

INTRODUCTION TO DATABASES



FINAL PROJECT

Create a database for the
project management
system

Student's Inform

CCCS 215

Course No.16844

D. Manal Almabadi

MARWH ALHADI:

ID: 2007881

Email: 2007881@uj.edu.sa

Rowaida Al-Shehri:

ID: 1705749

Email: 1705749@uj.edu.sa

Ruba Al-Qahtani:

ID: 2006485

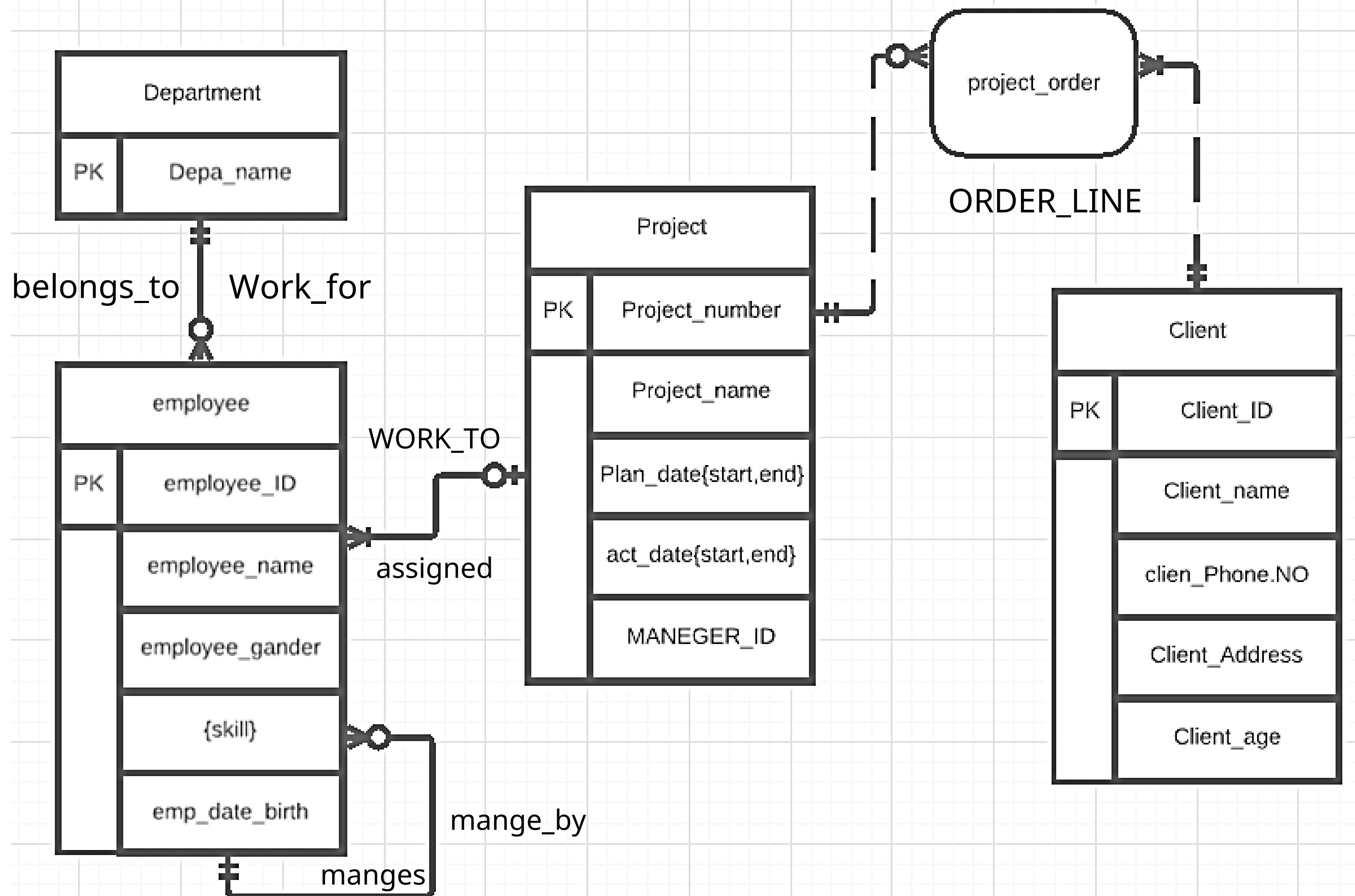
Email: 2006485@uj.edu.sa

INTRODUCTION TO DATABASES



Phase 1

Systems Analysis and
E-R Model completed



Entity description table

Entity	Description	PK
Project	The project that employees are working on according to its department	Client_ID
Client	The customer to whom the project will be delivered	Client_ID
Manager	Section ,employee and project manager.	Manager_ID
Employee	Employees who will work on projects	Employee_ID
Department	The department in which employees will work for the work of various projects	department_name
Dependent	Dependents of the employee (members of his family)	week

Attribute description table

Entity	Attributes	Type of date	Clarification
project	<u>Project_number</u>	Simple attribute	The unique number to identify each project.
	Project_name	Simple attribute	Project name
	Plan_date{start_end}	Composite	The beginning and end of the plan project.
	Act_date{start_end}	Composite	Project start and end time .
	Address	Simple attribute	project location
	[plan_time]	Driven	Project plan time
	[Actual_time]	Driven	Working time project

Attribute description table

Entity	Attributs	Type of date	Clarification
Client	<u>Client_id</u>	Simple attribute	The unique id to identify each client.
	Client_name	Simple attribute	Client name
	Client_phone.No	Composite	The number of contact client
	Client_Address	Composite	Client Address(city,street name,budling num, apartment num)
	Client_Age	Simple attribute	Client Age

Attribute description table

Entity	Attributs	Type of date	Clarification
Employee	<u>Employee_ID</u>	Simple attribute	The unique id to identify each employee.
	<u>Employee_name</u>	Simple attribute	Employee name
	Employee_gander	Simple attribute	Employee gender male or <u>famle</u>
	{Skill}	Multtivalued	An employee can have more than one skill.
	Emp_date_birth	Simple attribute	Employees date of birth.

Attribute description table

Entity	Attributs	Type of date	Clarification
Dependent	Depend_name	Simple attribute	Dependent name
	Depend_gender	Simple attribute	dependent gender male or famle
	Relationship	Simple attribute	Type Relationship of
	Depn_date_of_birth	Simple attribute	Dependent date of birth.
	[depen_age]	drived	Dependent age
Department	<u>Depa_name</u>	Simple attribute	The unique name to identify each department.

