNAME | AMOUNT | DATES |
|---------|-----------|--------|-----------|
| SUNIL | AJNI | 5000 | 4-JAN-96 |
| MEHUL | KAROLBAGH | 3500 | 17-NOV-95 |
| MADHURI | CHANDI | 1200 | 17-DEC-95 |
| SHIVANI | VIRAR | 1000 | 5-SEP-95 |
| SANDIP | ANDHERI | 2000 | 31-MAR-96 |

5 rows returned in 0.01 seconds [Download](#)

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5. List the order information for client C00001 and C00002.

- SELECT O.* from Salesorder S inner join Salesorder_Details O on S.Od_no=O.Od_no where S.Cl_no='C00001' or S.Cl_no='C00002';

```

1 select O.* from Salesorder S inner join Salesorder_Details O on S.Od_no=O.Od_no
2 where S.Cl_no='C00001' or S.Cl_no='C00002';
3

```

| Results | | | | |
|---------|--------|-----------|----------|-------|
| OD_NO | PR_NO | QTY_ORDER | QTY_DISP | RATE |
| O19001 | P00001 | 4 | 4 | 525 |
| O19001 | P07965 | 2 | 1 | 8400 |
| O19001 | P07885 | 2 | 1 | 5250 |
| O19002 | P00001 | 10 | 0 | 525 |
| O19003 | P0345 | 2 | 2 | 1050 |
| O19003 | P06734 | 1 | 1 | 12000 |

6 rows returned in 0.01 seconds [Download](#)

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6. List all the information for the orders placed in the month of June

- SELECT *FROM SALESORDER WHERE EXTRACT(MONTH FROM O_dat) = 6;

```

1 SELECT *FROM SALESORDER WHERE EXTRACT(MONTH FROM O_dat) = 6;
2

```

| Results | | | | | | | |
|---------|--------|------------|--------|--------|------|------------|-----------|
| OD_NO | CL_NO | O_DAT | SL_NO | D_TYPE | BILL | D_DAT | STATUS |
| O19002 | C00002 | 06/25/2004 | S00002 | P | N | 06/27/2004 | Cancelled |
| O19001 | C00001 | 06/12/2004 | S00001 | F | N | 07/20/2004 | InProcess |

2 rows returned in 0.02 seconds [Download](#)

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7. List the details of clients who do not stay in Maharashtra.

- SELECT * from Client where not State='Maharashtra';

```
1 select * from Client where not State='Maharashtra';
2
```

The screenshot shows the Oracle APEX SQL Developer interface. At the top, there is a code editor window containing the SQL query. Below it is a results grid displaying the following data:

| CL_NO | NAME | CITY | PINCODE | STATE | BALDUE |
|--------|----------------|-----------|---------|-----------|--------|
| C00002 | MaritaMuzumdar | Madras | 780001 | TamilNadu | 100 |
| C00006 | DeepakSharma | Mangalore | 560050 | Karnataka | 1000 |
| C00004 | AshwiniJoshi | Bengaluru | 560001 | Karnataka | 500 |

Below the grid, it says "3 rows returned in 0.01 seconds" and "Download". At the bottom of the interface, there are user profile icons and copyright information: "Copyright © 1999, 2023, Oracle and/or its affiliates." and "Oracle APEX 23.2.1".

8. Determine the maximum and minimum product price. Rename the output as “Max_Price” and “Min_Price”.

- SELECT min(Cost_Price) Min_Price,max(Cost_Price) Max_Price from Product;

```
1 select min(Cost_Price) Min_Price,max(Cost_Price) Max_Price from Product;
2
```

The screenshot shows the Oracle APEX SQL Developer interface. At the top, there is a code editor window containing the SQL query. Below it is a results grid displaying the following data:

| MIN_PRICE | MAX_PRICE |
|-----------|-----------|
| 175 | 950 |

Below the grid, it says "1 rows returned in 0.00 seconds" and "Download". At the bottom of the interface, there are user profile icons and copyright information: "Copyright © 1999, 2023, Oracle and/or its affiliates." and "Oracle APEX 23.2.1".

9. Count the number of products having price less than or equal to 500.

- SELECT count(*) from Product where Cost_Price<=500;

The screenshot shows the Oracle APEX SQL developer interface. The SQL query entered is:

```
1 select count(*) from Product where Cost_Price<=500;
```

The results pane displays the output of the query:

| COUNT(*) |
|----------|
| 8 |

Below the results, it says "1 rows returned in 0.00 seconds". The interface includes tabs for Results, Explain, Describe, Saved SQL, and History. At the bottom, it shows the user information pdhruvi071525@gmail.com, dhruv1503, and en, along with copyright information for Oracle and Oracle APEX 23.2.1.

