

**School of Management (PG)**

**MCA Programme**

**A**

**Assignment**

**On**

*Case study/Project Title*

**Submitted By:**

***Student name***

**Div:A/B/C Roll No.:**

**Batch 2022-24**

**Course Incharge**

**Dr. Dinesh Banswal**

**Academic Year**

**2022-24**

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**INTRODUCTION**

**OBJECTIVES**

**SCOPE OF THE SYSTEM**

*Mention the modules of the proposed system*

**SYSTEM REQUIREMENTS**

The environment requirements consist of two requirements for these systems are as follows:

**MINIMUM HARDWARE REQUIREMENT**

PROCESSOR :

HARD DISK :

RAM :

**MINIMUM SOFTWARE REQUIREMENT**

OPERATING SYSTEM :

SYSTEM SOFTWARE :

**INTRODUCTION TO THE DATABASE USED**

The Oracle Database (commonly referred to as Oracle RDBMS or simply as Oracle) is an object-relational database management system produced and marketed by Oracle Corporation.

Larry Ellison and his friends, former co-workers Bob Miner and Ed Oates, started the consultancy Software Development Laboratories (SDL) in 1977. SDL developed the original version of the Oracle software. The name *Oracle* comes from the code-name of a CIA-funded project Ellison had worked on while previously employed by Ampex.

**FEATURES**:

* Active Session History (ASH), the collection of data for immediate monitoring of very recent database activity.
* Automatic Workload Repository (AWR), providing monitoring services to Oracle database installations from Oracle version 10. Prior to the release of Oracle version 10, the Statspack facility provided similar functionality.
* Cluster ware.
* Data Aggregation and Consolidation
* Data Guard for high availability.
* Generic Connectivity for connecting to non-Oracle systems.

Data Pump utilities, which aid in importing and exporting data and metadata between databases.

**ENTITY RELATIONSHIP DIAGRAM**

HAS

NON-EQUITABLE

EQUITABLE

ISA

PORTFOLIO

INVESTMENT BANK

HAS

PORTFOLIO MANAGER

GOES TO

INVESTOR

**DATA DICTIONARY**

MANAGES

BROKER

1. **INVESTOR TABLE:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Data Type | Scale | Description | Constraints |
| INV\_ID | NUMBER | 5 | INVESTOR ID | PRIMARY KEY |
| INV\_FNAME | VARCHAR2 | 4000 | FIRST NAME | - |
| INV\_LNAME | VARCHAR2 | 4000 | LAST NAME | - |
| INV\_CITY | VARCHAR2 | 4000 | CITY | - |
| INV\_CONT | VARCHAR2 | 10 | CONTACT NO. | - |

1. **BROKER TABLE:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Data Type | Scale | Description | Constraints |
| BROKER\_ID | NUMBER | 5 | BROKER’s ID | PRIMARY KEY |
| BROKER\_FNAME | VARCHAR2 | 4000 | FIRST NAME | - |
| BROKER\_LNAME | VARCHAR2 | 4000 | LAST NAME | - |
| BROKER\_CITY | VARCHAR2 | 4000 | CITY | - |
| BROKER\_CONT | VARCHAR2 | 10 | CONTACT NO. | - |
| BROKER\_COMM | VARCHAR2 | 10 | COMMISSION | - |
| BROKER\_STATE | VARCHAR2 | 20 | STATE | - |

1. **PORTFOLIO\_MANAGER TABLE:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Data Type | Scale | Description | Constraints |
| PORTMGR\_ID | NUMBER | 5 | PORTFOLIO MGR’S ID | PRIMARY KEY |
| PORTMGR\_FNAME | VARCHAR2 | 4000 | MGR’S FIRST NAME | - |
| PORTMGR\_LNAME | VARCHAR2 | 4000 | MGR’S LAST NAME | - |
| PORTMGR\_CONT | VARCHAR2 | 10 | CONTACT NO. | - |
| INV\_ID | NUMBER | 5 | INVESTOR ID | FOREIGN KEY |
| PORT\_ID | NUMBER | 5 | PORTFOLIO ID | FOREIGN KEY |