Explanation about relationships

Project and Client :

The Project can be ordered by one or more of the Project orders,

and only one Client must order one or more Project orders.

Employee and Department :

Each Employee most belongs_to only one department ,

and the department can have many than Employee or not be any at all .

Explanation about relationships

Manager and Employee:

Each manager can manage one or more Employees,

and Each employee must be managed by only one manager.

Project and Employee :

The Project can be assigned at least to one or to many Employees ,

and Employees must work to one or not be any at all on the project.

Phase 1

Distribution of tasks:

MARWH ALHADI:

- Define Entity, Attribute, and relationships in ER
- ER design
- File Format

Ruba Al-Qahtani:

- Define Entity, Attribute, and relationships in ER
- explanation of relationship.
- File Format

Rowaida Al-Shehri:

- Define Entity, Attribute, and relationships in ER
- Attribute description
- File Format

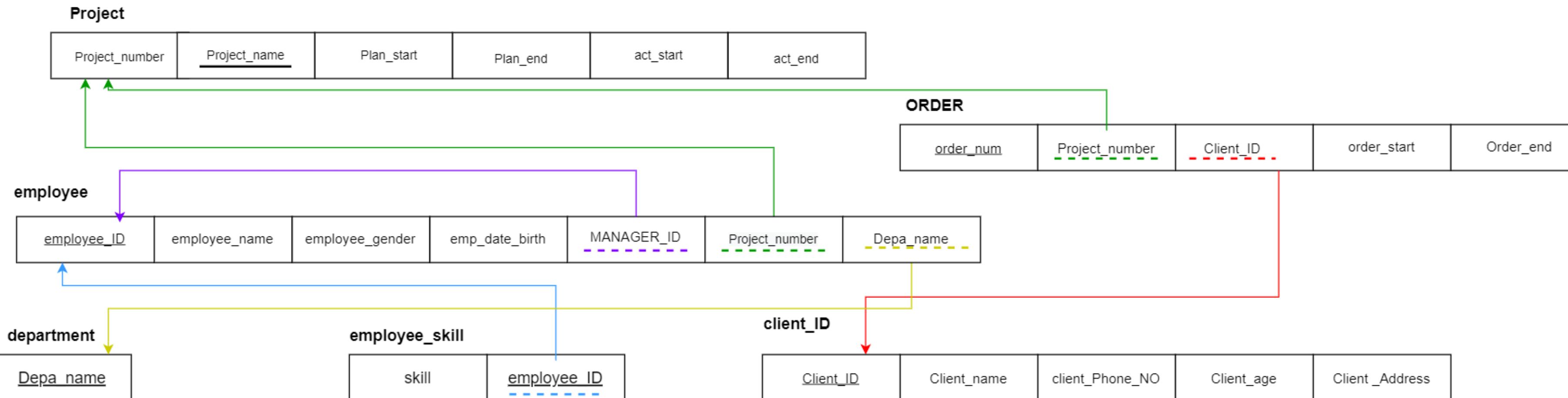
INTRODUCTION TO DATABASES



Phase2

Logical modelling and
normalization.

Mapping



Normalization



1NF

Relation already in 1NF , because :

- doesn't include multivalued or composite attribute
- a unique key has been identified for each relation
- all attributes are functionally dependent on all or part of the key.

Normalization

◆ 2NF

Relation already in 2 NF ,because :

- the relation is in 1 NF
- all non key attributes dependes on the primary key.

Normalization

◆ 3NF

Relation already in 3 NF ,because :

- the relation is in 2NF
- all transitive dependencies have been removed.

The final result schema have 6 relations

PROJECT (project_number , project_name , plan_start , plan_end ,act_start , act_end)

ORDER (order_num , project_number # , Client_ID#)

CLIENT (Client_ID , Client_name , client_Phone.NO , Client_age ,Client_Address)

EMPLOYEE (employee_ID , employee_name, employee_gander ,emp_date_birth ,
MANGER_ID#,Depa_name#,))

EMPLOYEE_SKILL (skill , employee_ID#)

DEPARTMENT (Depa_name)

The PK and FK in relations :

- **PROJECT** : PK (project_number)
FK (MANGER_ID) refers to (employee_ID) in EMPLOYEE relation
- **EMPLOYEE** : PK (employee_ID)
FK (MANGER_ID) because it is a unary relationship refers to (employee_ID) in EMPLOYEE relation
- **ORDER** : PK (order_num)
it was Associative Entities so has 2 FK (project_number) refers to project relation
(Client_ID) refers to client relation

The PK and FK in relations :



DEPARTMENT : PK (Depa_name)

FK (employee_ID) refers to (employee_ID) in EMPLOYEE relation



EMPLOYEE_SKILL : Composed PK (employee_ID), (skill)

it was a multivalued , FK (employee_ID) in EMPLOYEE relation



CLIENT : PK (Client_ID) , relation doesn't have FK

functional dependancy :



project_number

project_name , plan_start, plan_end,
act_start , act_end ,MANGER_ID



employee_ID :

employee_name,employee_gander
emp_date_birth



order_num :

project_number , Client_ID



Client_ID

Client_name , client_Phone.NO,
Client_age ,Client_Address



Depa_name :

employee_ID

Phase 2

Distribution of tasks:

MARWH ALHADI:

- Define Entity, Attribute, and relationships in ER
- ER design
- Relations
- Normalization
- File Format

Ruba Al-Qahtani:

- Define Entity, Attribute, and relationships in ER
- ER design
- Relations
- Normalization
- File Format

Rowaida Al-Shehri:

- Define Entity, Attribute, and relationships in ER
- ER design
- Relations
- Normalization
- File Format

INTRODUCTION TO DATABASES



Phase3

**Physical Database
implementation**

SQL DDL statements for table creation AND

Table specification for each tabel

SQL statement for inserting data in tables for each tabel



DEPARTMENT

CREATE TABLE DEPARTMENT

```
(  
Depa_name      varchar2(50) not null,  
PRIMARY KEY (Depa_name)  
)
```

DESCRIBE DEPARTMENT;

