L U N A

IS251-DBMS Course Project

TEAM MEMBERS

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Responsible for Schema, Physical Data Model, insert data, design one view (report), and design PDF file.

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Responsible for conceptual data model(ERM), design some view (report).

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Responsible for the Introduction, Scenario, Organization Architecture and work system, Organization current system problem ,Project objective, and design some view (report).

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Responsible for design some view (report), helped with the Physical Data Model.

Introduction

And table of contents:

The Luna spa is one of the famous spas, Recently The spa has started to spread and open many branches, therefore, the number of clients, employees, and data increased. The increase was the reason why the spa encouraged to create a database.so when you visit our spa, we want you to have an experience you couldn't have anywhere else on earth ,And for that, this project is to design a database system for the spa which collects, stores and manages all the information the spa.

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Project Objective

About LUNA spa DBMs

Scenario:

In LUNA spa the employee provides many services to the clients.

- One and only one employee can supervisor many employees.
- Each employee can be described by her name (First name and last name), employee id, hire date, manager id, job name, phone number, and salary. An employee can be uniquely described using the employee id.
- each employee can work in one and only one department and one and only one employee can manage one and only one department, each department can be described by department id and department name . Department can be uniquely described using the department id .
- Each employee can work on each bill and Each bill can be described by bill id and the date of printed the bill. Bill can be uniquely described using the bill id.
- Each bill can have one and more services and Each service can be described by service id, service name, and the price of the service. Services can be uniquely described using the service id.
- Each client has one and more bills and Each client can be described by the client name (first and last name), client id, and phone number. Clients can be uniquely described using the client id.

Organization current system problem:

The current spa system uses paper everywhere. Employees need to store customer information in papers. After that, all paper is collected and stored in a file. Employees need to go and check the file every time they want client service. This makes the current spa system very slow and increases errors.

Project objective :

This project intends to make a database management system for a spa. The main objective of this DBMS are:

1- No Paperwork Required

2- Minimize the time of search to find the information.

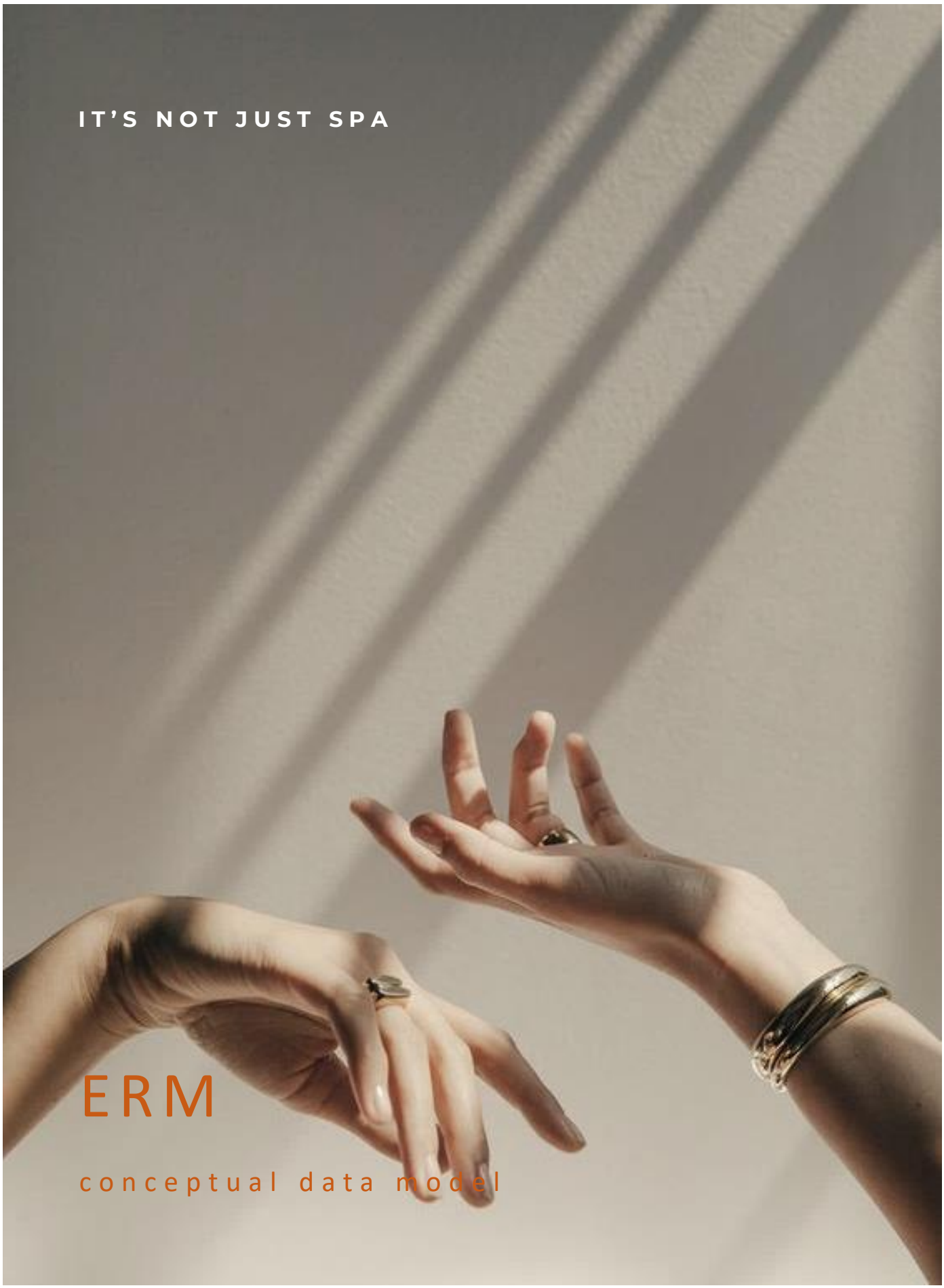
3- Allow users to find the needed information easily.