10. List the order number and the day on which client placed an order.

- SELECT Od_no,O_dat from Salesorder;

The screenshot shows the Oracle APEX SQL developer interface. The SQL query entered is:

```
1 select Od_no,O_dat from Salesorder;
```

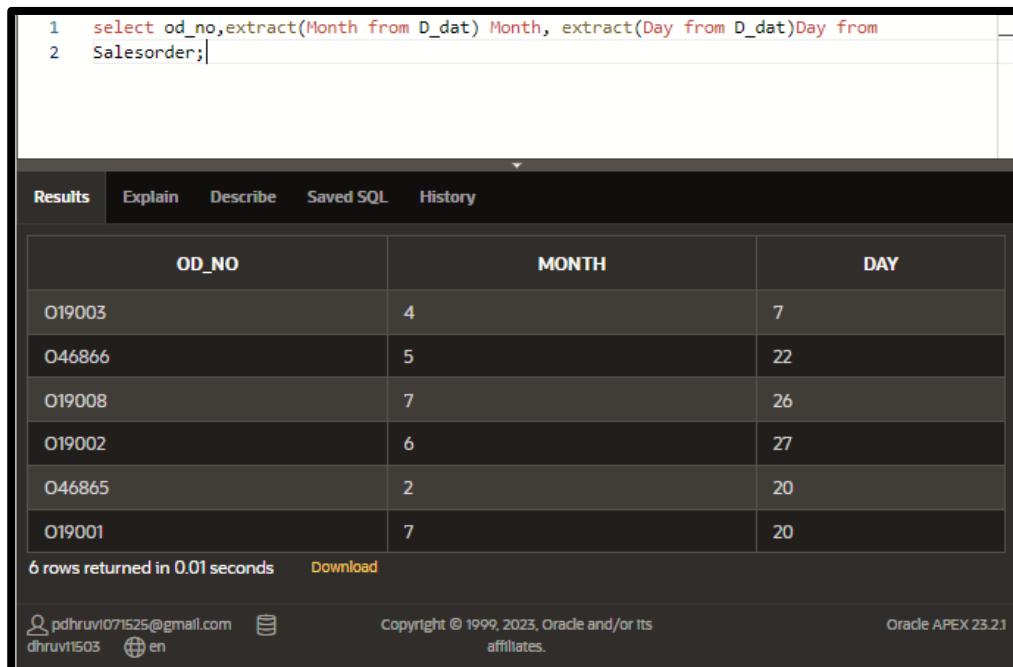
The results pane displays the output of the query:

| OD_NO | O_DAT |
|--------|------------|
| O19003 | 04/03/2004 |
| O46866 | 05/20/2004 |
| O19008 | 05/24/2004 |
| O19002 | 06/25/2004 |
| O46865 | 02/18/2004 |
| O19001 | 06/12/2004 |

Below the results, it says "6 rows returned in 0.00 seconds". The interface includes tabs for Results, Explain, Describe, Saved SQL, and History. At the bottom, it shows the user information pdhruvi071525@gmail.com, dhruv1503, and en, along with copyright information for Oracle and Oracle APEX 23.2.1.

11. List the month and the date on which an order is to be delivered.

- SELECT od_no,extract(Month from D_dat) Month, extract(Day from D_dat)Day from Salesorder;



```
1 select od_no,extract(Month from D_dat) Month, extract(Day from D_dat)Day from
2 Salesorder;
```