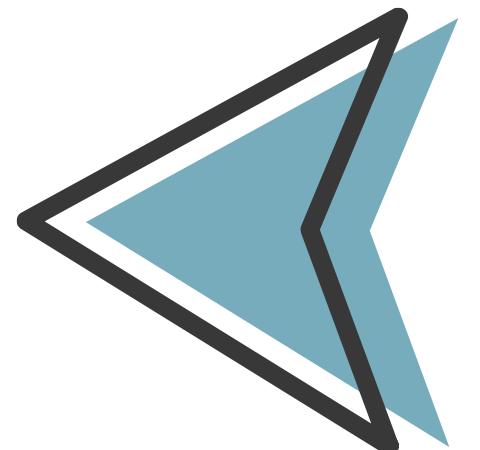
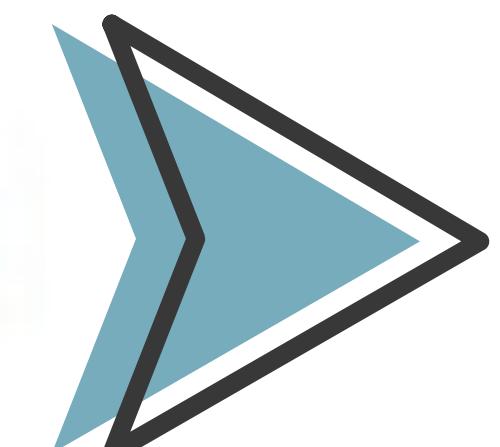
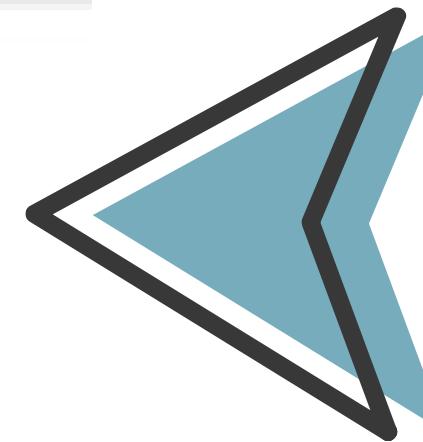


TABLE DEPARTMENT

Column	Null?	Type
DEPA_NAME	NOT NULL	VARCHAR2(50)

[Download CSV](#)

```
INSERT INTO DEPARTMENT (Depa_name)  
VALUES ('Production')
```

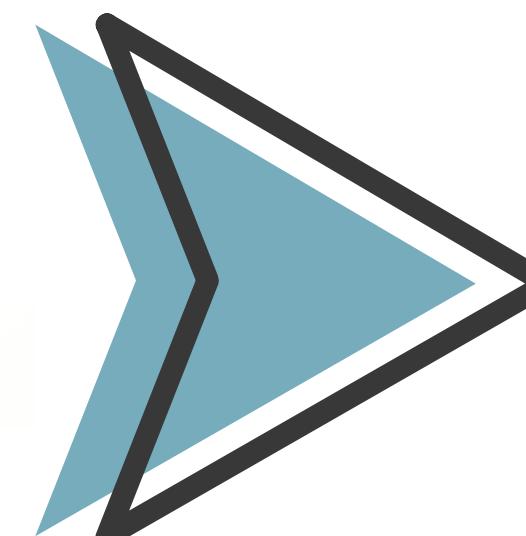


insert

```
INSERT INTO DEPARTMENT (Depa_name)  
VALUES ('Finance')
```

```
INSERT INTO DEPARTMENT (Depa_name)  
VALUES ('Facility management')
```

```
INSERT INTO DEPARTMENT (Depa_name)  
VALUES ('marketing')
```



DEPA_NAME
Facility management
Finance
Production
marketing

Download CSV

4 rows selected.

```
SELECT * FROM DEPARTMENT;
```

Client

```
CREATE TABLE Client_T  
(  
    Client_ID numeric (10) NOT NULL,  
    client_name varchar(20),  
    client_phone numeric (10),  
    client_Age numeric(10),  
    client_Address varchar(20),  
    Primary key(Client_ID)  
)
```

```
DESCRIBE Client_T;
```

CREATE

TABLE CLIENT_T

Column	Null?	Type
CLIENT_ID	NOT NULL	NUMBER(10,0)
CLIENT_NAME	-	VARCHAR2(20)
CLIENT_PHONE	-	NUMBER(10,0)
CLIENT_AGE	-	NUMBER(10,0)
CLIENT_ADDRESS	-	VARCHAR2(20)

Download CSV

5 rows selected.



insert

```
INSERT INTO Client_T (Client_ID,client_name, client_phone,client_Age)  
VALUES (9876645563,'Laila Nasr El-Din',0567865887,28)
```

```
INSERT INTO Client_T (Client_ID,client_name, client_phone,client_Address)  
VALUES (2236757976,'Abdullah Al-Hadi',0565342557,'Jeddah')
```

```
INSERT INTO Client_T (Client_ID,client_name, client_phone,client_Address)  
VALUES (1877988906,'Khadija El-Sayed',0576435776,'Makkah')
```

```
INSERT INTO Client_T (Client_ID,client_name, client_phone,client_Age,client_Address)  
VALUES (7625257376,'Wiam Saud Baloch',0509876447,43,'Riyadh')
```

```
INSERT INTO Client_T (Client_ID,client_name, client_phone,client_Age,client_Address)  
VALUES (6773899227,'Fatima Al-Thalabi',0576534448,28,'Abha')
```



SELECT * FROM Client_T;

CLIENT_ID	CLIENT_NAME	CLIENT_PHONE	CLIENT_AGE	CLIENT_ADDRESS
9876645563	Laila Nasr El-Din	567865887	28	-
1877988906	Khadija El-Sayed	576435776	-	Makkah
2236757976	Abdullah Al-Hadi	565342557	-	Jeddah
6773899227	Fatima Al-Thalabi	576534448	28	Abha
7625257376	Wiam Saud Baloch	509876447	43	Riyadh

[Download CSV](#)

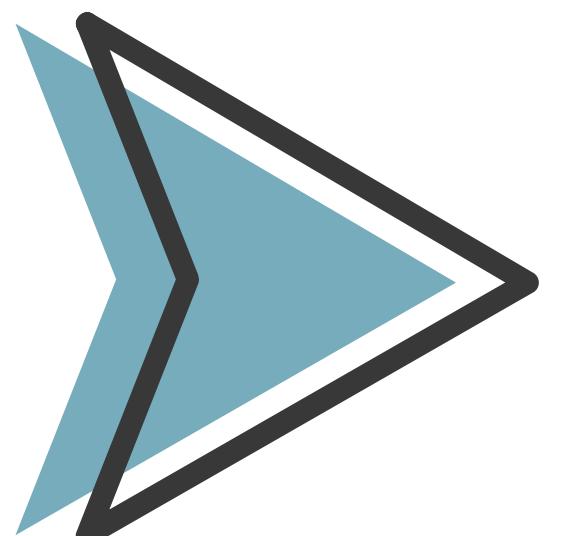
5 rows selected.