1. **PORTFOLIO TABLE:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Data Type | Scale | Description | Constraints |
| PORT\_ID | NUMBER | 5 | PORTFOLIO ID | PRIMARY KEY |
| INV\_ID | NUMBER | 5 | INVESTOR ID | FOREIGN KEY |
| FINS\_ID | NUMBER | 5 | FINAN. INSTRU. ID | FOREIGN KEY |
| PORT\_QUANTITY | NUMBER | 5 | QUANTITY | - |
| PORT\_PRICE | NUMBER | 5 | UNIT PRICE | - |
| PORT\_STATUS | VARCHAR2 | 10 | STATUS | - |

1. **PORTFOLIO EXECUTION TABLE:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Data Type | Scale | Description | Constraints |
| PORT\_ID | NUMBER | 5 | PORTFOLIO ID | FOREIGN KEY |
| BROKER\_ID | NUMBER | 5 | BROKER’S ID | FOREIGN KEY |
| PORTMGR\_ID | NUMBER | 5 | PORTFOLIO MGR ID | FOREIGN KEY |
| PORT\_PRICE | NUMBER | 5 | UNIT PRICE | - |
| PORT\_STATUS | VARCHAR2 | 10 | STATUS | - |
| BROKER\_COMM | VARCHAR2 | 4000 | BROKER COMM. | - |

1. **FINANCIAL INSTRUMENT TABLE:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Data Type | Scale | Description | Constraints |
| FINS\_ID | NUMBER | 5 | FINAN. INSTRU ID | PRIMARY KEY |
| FINS\_TYPE | VARCHAR2 | 4000 | FINAN. INSTRU TYPE | - |
| FINS\_NAME | VARCHAR2 | 4000 | FINAN. INSTRU NAME | - |
| FINS\_QUANTITY | VARCHAR2 | 5 | QUANTITY | - |
| FINS\_UNITPRICE | NUMBER | 5 | UNIT PRICE | - |

**DATABASE SCHEMA**

1. **BROKER TABLE:**

CREATE TABLE “BROKER"

(

"BROKER\_ID" NUMBER NOT NULL ENABLE,

"BROKER\_FNAME" VARCHAR2 (4000),

"BROKER\_LNAME" VARCHAR2 (4000),

"BROKER\_CITY" VARCHAR2 (4000),

"BROKER\_CONT" VARCHAR2 (10),

"BROKER\_COMM" VARCHAR2 (10),

"BROKER\_STATE" VARCHAR2 (20),

CONSTRAINT "BROKER\_PK" PRIMARY KEY ("BROKER\_ID") ENABLE

)

1. **INVESTOR TABLE:**

CREATE TABLE "INVESTOR"

(

"INV\_ID" NUMBER NOT NULL ENABLE,

"INV\_FNAME" VARCHAR2 (4000),

"INV\_LNAME" VARCHAR2 (4000),

"INV\_CITY" VARCHAR2 (4000),

"INV\_CONT" VARCHAR2 (4000),

CONSTRAINT "INVESTOR\_PK" PRIMARY KEY ("INV\_ID") ENABLE

)

1. **PORTFOLIO TABLE:**

CREATE TABLE "PORTFOLIO"

(

"PORT\_ID" NUMBER NOT NULL ENABLE,

"INV\_ID" NUMBER NOT NULL ENABLE,

"FINS\_ID" NUMBER NOT NULL ENABLE,

"PORT\_QUANTITY" NUMBER,

"PORT\_PRICE" NUMBER,

"PORT\_STATUS" VARCHAR2 (10),

CONSTRAINT "PORTFOLIO\_PK" PRIMARY KEY ("PORT\_ID") ENABLE,

CONSTRAINT "PORTFOLIO\_FK" FOREIGN KEY ("INV\_ID")

REFERENCES "INVESTOR" ("INV\_ID") ON DELETE SET NULL ENABLE,

CONSTRAINT "PORTFOLIO\_FK2" FOREIGN KEY ("FINS\_ID")

REFERENCES "FINANCIAL\_INSTRU" ("FINS\_ID") ON DELETE SET NULL ENABLE

)

1. **PORTFOLIO MANAGER TABLE:**

CREATE TABLE "PORTFOLIO\_MANAGER"

(

"PORTMGR\_ID" NUMBER NOT NULL ENABLE,

"PORTMGR\_FNAME" VARCHAR2 (4000),

"PORTMGR\_LNAME" VARCHAR2 (4000),

"PORTMGR\_CONT" VARCHAR2 (10),

"INV\_ID" NUMBER NOT NULL ENABLE,

"PORT\_ID" NUMBER NOT NULL ENABLE,

CONSTRAINT "PORTFOLIO\_MANAGER\_PK" PRIMARY KEY ("PORTMGR\_ID") ENABLE,

CONSTRAINT "PORTFOLIO\_MANAGER\_FK3" FOREIGN KEY ("INV\_ID")