4- Allow to delete or modify information..

''BEING CHOOSEY AND SELECTIVE ABOUT YOUR TIME\ENERGY IS A FORM OF SELF CARE.''

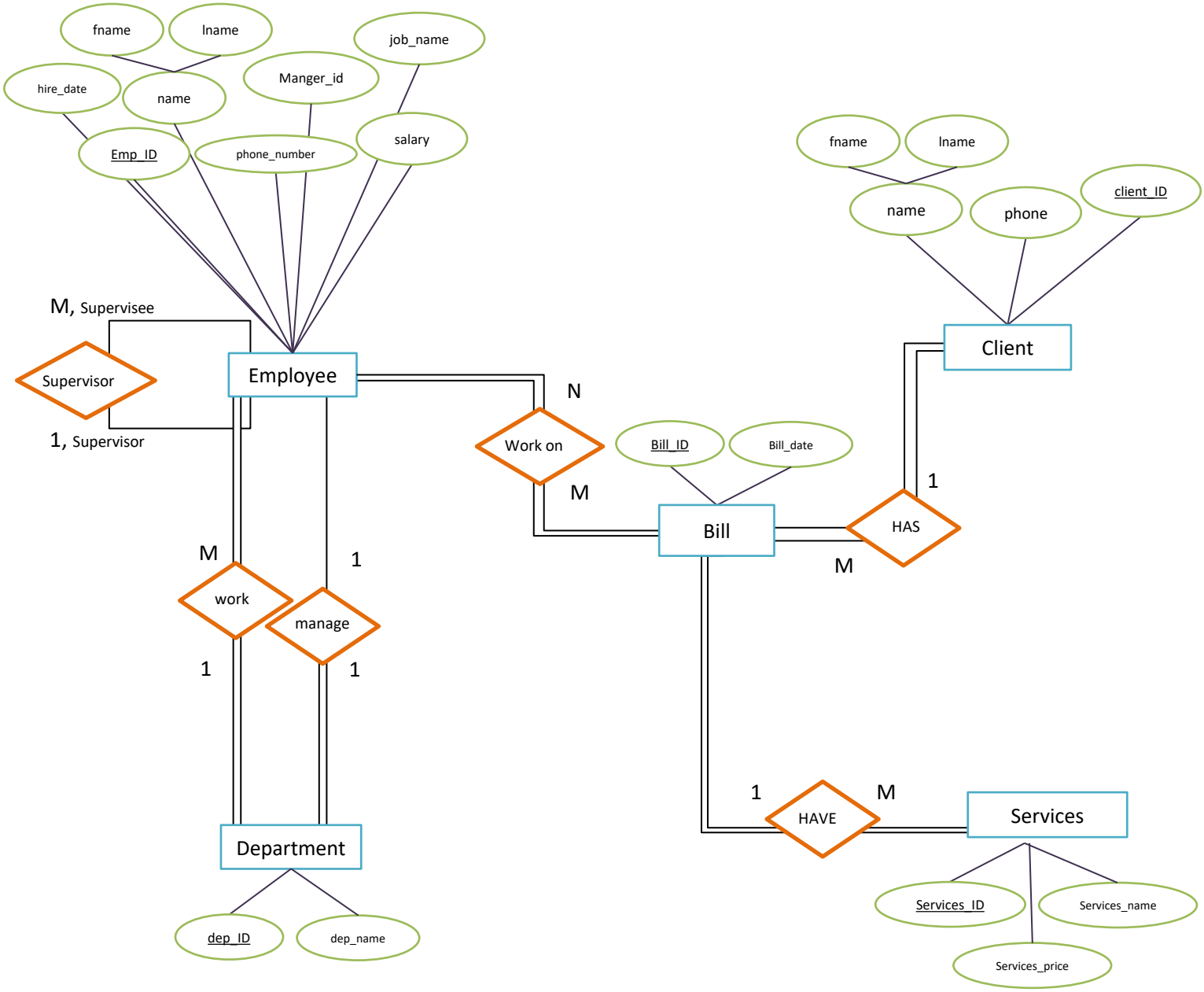
Organization Architecture and work system:

The current work system for the spa is as follows: In each branch there are 4 department managers who supervise the employees, and there is also a receptionist and an assistant responsible for cleaning the spa. The rest of the employees are responsible for providing services to clients in all aspects of skin, body, hair and nail care.


IT'S NOT JUST SPA
ERM
conceptual data model

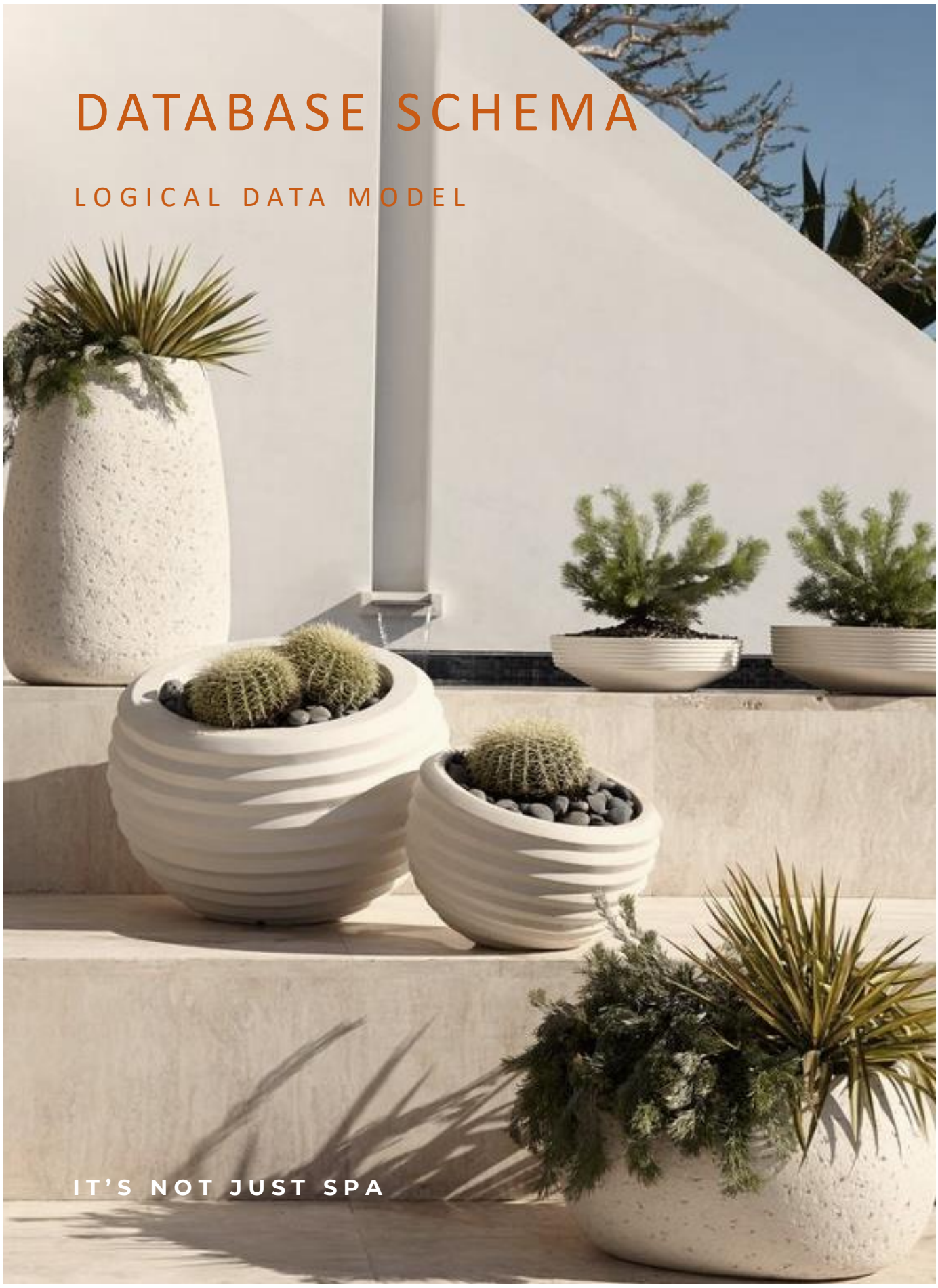
ERM Model

conceptual data model



DATABASE SCHEMA

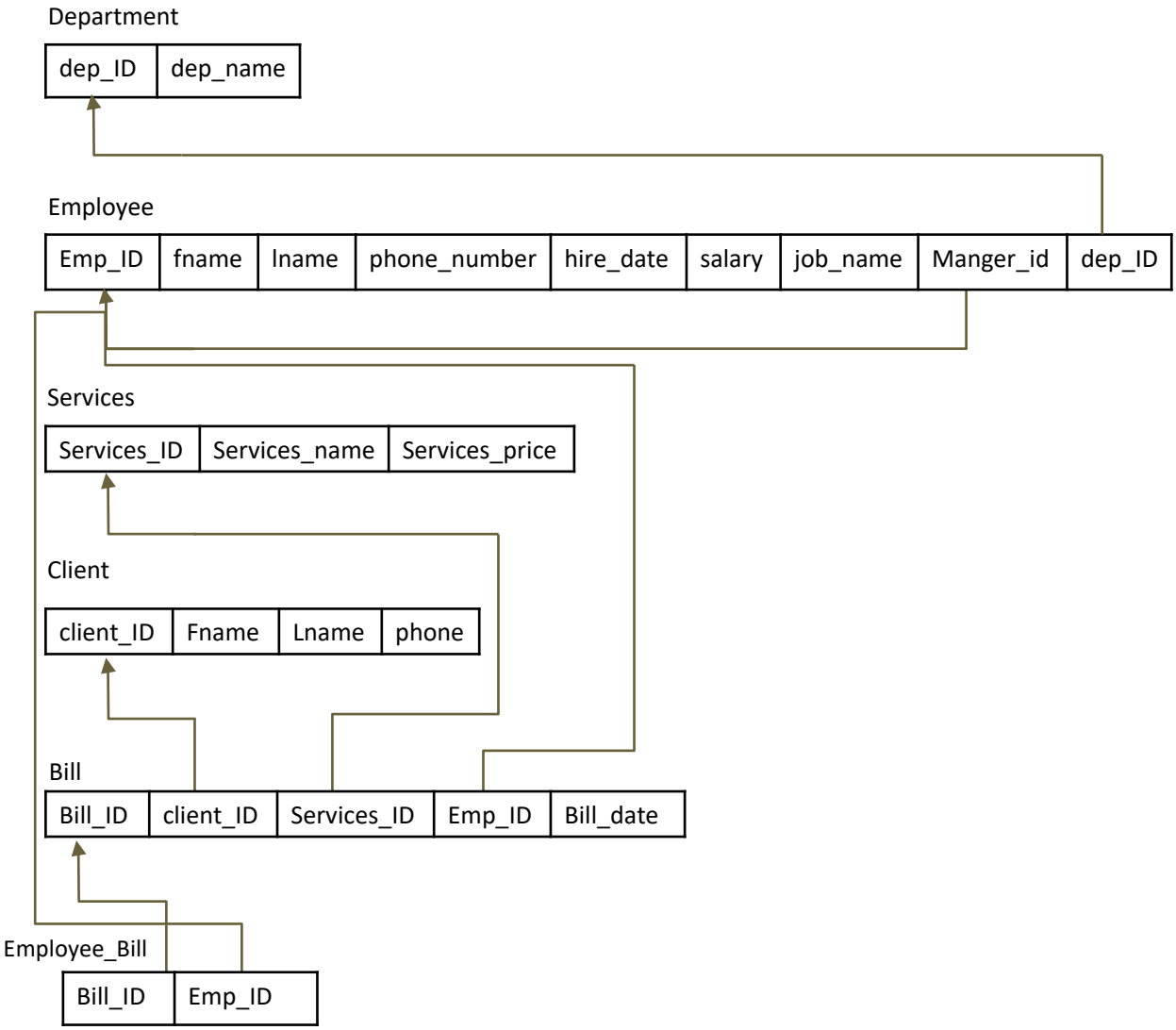
LOGICAL DATA MODEL

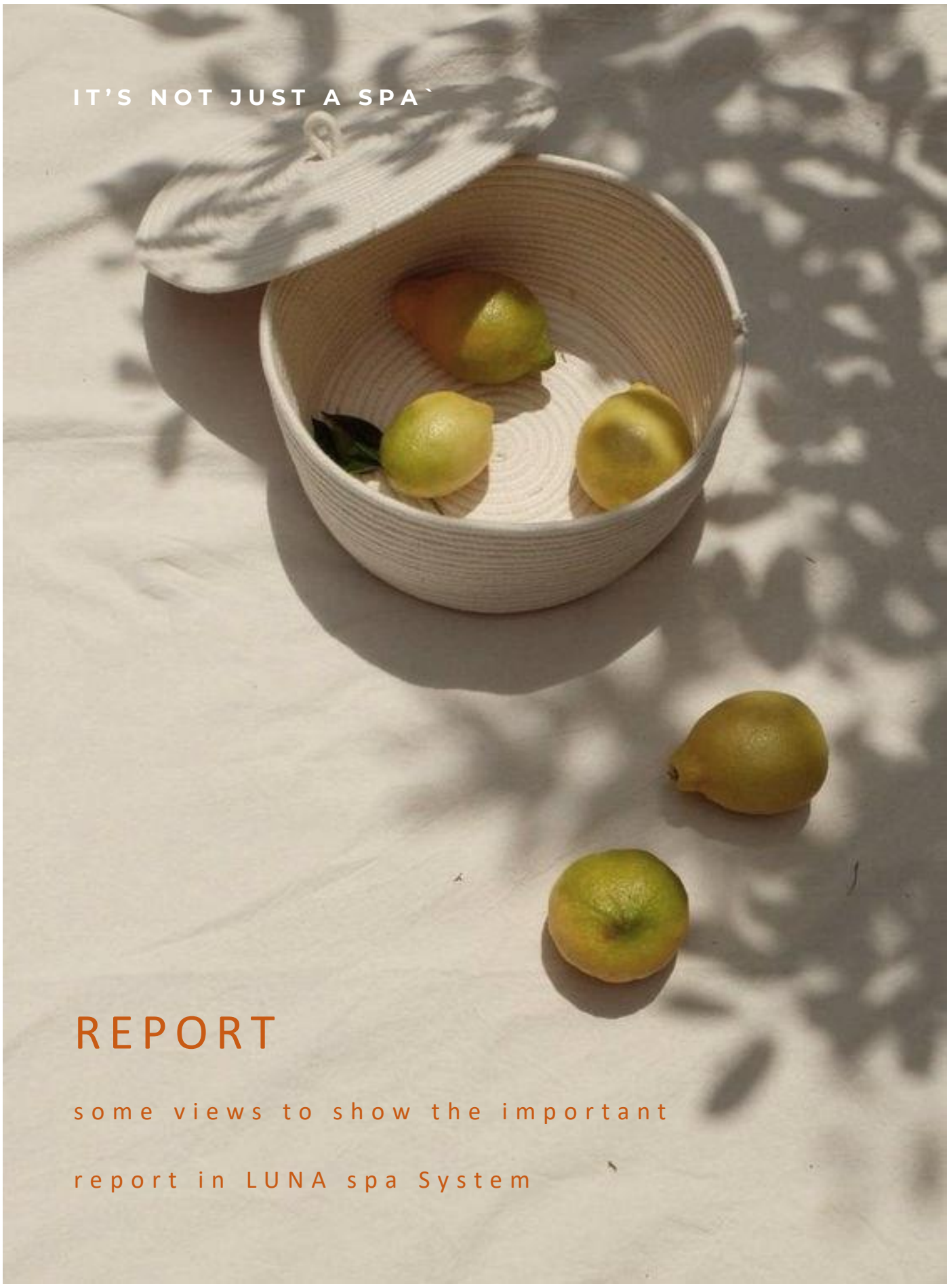


IT'S NOT JUST SPA

Schema

LOGICAL DATA MODEL





REPORT

some views to show the important

report in LUNA spa System

REPORT

important report in the system

- Report showing pay raise for all employees based on the job name:

```
select fname,job_name,salary,
    CASE job_name when 'manager' then  (1.2*salary)
                  when 'employee' then  (1.15*salary)
                  when 'receptionist' then  (1.1*salary)