Project_T

```
create table Project_T
(
    Project_number numeric(10) NOT NULL,
    Project_name varchar(20),
    Plan_start date,
    Plan_end date,
    act_start date,
    act_end date,
    PRIMARY KEY(Project_number)
)

DESCRIBE Project_T;

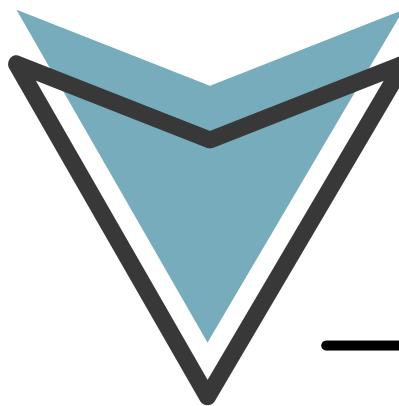
INSERT INTO Project_T (Pro
```



CREATE

TABLE PROJECT_T		
Column	Null?	Type
PROJECT_NUMBER	NOT NULL	NUMBER(10,0)
PROJECT_NAME	-	VARCHAR2(20)
PLAN_START	-	DATE
PLAN_END	-	DATE
ACT_START	-	DATE
ACT_END	-	DATE

Download CSV
6 rows selected.



insert

```
INSERT INTO Project_T (Project_number,Project_name, Plan_start,Plan_end,act_start,act_end)
VALUES (6956,'M54','21-January-6','21-February-22','21-March-5','22-January-9')
```

```
INSERT INTO Project_T (Project_number,Project_name, Plan_start,Plan_end,act_start,act_end)
VALUES (7067,'PP2','21-May-10','21-June-30','21-August-2','21-December-15')
```

```
INSERT INTO Project_T (Project_number,Project_name, Plan_start,Plan_end,act_start,act_end)
VALUES (8053,'F90','21-March-11','21-May-20','21-June-7','22-January-5')
```

```
INSERT INTO Project_T (Project_number,Project_name, Plan_start,Plan_end,act_start,act_end)
VALUES (4821,'L6K',TO_DATE('21-11-3','YYYY-MM-DD'),TO_DATE('21-4-15','YYYY-MM-DD'),TO_DATE('21-6-7','YYYY-MM-DD'),TO_DATE('22-1-5','YYYY-MM-DD'))
```

```
INSERT INTO Project_T (Project_number,Project_name, Plan_start,Plan_end,act_start,act_end)
VALUES (7876,'M54',TO_DATE('21-1-2','YYYY-MM-DD'),TO_DATE('21-3-3','YYYY-MM-DD'),TO_DATE('21-1-3','YYYY-MM-DD'),TO_DATE('21-2-5','YYYY-MM-DD'))
```



SELECT * FROM Project_T;

PROJECT_NUMBER	PROJECT_NAME	PLAN_START	PLAN_END	ACT_START	ACT_END
7876	M54	02-JAN-21	03-MAR-21	03-JAN-21	05-FEB-21
4821	L6K	03-NOV-21	15-APR-21	07-JUN-21	05-JAN-22
7067	PP2	21-MAY-10	21-JUN-30	21-AUG-02	21-DEC-15
6956	M54	21-JAN-06	21-FEB-22	21-MAR-05	22-JAN-09
8053	F90	21-MAR-11	21-MAY-20	21-JUN-07	22-JAN-05

[Download CSV](#)

5 rows selected.

(ORDER_T)

```
CREATE TABLE ORDER_T
(
Order_num numeric(10) NOT NULL,
Project_number numeric (10) NOT NULL,
Client_ID numeric (10) NOT NULL,
received_date date,
Order_date date,
PRIMARY KEY (Order_num),
CONSTRAINT Project_number_FK FOREIGN KEY (Project_number) REFERENCES Project_T(Project_number),
CONSTRAINT Client_ID_FK FOREIGN KEY (Client_ID) REFERENCES Client_T(Client_ID)
)
```

```
DESCRIBE ORDER_T;
```

CREATE

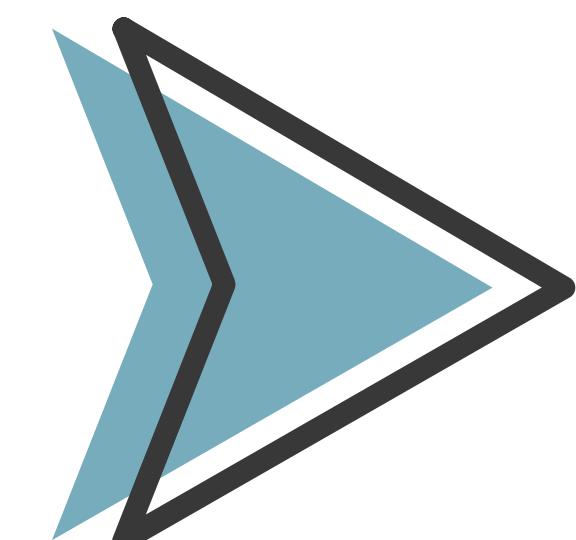


TABLE ORDER_T

Column	Null?	Type
ORDER_NUM	NOT NULL	NUMBER(10,0)
PROJECT_NUMBER	NOT NULL	NUMBER(10,0)
CLIENT_ID	NOT NULL	NUMBER(10,0)
RECEIVED_DATE	-	DATE
ORDER_DATE	-	DATE

Download CSV

5 rows selected.



insert

```
INSERT INTO ORDER_T (Order_num,Project_number,Client_ID,received_date,Order_date)
VALUES (1001 ,6956,9876645563,'22-January-10','21-January-1')
```

```
INSERT INTO ORDER_T (Order_num,Project_number,Client_ID,received_date,Order_date)
VALUES (1002 ,7067,2236757976,TO_DATE('21-12-16','YYYY-MM-DD'),TO_DATE('21-4-5','YYYY-MM-DD'))
```

```
INSERT INTO ORDER_T (Order_num,Project_number,Client_ID,received_date,Order_date)
VALUES (1003 ,8053,1877988906,'22-January-6','21-February-9')
```

```
INSERT INTO ORDER_T (Order_num,Project_number,Client_ID,received_date,Order_date)
VALUES (1004 ,7876,7625257376,'21-November-21','19-December-15')
```

```
INSERT INTO ORDER_T (Order_num,Project_number,Client_ID,received_date,Order_date)
VALUES (1005 ,4821,6773899227,TO_DATE('21-12-16','YYYY-MM-DD'),TO_DATE('21-4-5','YYYY-MM-DD'))
```

```
SELECT * FROM ORDER_T;
```