REFERENCES "INVESTOR" ("INV\_ID") ON DELETE SET NULL ENABLE,

CONSTRAINT "PORTFOLIO\_MANAGER\_FK4" FOREIGN KEY ("PORT\_ID")

REFERENCES "PORTFOLIO" ("PORT\_ID") ON DELETE SET NULL ENABLE

)

1. **PORTFOLIO EXECUTION TABLE:**

CREATE TABLE "PORTFOLIO\_EXEC"

(

"PORT\_ID" NUMBER NOT NULL ENABLE,

"BROKER\_ID" NUMBER NOT NULL ENABLE,

"PORTMGR\_ID" NUMBER NOT NULL ENABLE,

"PORT\_PRICE" NUMBER,

"PORT\_STATUS" VARCHAR2 (10),

"BROKER\_COMM" VARCHAR2 (4000),

CONSTRAINT "PORT\_EXEC\_FK" FOREIGN KEY ("PORT\_ID")

REFERENCES "PORTFOLIO" ("PORT\_ID") ON DELETE SET NULL ENABLE,

CONSTRAINT "PORT\_EXEC\_FK2" FOREIGN KEY ("BROKER\_ID")

REFERENCES "BROKER" ("BROKER\_ID") ON DELETE SET NULL ENABLE,

CONSTRAINT "PORT\_EXEC\_FK3" FOREIGN KEY ("PORTMGR\_ID")

REFERENCES "PORTFOLIO\_MANAGER" ("PORTMGR\_ID") ON DELETE SET NULL ENABLE

)

1. **FINANCIAL INSTRUMENT TABLE:**

CREATE TABLE "FINANCIAL\_INSTRU"