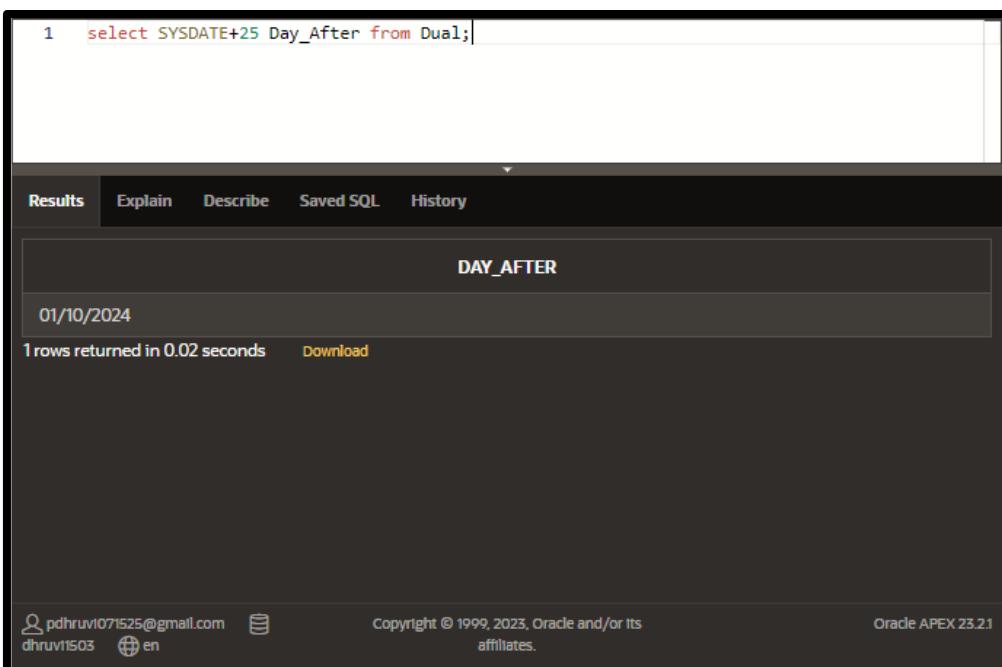
| OD_NO | MONTH | DAY |
|--------|-------|-----|
| O19003 | 4 | 7 |
| O46866 | 5 | 22 |
| O19008 | 7 | 26 |
| O19002 | 6 | 27 |
| O46865 | 2 | 20 |
| O19001 | 7 | 20 |

6 rows returned in 0.01 seconds Download

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12. List the the date, 25 days after today's date.

- SELECT SYSDATE+25 Day_After from Dual;



```
1 select SYSDATE+25 Day_After from Dual;
```

| DAY_AFTER |
|------------|
| 01/10/2024 |

1 rows returned in 0.02 seconds Download

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13. Find the total of all the billed orders in the month of June.

- SELECT count(Od_no) from Salesorder where O_dat like '%JUN%';

The screenshot shows the Oracle APEX interface with the following details:

- SQL Query:**

```
1  select count(Od_no) from Salesorder where O_dat like '%JUN%'
```

- Results:** The results table shows a single row with the header "COUNT(OD_NO)" and the value "0". Below the table, it says "1 rows returned in 0.00 seconds" and has a "Download" link.
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14. List the products and orders from customers who have ordered less than 5 units of “Pull Overs”

- SELECT SD.Od_no, SD.Pr_no, SD.Qty_order, P.Dscr FROM Salesorder_Details SD JOIN Product P ON SD.Pr_no = P.Pr_no WHERE P.Dscr = 'PullOvers' AND SD.Qty_order < 5;

The screenshot shows the Oracle APEX interface with the following details:

- SQL Query:**

```
1  SELECT SD.Od_no, SD.Pr_no, SD.Qty_order, P.Dscr
2  FROM Salesorder_Details SD
3  JOIN Product P ON SD.Pr_no = P.Pr_no
4  WHERE P.Dscr = 'PullOvers' AND SD.Qty_order < 5;
5
```

- Results:** The results table has columns: OD_NO, PR_NO, QTY_ORDER, and DSCR. It contains two rows:

| OD_NO | PR_NO | QTY_ORDER | DSCR |
|--------|--------|-----------|-----------|
| O19001 | P07885 | 2 | PullOvers |
| O46865 | P07885 | 3 | PullOvers |

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15. Find the list of products and orders placed by “Ivan Bayross” and “Mamta Muzumdar”.

- ```
SELECT so.Od_no, sod.Pr_no,C.Name
FROM Client c
JOIN Salesorder so ON c.Cl_no = so.Cl_no
JOIN Salesorder_Details sod ON so.Od_no = sod.Od_no
WHERE c.Name IN ('IvanBayross', 'MamtaMuzumdar');
```

| OD_NO  | PR_NO  | NAME          |
|--------|--------|---------------|
| O19001 | P00001 | IvanBayross   |
| O19001 | P07965 | IvanBayross   |
| O19001 | P07885 | IvanBayross   |
| O19002 | P00001 | MamtaMuzumdar |
| O19003 | P0345  | IvanBayross   |
| O19003 | P06734 | IvanBayross   |