SELECT * FROM ORDER_T;

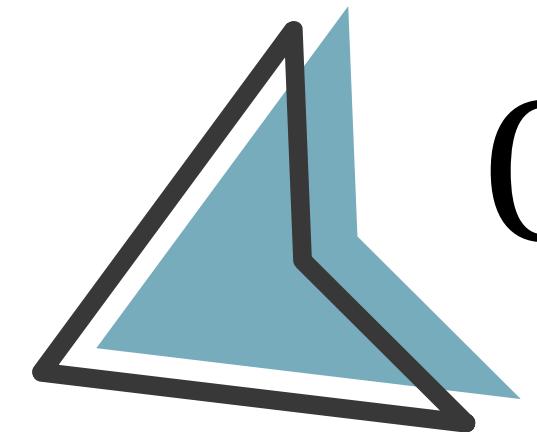
ORDER_NUM	PROJECT_NUMBER	CLIENT_ID	RECEIVED_DATE	ORDER_DATE
1001	6956	9876645563	22-JAN-10	21-JAN-01
1004	7876	7625257376	21-NOV-21	19-DEC-15
1003	8053	1877988906	22-JAN-06	21-FEB-09
1005	4821	6773899227	16-DEC-21	05-APR-21
1002	7067	2236757976	16-DEC-21	05-APR-21

[Download CSV](#)

5 rows selected.

(EMPLOYEE_T)

```
CREATE TABLE EMPLOYEE_T
(
    employee_ID      numeric(10) NOT NULL,
    employee_name    varchar2(50) NOT NULL,
    employee_gander  varchar2(50) ,
    emp_data_birth   date,
    MANEGER_ID       numeric(10) ,
    Project_number   numeric(10) NOT NULL,
    Depa_name        varchar2(50) NOT NULL,
    PRIMARY KEY(employee_ID),
    CONSTRAINT MANEGER_ID_FK FOREIGN KEY (MANEGER_ID) REFERENCES EMPLOYEE_T (employee_ID),
    CONSTRAINT EMProject_number_FK FOREIGN KEY (Project_number) REFERENCES Project_T(Project_number),
    CONSTRAINT EMDepa_name_FK FOREIGN KEY (Depa_name) REFERENCES DEPARTMENT (Depa_name)
)
```



CREATE

```
DESCRIBE EMPLOYEE_T;
```



TABLE EMPLOYEE_T

Column	Null?	Type
EMPLOYEE_ID	NOT NULL	NUMBER(10,0)
EMPLOYEE_NAME	NOT NULL	VARCHAR2(50)
EMPLOYEE_GANDER	-	VARCHAR2(50)
EMP_DATA_BIRTH	-	DATE
MANEGER_ID	-	NUMBER(10,0)
PROJECT_NUMBER	NOT NULL	NUMBER(10,0)
DEPA_NAME	NOT NULL	VARCHAR2(50)

[Download CSV](#)

7 rows selected.



insert

```
INSERT INTO EMPLOYEE_T (employee_ID,employee_name, employee_gander,emp_data_birth,Project_number,Depa_name)
VALUES (1117768887,'Gadi seed AL-Sady','female','20-March-5',7876,'Production')

INSERT INTO EMPLOYEE_T (employee_ID,employee_name, employee_gander,emp_data_birth,MANEGER_ID,Project_number,Depa_name)
VALUES (1245637378,'seed AL-Sady','male','20-March-5',1117768887,7876,'Production')

INSERT INTO EMPLOYEE_T (employee_ID,employee_name, employee_gander,emp_data_birth,MANEGER_ID,Project_number,Depa_name)
VALUES (10942853,'Sara Emad Al-ghamdi','female',TO_DATE('21-11-1','YYYY-MM-DD'),1245637378,6956,'Facility management')

INSERT INTO EMPLOYEE_T (employee_ID,employee_name, employee_gander,emp_data_birth,MANEGER_ID,Project_number,Depa_name)
VALUES (10256679,'Hamd Saleh Al-sharef','male',TO_DATE('87-12-16','YYYY-MM-DD'),10942853,7067,'Finance')

INSERT INTO EMPLOYEE_T (employee_ID,employee_name, employee_gander,emp_data_birth,MANEGER_ID,Project_number,Depa_name)
VALUES (10316468,'Nuha Naser Al-fayez','female',TO_DATE('96-8-16','YYYY-MM-DD'),10256679,8053,'marketing')
```



SELECT * FROM EMPLOYEE_T;

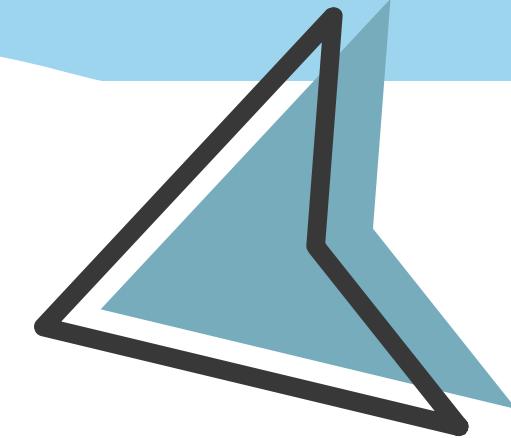
EMPLOYEE_ID	EMPLOYEE_NAME	EMPLOYEE_GENDER	EMP_DATA_BIRTH	MANEGER_ID	PROJECT_NUMBER	DEPA_NAME
1117768887	Gadi seed AL-Sady	female	20-MAR-05	-	7876	Production
10942853	Sara Emad Al-ghamdi	female	01-NOV-21	1245637378	6956	Facility management
10316468	Nuha Naser Al-fayez	female	16-AUG-96	10256679	8053	marketing
1245637378	seed AL-Sady	male	20-MAR-05	1117768887	7876	Production
10256679	Hamd Saleh Al-sharef	male	16-DEC-87	10942853	7067	Finance

[Download CSV](#)

5 rows selected.