(

"FINS\_ID" NUMBER NOT NULL ENABLE,

"FINS\_TYPE" VARCHAR2 (4000),

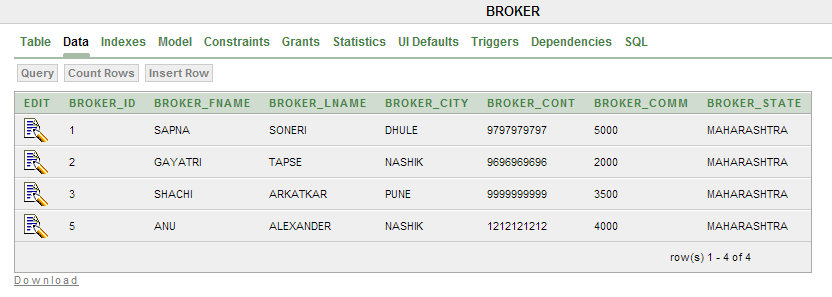
"FINS\_NAME" VARCHAR2 (4000),

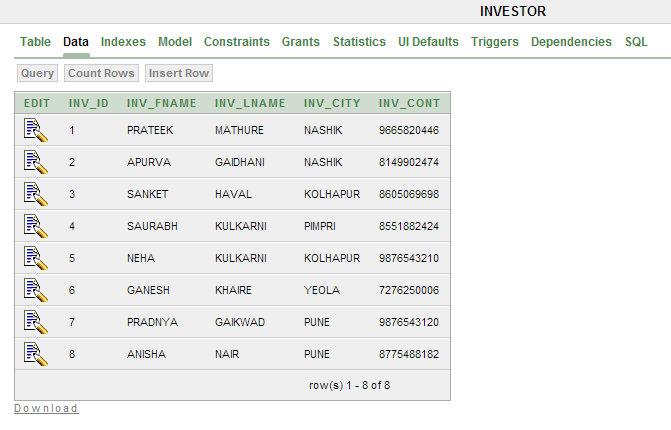
"FINS\_QUANTITY" VARCHAR2 (5),

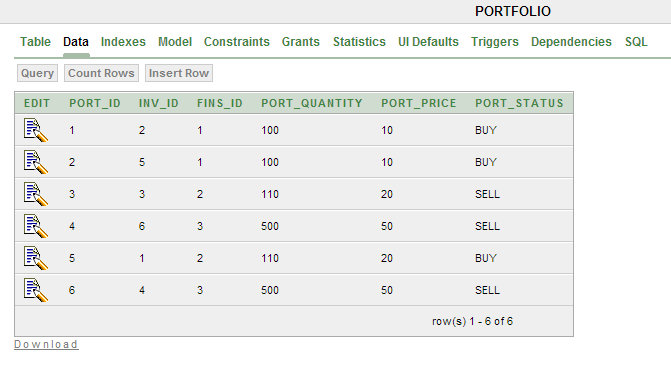
"FINS\_UNITPRICE" NUMBER,

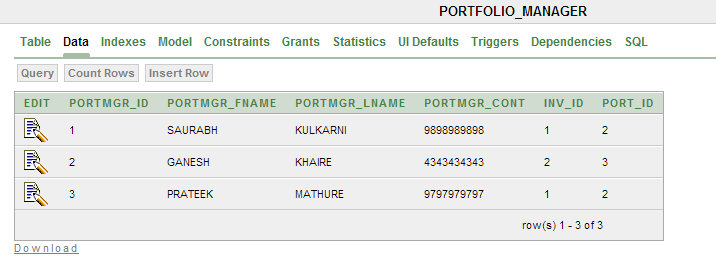
CONSTRAINT "FINANCIAL\_INSTRU\_PK" PRIMARY KEY ("FINS\_ID") ENABLE

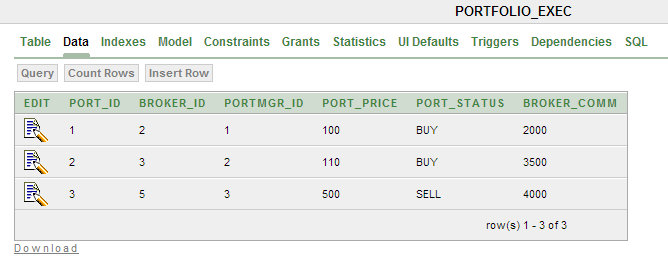
)

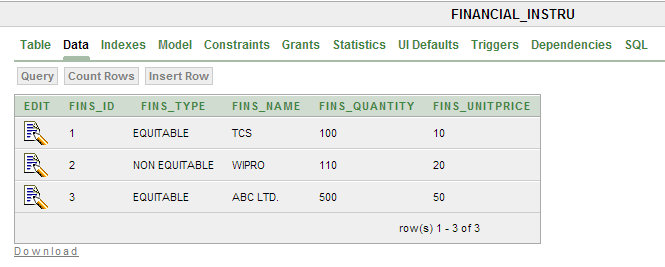












**DDL EXERCISES**

1. **CREATE**:

CREATE TABLE INVESTOR

( "INV\_ID" NUMBER NOT NULL ENABLE,

"INV\_FNAME" VARCHAR2 (4000),

"INV\_LNAME" VARCHAR2 (4000),

"INV\_CITY" VARCHAR2 (4000),

"INV\_CONT" VARCHAR2 (4000),

CONSTRAINT "INVESTOR\_PK" PRIMARY KEY ("INV\_ID") ENABLE

);

1. **INSERT**:

INSERT INTO INVESTOR VALUES (8,'PRATEEK','MATHURE','NASHIK','8775488182');

1. **ALTER**:

ALTER TABLE BROKER

ADD BROKER\_STATE VARCHAR2 (20);

1. **TRUNACTE**:

TRUNCATE TABLE PORTFOLIO;

1. **DROP**:

DROP TABLE PORTFOLIO\_MANAGER;

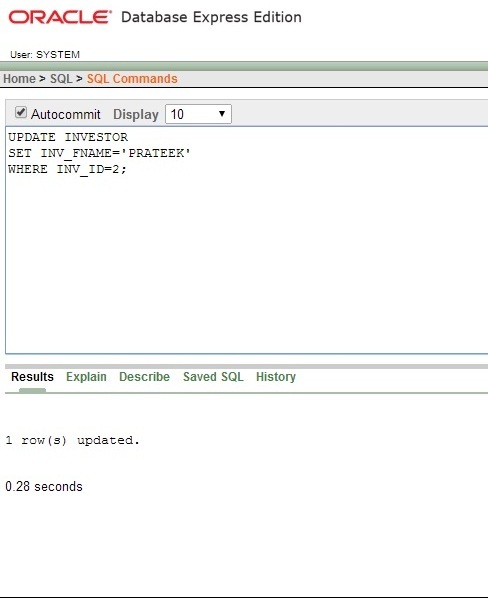
**DML EXERCISES**

1. **UPDATE**:

UPDATE INVESTOR

SET INV\_FNAME='PRATEEK'

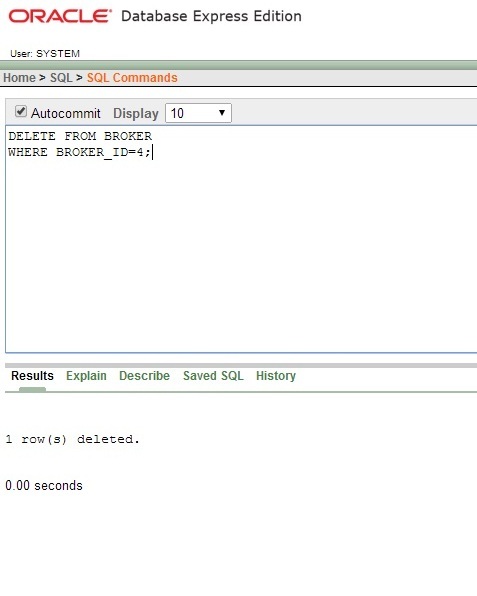
WHERE INV\_ID=2;



1. **DELETE**:

DELETE FROM BROKER

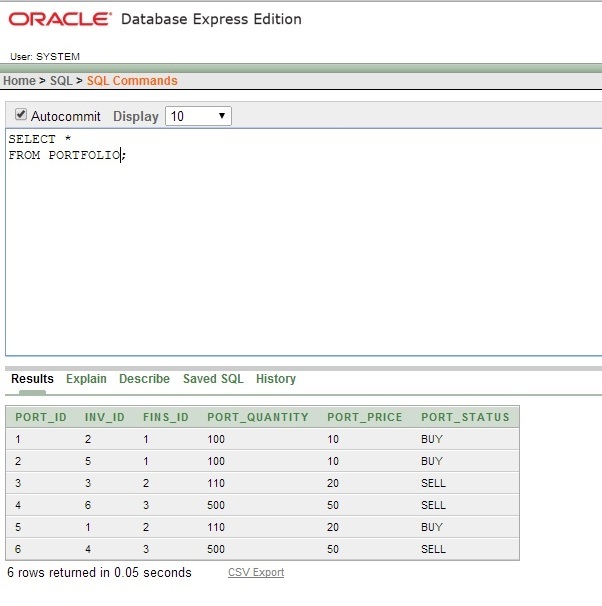
WHERE BROKER\_ID=4;



1. **SELECT**:

SELECT \*

FROM PORTFOLIO;

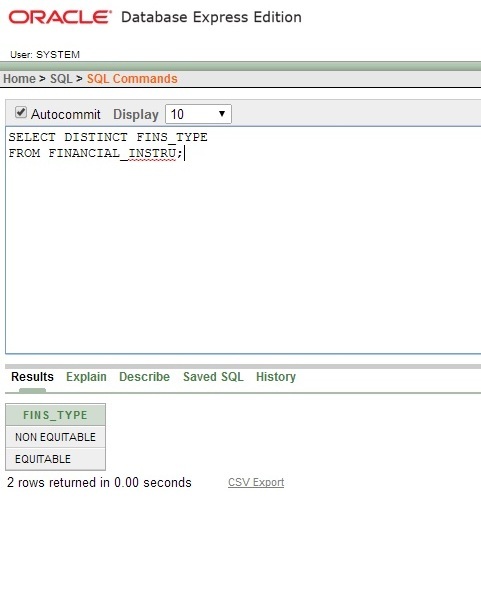


**DISTINCT & ORDER BY EXERCISES**

1. **DISTINCT**:

SELECT DISTINCT FINS\_TYPE

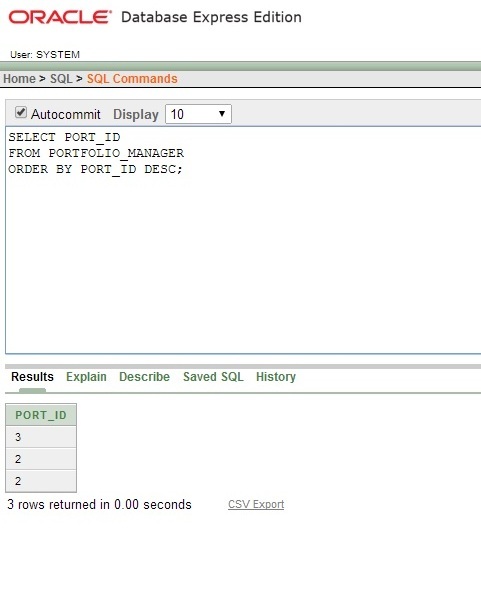
FROM FINANCIAL\_INSTRU;