6 rows returned in 0.00 seconds [Download](#)

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## 16. List the clients who placed order before June'04.

- ```
SELECT DISTINCT c.Cl_no, c.Name,so.D_dat
FROM Client c
JOIN Salesorder so ON c.Cl_no = so.Cl_no
WHERE so.O_dat < DATE '2004-06-04';
```

| CL_NO | NAME | D_DAT |
|--------|--------------|------------|
| C00004 | AshwiniJoshi | 05/22/2004 |
| C00005 | HanselColaco | 07/26/2004 |
| C00001 | IvanBayross | 04/07/2004 |
| C00003 | ChhayaBankar | 02/20/2004 |

4 rows returned in 0.01 seconds [Download](#)

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17. List all the clients who stays in “Bengaluru” or “Mangalore”

- `SELECT * FROM CLIENT WHERE CITY = 'Bangaluru' OR CITY = 'Mangalore';`

The screenshot shows a database query results page from Oracle APEX 23.2.1. At the top, there is a code editor containing the SQL query:

```
1  SELECT * FROM CLIENT WHERE CITY = 'Bangaluru' OR CITY = 'Mangalore';
```

Below the code editor is a table with the following data:

| CL_NO | NAME | CITY | PINCODE | STATE | BALDUE |
|--------|--------------|-----------|---------|-----------|--------|
| C00006 | DeepakSharma | Mangalore | 560050 | Karnataka | 1000 |

Below the table, it says "1 rows returned in 0.01 seconds" and has a "Download" link.

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PRACTICAL: 10

Aim: “PL/SQL “ Block

1. Write a PL/SQL Block to Add 2 Numbers

DECLARE

a NUMBER(2);

b NUMBER(2);

c NUMBER(2);

BEGIN

a := 5; -- Replace with your desired value for 'a'

b := 10; -- Replace with your desired value for 'b'

c := a + b;

dbms_output.put_line(a || '+' || b || '=' || c);

END;

OUTPUT:

```
1  DECLARE
2      a NUMBER(2);
3      b NUMBER(2);
4      c NUMBER(2);
5  BEGIN
6      a := 5; -- Replace with your desired value for 'a'
7      b := 10; -- Replace with your desired value for 'b'
8      c := a + b;
9      dbms_output.put_line(a || '+' || b || '=' || c);
10 END;
11
```

Results Explain Describe Saved SQL History

5+10=15

Statement processed.

0.02 seconds

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2. Write a PL/SQL Block to find Area of Rectangle, Triangle and Square.

DECLARE

```

length_val NUMBER := 5;
width_val NUMBER := 5;
height_val NUMBER := 5;
base_val NUMBER := 5; -
radius_val NUMBER := 5;
area1 NUMBER(10);
area2 FLOAT(10);
area3 FLOAT(10);

BEGIN
    area1 := length_val * width_val;
    area2 := base_val * height_val * 0.5;
    area3 := 3.14 * radius_val * radius_val;
    DBMS_OUTPUT.PUT_LINE('Area of rectangle is ' || length_val || ' * ' || width_val || ' = ' || area1);
    DBMS_OUTPUT.PUT_LINE('Area of triangle is ' || base_val || ' * ' || height_val || ' * 0.5 = ' || area2);
    DBMS_OUTPUT.PUT_LINE('Area of circle is ' || area3);
END;

```

OUTPUT:

The screenshot shows the Oracle APEX interface with the following details:

- Code:**

```

1  DECLARE
2      length_val NUMBER := 5;
3      width_val NUMBER := 5;
4      height_val NUMBER := 5;
5      base_val NUMBER := 5; -
6      radius_val NUMBER := 5;
7      area1 NUMBER(10);
8      area2 FLOAT(10);
9      area3 FLOAT(10);
10 BEGIN
11     area1 := length_val * width_val;
12     area2 := base_val * height_val * 0.5;
13     area3 := 3.14 * radius_val * radius_val;
14
15     DBMS_OUTPUT.PUT_LINE('Area of rectangle is ' || length_val || ' * ' || width_val || ' = ' || area1);
16     DBMS_OUTPUT.PUT_LINE('Area of triangle is ' || base_val || ' * ' || height_val || ' * 0.5 = ' || area2);
17     DBMS_OUTPUT.PUT_LINE('Area of circle is ' || area3);
18 END;

```
- Results Tab:** Shows the output of the executed SQL code:


```

Area of rectangle is 5 * 5 = 25
Area of triangle is 5 * 5 * 0.5 = 12.5
Area of circle is 78.5
Statement processed.
0.02 seconds

```
- Footer:** Includes user information (pdhruvi071525@gmail.com), session ID (dhruvi1503), copyright notice (Copyright © 1999, 2023, Oracle and/or its affiliates.), and the APEX version (Oracle APEX 23.2).