(EMPLOYEE skill)

```
CREATE TABLE employee_skill  
(  
skill varchar(50) NOT NULL,  
employee_ID numeric (10)NOT NULL,  
Primary key (skill),  
Constraint employee_ID_FK Foreign key (employee_ID) References EMPLOYEE_T(employee_ID)  
)
```



CREATE

```
DESCRIBE employee_skill;
```

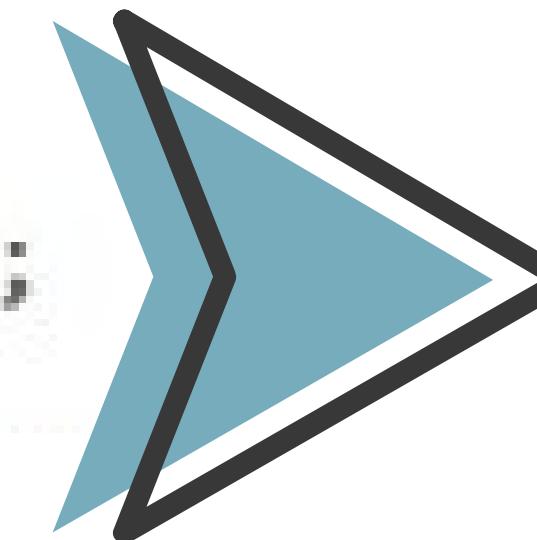


TABLE EMPLOYEE_SKILL

column	Null?	Type
SKILL	NOT NULL	VARCHAR2(50)
EMPLOYEE_ID	NOT NULL	NUMBER(10,0)

Download CSV

2 rows selected.



insert

```
INSERT INTO employee_skill (skill,employee_ID)
VALUES ('integrity',1117768887)
```

```
INSERT INTO employee_skill (skill,employee_ID)
VALUES ('Problem-solving',1245637378)
```

```
INSERT INTO employee_skill (skill,employee_ID)
VALUES ('Conflict resolution',10942853)
```

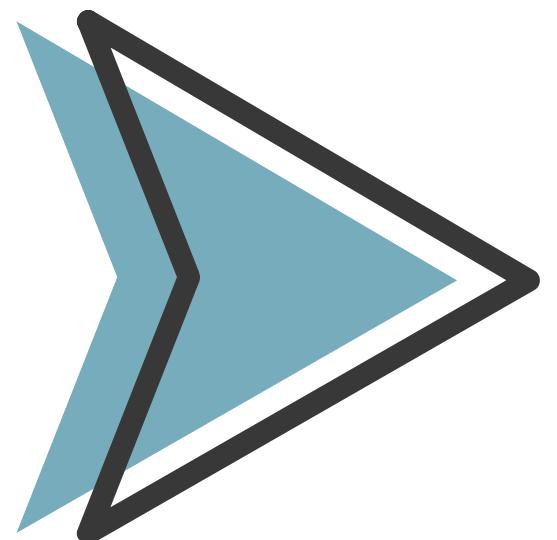
```
INSERT INTO employee_skill (skill,employee_ID)
VALUES ('Teamwork',10256679)
```

```
INSERT INTO employee_skill (skill,employee_ID)
VALUES ('Creativity',10316468)
```

```
INSERT INTO employee_skill (skill,employee_ID)
VALUES ('Willingness to learn',1117768887)
```

```
INSERT INTO employee_skill (skill,employee_ID)
VALUES ('responsibility',1117768887)
```

```
SELECT * FROM employee_skill;
```



SKILL	EMPLOYEE_ID
integrity	111776887
Problem-solving	1245637378
Conflict resolution	10942853
Creativity	10316465
responsibility	111776887
Teamwork	10256679
Willingness to learn	111776887

[Download CSV](#)

7 rows selected.

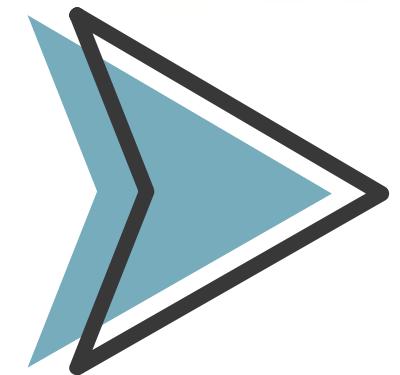
Design and implement queries



WHERE

Use WHERE in Query To inquire about Orderd and received date For a specific order

```
SELECT received_date , Order_date  
FROM ORDER_T  
WHERE Order_num = 1002
```



RECEIVED_DATE	ORDER_DATE
16-DEC-21	05-APR-21

[Download CSV](#)

Use WHERE in Queri To inquire about time spent by the completed project in planning and implementation

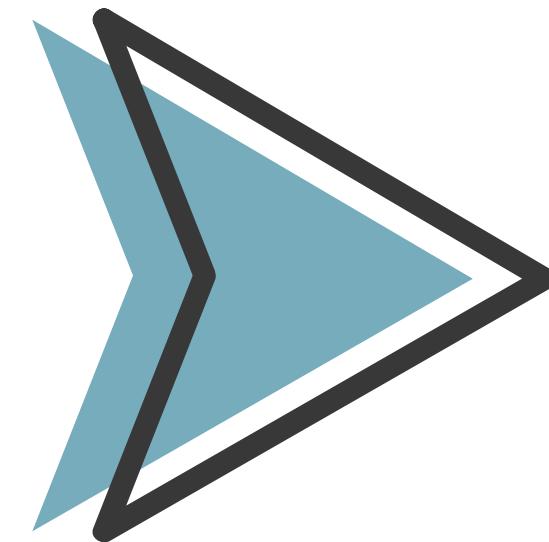
```
SELECT Plan_start , Plan_end , act_start ,act_end  
FROM Project_T  
WHERE Project_number = 6956 AND Project_name = 'M54'
```

PLAN_START	PLAN_END	ACT_START	ACT_END
21-JAN-06	21-FEB-22	21-MAR-05	22-JAN-09

[Download CSV](#)

Use WHERE in Queri To inquire about the manager responsible for a specific department

```
SELECT MANEGER_ID  
FROM EMPLOYEE_T  
WHERE Depa_name = "Production"
```