2. **ORDER BY**:

SELECT PORT\_ID

FROM PORTFOLIO\_MANAGER

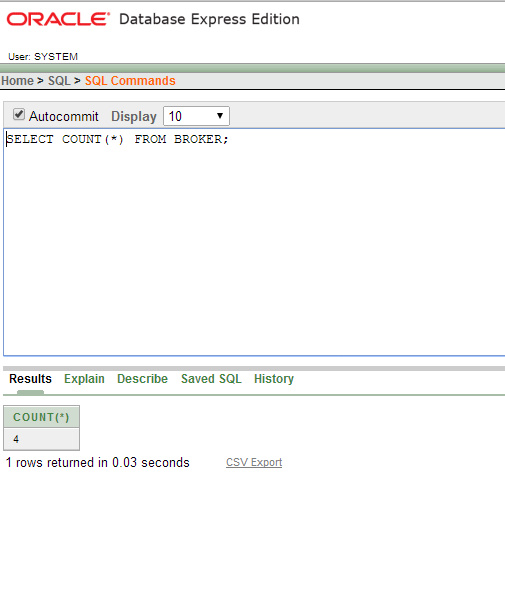
ORDER BY PORT\_ID DESC;



**AGGREGATE FUNCTION EXERCISE**

1. **AGGREGATE FUNCTION**:

SELECT COUNT (\*) FROM BROKER;

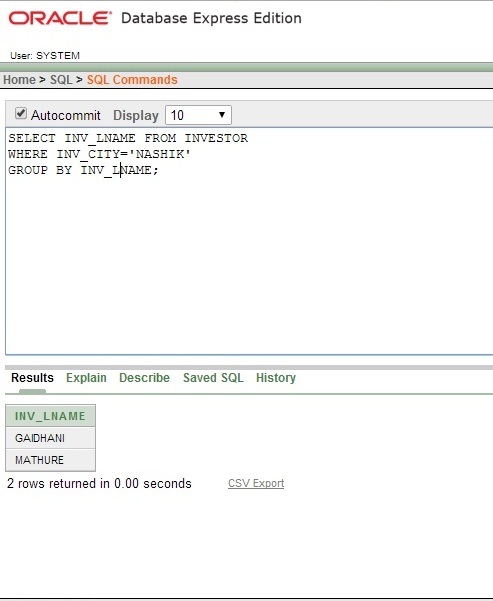


**GROUP BY EXECISES**

SELECT INV\_LNAME FROM INVESTOR

WHERE INV\_CITY='NASHIK'

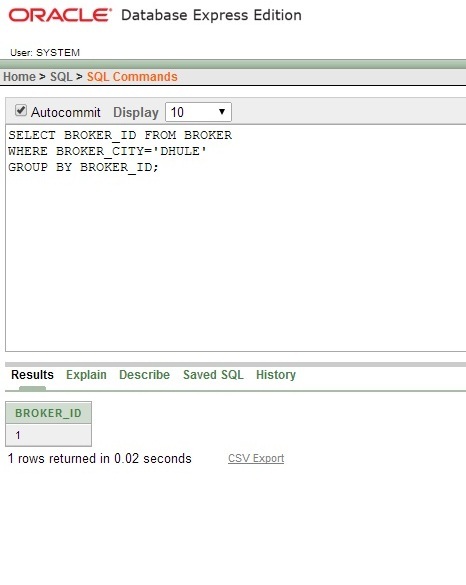
GROUP BY INV\_LNAME;



SELECT BROKER\_ID FROM BROKER

WHERE BROKER\_CITY='DHULE'

GROUP BY BROKER\_ID;