3. Write a PL/SQL Block to find Maximum of 3 numbers.

DECLARE

```
a NUMBER(3) := 80;  
b NUMBER(3) := 50;  
c NUMBER(3) := 15;
```

BEGIN

```
IF a > b AND a > c THEN
```

```
    DBMS_OUTPUT.PUT_LINE('Maximum number is : ' || a);
```

```
ELSIF b > a AND b > c THEN
```

```
    DBMS_OUTPUT.PUT_LINE('Maximum number is : ' || b);
```

```
ELSE
```

```
    DBMS_OUTPUT.PUT_LINE('Maximum number is : ' || c);
```

```
END IF;
```

END;

OUTPUT:

```
1  DECLARE  
2      a NUMBER(3) := 80;  
3      b NUMBER(3) := 50;  
4      c NUMBER(3) := 15;  
5  BEGIN  
6      IF a > b AND a > c THEN  
7          DBMS_OUTPUT.PUT_LINE('Maximum number is : ' || a);  
8      ELSIF b > a AND b > c THEN  
9          DBMS_OUTPUT.PUT_LINE('Maximum number is : ' || b);  
10     ELSE  
11         DBMS_OUTPUT.PUT_LINE('Maximum number is : ' || c);  
12     END IF;  
13 END;
```

Results Explain Describe Saved SQL History

Maximum number is : 80

Statement processed.

0.01 seconds

4. Write a PL/SQL Block to print sum of N Numbers using For Loop.

```
DECLARE
    n NUMBER(5) := 55;
    res NUMBER(5) := 0;
BEGIN
    WHILE n > 0 LOOP
        res := res + n;
        n := n - 1;
        EXIT WHEN n = 0;
    END LOOP;
    DBMS_OUTPUT.PUT_LINE('Sum is : ' || res);
END;
```

OUTPUT:

The screenshot shows the Oracle APEX interface with a SQL editor window. The code is identical to the one above, but the output section shows the results of the execution:

```
1  DECLARE
2      n NUMBER(5) := 55;
3      res NUMBER(5) := 0;
4  BEGIN
5      WHILE n > 0 LOOP
6          res := res + n;
7          n := n - 1;
8          EXIT WHEN n = 0;
9      END LOOP;
10     DBMS_OUTPUT.PUT_LINE('Sum is : ' || res);
11 END;
12
```

Results

```
Sum is : 1540
statement processed.

0.00 seconds
```

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5. Write a PL/SQL Block to generate Fibonacci series of N numbers.

DECLARE

```

first_number NUMBER := 0;
second_number NUMBER := 1;
third_number NUMBER(5);
n NUMBER := 5;
i NUMBER(5);

BEGIN
    DBMS_OUTPUT.PUT_LINE('Fibonacci series is : ');
    DBMS_OUTPUT.PUT_LINE(first_number);
    DBMS_OUTPUT.PUT_LINE(second_number);
    FOR i IN 2 .. n LOOP
        third_number := first_number + second_number;
        first_number := second_number;
        second_number := third_number;
        DBMS_OUTPUT.PUT_LINE(third_number);
    END LOOP;
END;

```

OUTPUT:

The screenshot shows the Oracle APEX interface with the following details:

- Code Area:**

```

1  DECLARE
2      first_number NUMBER := 0;
3      second_number NUMBER := 1;
4      third_number NUMBER(5);
5      n NUMBER := 5;
6      i NUMBER(5);
7  BEGIN
8      DBMS_OUTPUT.PUT_LINE('Fibonacci series is : ');
9      DBMS_OUTPUT.PUT_LINE(first_number);
10     DBMS_OUTPUT.PUT_LINE(second_number);
11
12     FOR i IN 2 .. n LOOP
13         third_number := first_number + second_number;
14         first_number := second_number;
15         second_number := third_number;
16         DBMS_OUTPUT.PUT_LINE(third_number);
17     END LOOP;
18 END;
19

```
- Execution Results:**

Fibonacci series is :

```

0
1
1
2
3
5

```

Statement processed.
- User Information:**

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Oracle APEX 23.2.3