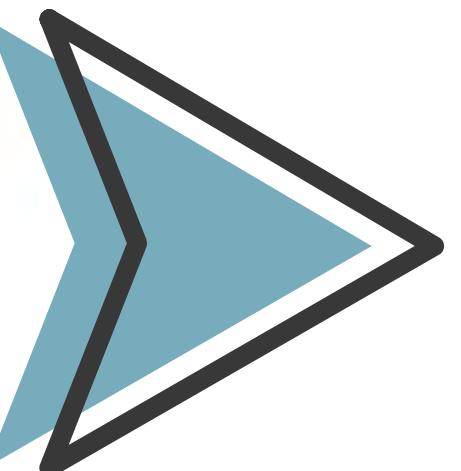
MANEGER_ID
-
1117768887

[Download CSV](#)

Order By

Arrange clients according to their
alphabet in descending order

```
SELECT client_name FROM Client_T  
ORDER BY client_name DESC;
```



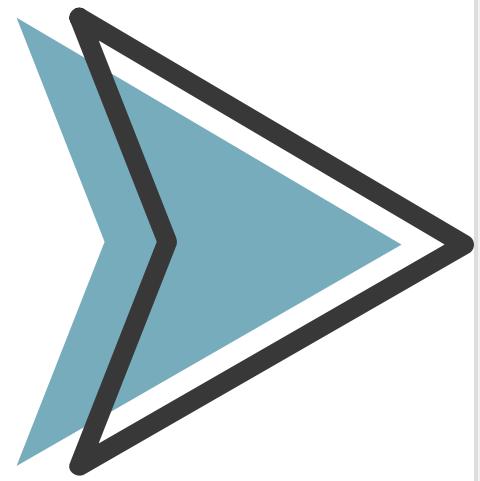
CLIENT_NAME
Wiam Saud Baloch
Laila Nasr El-Din
Khadija El-Sayed
Fatima Al-Thalabi
Abdullah Al-Hadi

[Download CSV](#)

5 rows selected.

Arrange clients according to their age in ascending order

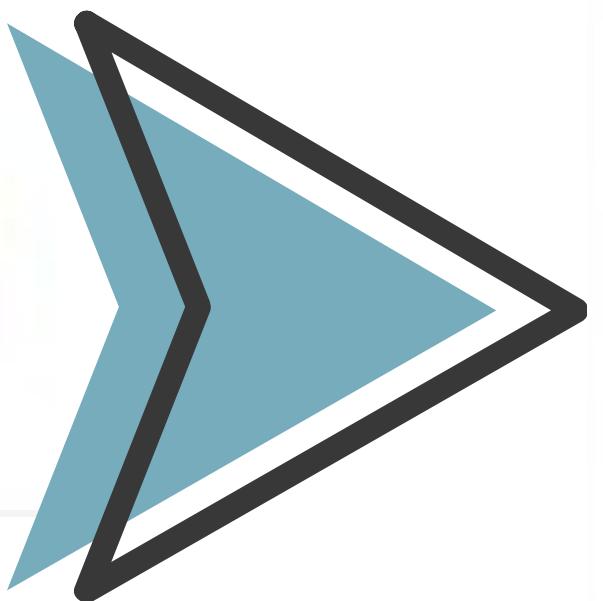
```
SELECT client_Age FROM Client_T  
ORDER BY client_Age ASC;
```



CLIENT_AGE
28
28
43
-
-

Inquiries about the history of outgoing orders in descending order

```
SELECT Order_date FROM ORDER_T  
ORDER BY Order_date ASC;
```



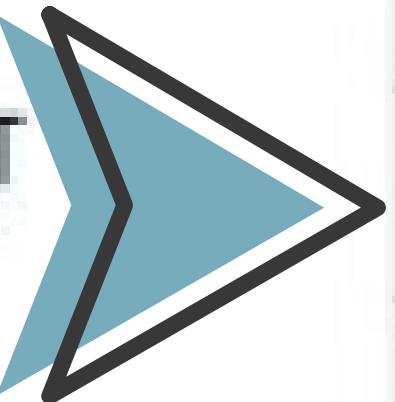
ORDER_DATE
05-APR-21
05-APR-21
21-JAN-01
21-FEB-09
19-DEC-15

Download CSV

5 rows selected

Arrange employees according
to their names in descending
order

```
SELECT employee_name FROM EMPLOYEE_T  
ORDER BY employee_name DESC;
```



EMPLOYEE_NAME
seed AL-Sady
Sara Emad Al-ghamdi
Nuha Naser Al-fayez
Hamd Saleh Al-sharef
Gadi seed AL-Sady

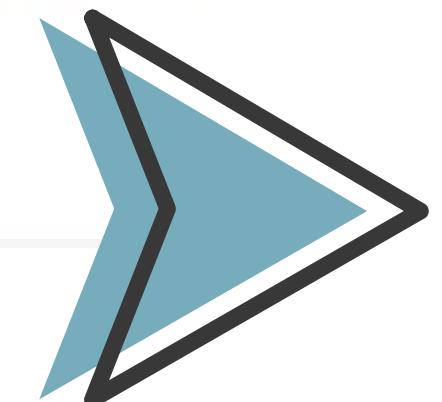
[Download CSV](#)

5 rows selected.

Group By

Classification of workers into females and men and count them

```
SELECT employee_gander ,COUNT(*)  
FROM EMPLOYEE_T  
Group By employee_gander
```



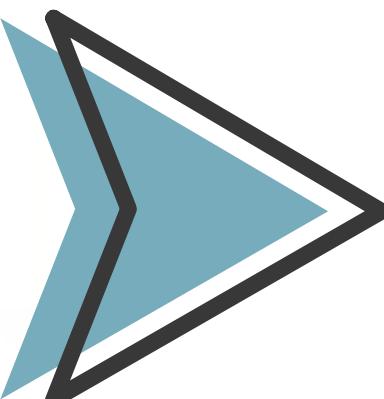
EMPLOYEE_GANDER	COUNT(*)
male	2
female	3

[Download CSV](#)

2 rows selected.