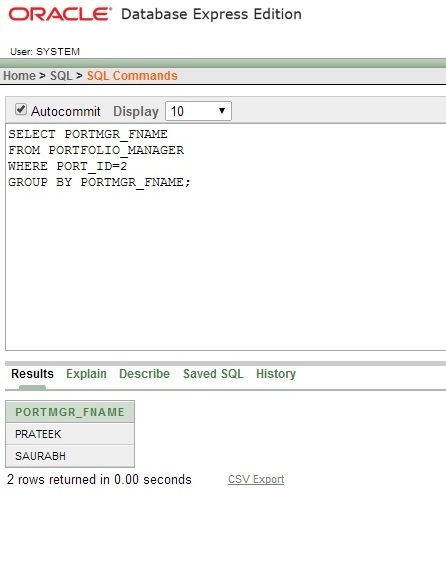


SELECT PORTMGR\_FNAME

FROM PORTFOLIO\_MANAGER

WHERE PORT\_ID=2

GROUP BY PORTMGR\_FNAME;



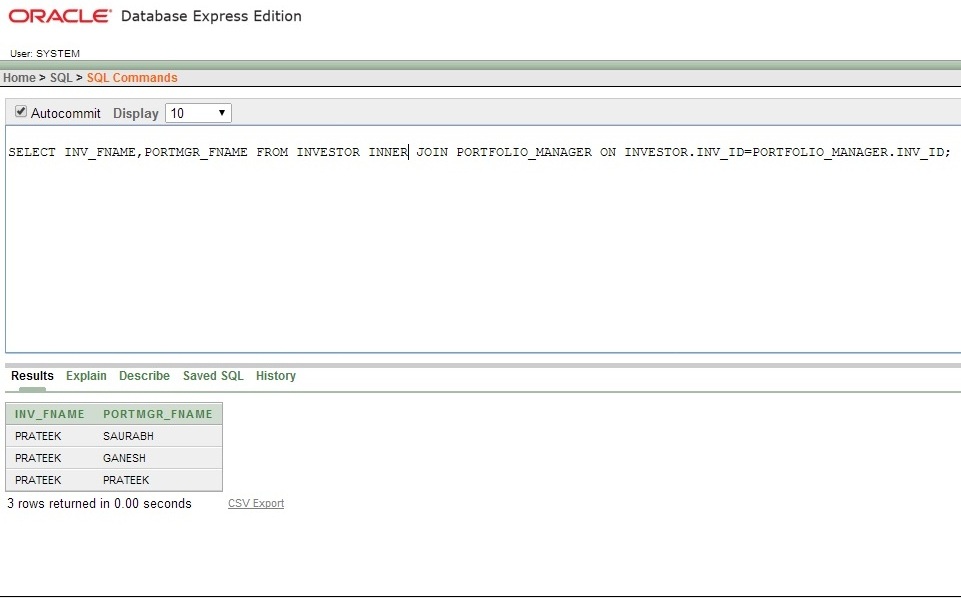
**JOINS**

**INNER JOIN**:

SELECT INV\_FNAME, PORTMGR\_FNAME

FROM INVESTOR

INNER JOIN PORTFOLIO\_MANAGER ON INVESTOR.INV\_ID=PORTFOLIO\_MANAGER.INV\_ID;

**LEFT JOIN**:

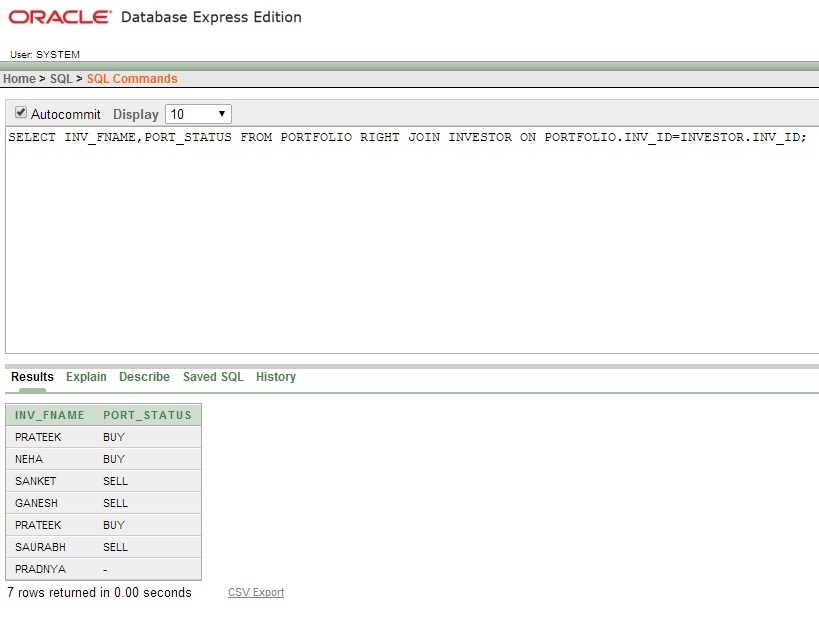
SELECT INV\_FNAME, PORT\_STATUS

FROM PORTFOLIO LEFT JOIN INVESTOR ON PORTFOLIO.INV\_ID=INVESTOR.INV\_ID;

**RIGHT JOIN**:

SELECT INV\_FNAME, PORT\_STATUS

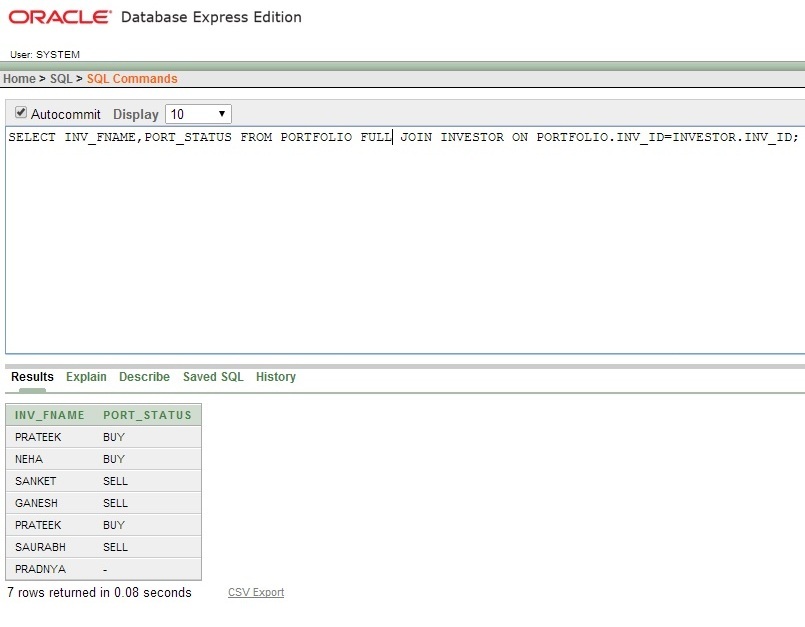
FROM PORTFOLIO RIGHT JOIN INVESTOR ON PORTFOLIO.INV\_ID=INVESTOR.INV\_ID



**FULL JOIN**:

SELECT INV\_FNAME, PORT\_STATUS

FROM PORTFOLIO FULL JOIN INVESTOR ON PORTFOLIO.INV\_ID=INVESTOR.INV\_ID;



**VIEWS**

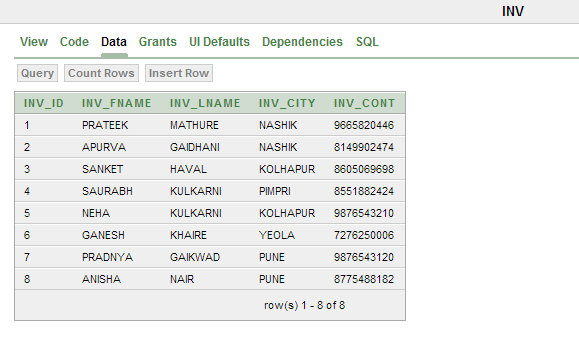
1.CREATE OR REPLACE FORCE VIEW "BROK" ("BROKER\_FNAME", "BROKER\_LNAME") AS

SELECT BROKER\_FNAME, BROKER\_LNAME FROM BROKER



1. CREATE OR REPLACE FORCE VIEW "INV" ("INV\_ID", "INV\_FNAME", "INV\_LNAME", "INV\_CITY", "INV\_CONT") AS

SELECT "INV\_ID","INV\_FNAME","INV\_LNAME","INV\_CITY","INV\_CONT" FROM INVESTOR



1. CREATE OR REPLACE FORCE VIEW "PORTMGR" ("PORTMGR\_ID", "PORTMGR\_FNAME", "PORTMGR\_CONT") AS

SELECT PORTMGR\_ID, PORTMGR\_FNAME, PORTMGR\_CONT FROM PORTFOLIO\_MANAGER