Classify employees according to their departments

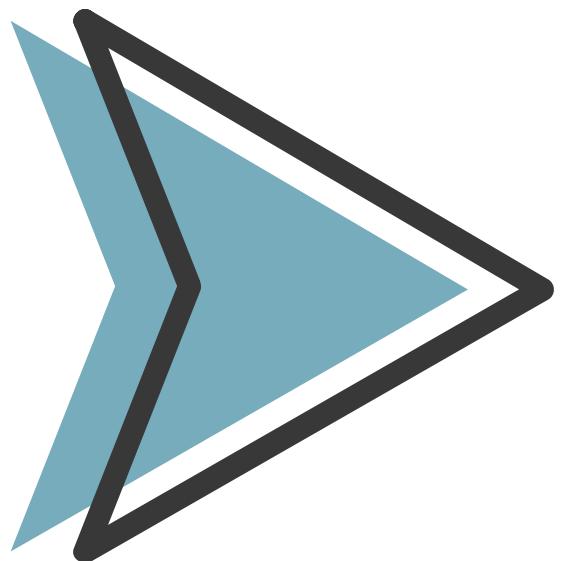
```
SELECT Depa_name  
FROM EMPLOYEE_T  
Group By Depa_name
```



DEPA_NAME
Production
Finance
Facility management
marketing
Download CSV
4 rows selected.

Classify orders based on received day

```
SELECT received_date  
FROM ORDER_T  
Group By received_date
```



RECEIVED_DATE
16-DEC-21
21-NOV-21
22-JAN-10
22-JAN-06

[Download CSV](#)

4 rows selected.

Aggregate functions

use count Aggregate to count number
of clinets

```
SELECT count(Client_ID) from Client_T;
```

COUNT(CLIENT_ID)

5

[Download CSV](#)

use AVG Aggregate to calculate
average number of clients age

```
SELECT AVG(client_Age) from Client_T;
```

AVG(CLIENT_AGE)
33

[Download CSV](#)

use sum Aggregate to calculate the
number of Orders

```
SELECT SUM(Order_num) AS "SUMMATION" FROM ORDER_T
```

SUMMATION
5015

[Download CSV](#)

Join query

```
SELECT Client_T.Client_ID ,client_name ,Order_num  
FROM Client_T INNER JOIN ORDER_T ON  
Client_T.Client_ID = ORDER_T.Client_ID  
ORDER BY Order_num
```



INNER

Inquiry about the name and id of the customer and the number of the order he requested

CLIENT_ID	CLIENT_NAME	ORDER_NUM
9876645563	Laila Nasr El-Din	1001
2236757976	Abdullah Al-Hadi	1002
1877988906	Khadija El-Sayed	1003
7625257376	Wiam Saud Baloch	1004
6773899227	Fatima Al-Thalabi	1005

[Download CSV](#)

EQUI JOIN

```
SELECT Client_T.Client_ID ,client_name ,Order_num  
FROM Client_T,ORDER_T  
WHERE Client_T.Client_ID = ORDER_T.Client_ID  
ORDER BY Order_num
```

Inquiry about the name and id of the customer and the number of the order he requested by using equi join



CLIENT_ID	CLIENT_NAME	ORDER_NUM
9876645563	Laila Nasr El-Din	1001
2236757976	Abdullah Al-Hadi	1002
1877988906	Khadija El-Sayed	1003
7625257376	Wiam Saud Baloch	1004
6773899227	Fatima Al-Thalabi	1005

[Download CSV](#)

OUTER JOIN

```
SELECT Client_T.Client_ID ,client_name ,Order_num  
FROM Client_T LEFT OUTER JOIN ORDER_T  
ON Client_T.Client_ID = ORDER_T.Client_ID  
ORDER BY Order_num
```



Inquiry about the name and id of the customer and the number of the order he requested by using outer join

CLIENT_ID	CLIENT_NAME	ORDER_NUM
9876645563	Laila Nasr El-Din	1001
2236757976	Abdullah Al-Hadi	1002
1877988906	Khadija El-Sayed	1003
7625257376	Wiam Saud Baloch	1004
6773899227	Fatima Al-Thalabi	1005

[Download CSV](#)

Design two stored procedures



update procedure

```
CREATE PROCEDURE UPDET_RECDAE_EORDER  
IS  
BEGIN  
UPDATE ORDER_T SET received_date = TO_DATE('87-12-16','YYYY-MM-DD') WHERE Order_num = 1001;  
COMMIT;  
END;
```

```
EXEC UPDET_RECDAE_EORDER;
```

Statement processed.

```
DROP PROCEDURE UPDET_RECDAE_EORDER;
```

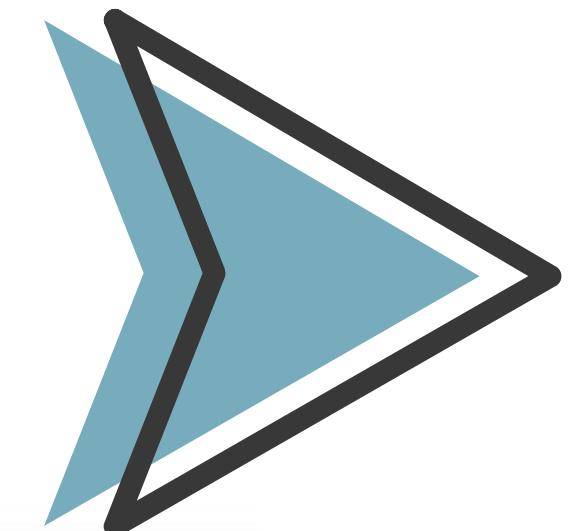
Procedure dropped.

select procedure

```
CREATE OR REPLACE PROCEDURE GETORDERINFORM (ORDNUM IN NUMBER)
AS
rec_date      ORDER_T.received_date %TYPE;
Or_date       ORDER_T.Order_date %TYPE;
BEGIN
SELECT received_date,Order_date INTO rec_date ,Or_date
FROM ORDER_T WHERE Order_num = ORDNUM;

DBMS_OUTPUT.PUT_LINE('received_date : ' || rec_date);
DBMS_OUTPUT.PUT_LINE('Order_date   : ' || Or_date);
DBMS_OUTPUT.PUT_LINE('Order_num  : ' || ORDNUM);
END;
```

```
EXEC GETORDERINFORM(1001);
```



```
Statement processed.
received_date :16-DEC-87
Order_date   :21-JAN-81
Order_num  :1001
```

Phase 3

Distribution of tasks:

MARWH ALHADI:

- Create the normalized table.
- Populate your tables with 5 rows at least.
- Design and implement at least 4 queries.
- Design two stored procedures.
- File Format.

Ruba Al-Qahtani:

- Create the normalized table.
- Populate your tables with 5 rows at least.
- Design and implement at least 4 queries.
- Design two stored procedures.
- File Format.

Rowaida Al-Shehri:

- Create the normalized table.
- Populate your tables with 5 rows at least.
- Design and implement at least 4 queries.
- Design two stored procedures.
- File Format.