                  when 'Clean Worker' then  (1.1*salary)
    End as "salary_after_pay_raise"
from employee;
```

FNAME	JOB_NAME	SALARY	salary_after_pay_raise
fatma	manager	8000	9600
Rozii	Clean Worker	2500	2750
salma	manager	8000	9600
Goldie	employee	5000	5750
Lauren	employee	5000	5750
Elia	manager	8000	9600
norhan	employee	5000	5750
Faye	manager	8000	9600
Josie	employee	5000	5750
Dheeraj	receptionist	3000	3300

10 rows returned in 0.02 seconds Download

- Report to show the first and last name of the employee who has more than one bill:

```
select fname,lname,count(*) AS "Number of Bills"
from Bill NATURAL JOIN Employee
group by Fname,Lname
having count(*)>1;
```

FNAME	LNAME	Number of Bills
Goldie	Montand	2

1 rows returned in 0.05 seconds Download

REPORT

important report in the system

- Report looking for an employee with specific conditions :

```
select fname,salary,dep_ID
from Employee
where lname like '_o%' or hire_date >= '06-12-2019';
```

FNAME	SALARY	DEP_ID
Goldie	5000	D103
Josie	5000	D104
Rozii	2500	D101
Dheeraj	3000	D101
norhan	5000	D101

5 rows returned in 0.03 seconds Download

- Report on the department's name and how many employees works in each of them:

```
select dep_name As "Department Name ", count(*) AS "Number of employee"
from Department,Employee
where Department.dep_ID = Employee.dep_ID
group by dep_name;
```

Department Name	Number of employee
Hair Care	2
Skin Care	4
NailCare	2
Body Care	2

4 rows returned in 0.02 seconds Download

- Report on the employees' information who get the highest-paid:

```
select *
from Employee
where salary = (select max(salary) from employee);
```

EMP_ID	FNAME	LNAME	PHONE_NUMBER	HIRE_DATE	SALARY	JOB_NAME	MANGER_ID	DEP_ID
E500	Elia	Fawcett	556783787	02/11/2019	8000	manager	M103	D103
E700	Faye	Glenn	565451234	02/09/2017	8000	manager	M104	D104
E100	fatma	ahmed	569274892	02/10/2018	8000	manager	M101	D101
E300	salma	nader	565451117	12/07/2018	8000	manager	M102	D102

4 rows returned in 0.03 seconds Download

REPORT

important report in the system

- Report on managers and the number of employees supervising them:

```
select Manger_id, count(*) AS "Number of employee"
from Employee
group by Manger_id;
```

MANGER_ID	Number of employee
E100	2
E700	2
E500	2
E900	2
E300	2

5 rows returned in 0.01 seconds Download

- Report that displays the name of the client, the service he requested, and its price before and after the discount:

```
select fname,Services_name,Services_price,(Services_price-
(Services_price*20/100)) AS "Services price  after discount"
from Client,Services,Bill
where Bill.client_ID= Client.client_ID and Bill.Services_ID= Services.Services_ID ;
```

FNAME	SERVICES_NAME	SERVICES_PRICE	Services price after discount
Eman	Detox Facial	400	320
sara	Hair Cut	90	72
maha	Blow dry	140	112
rawan	Spa Manicure	200	160
Nashwa	Relaxing Massage	300	240
Rana	Spa Manicure	200	160

6 rows returned in 0.06 seconds Download

- Report to show our services and the prices that between 150 and 350:

```
select (Services_name ||'  ||  '|| Services_price)  "price list"
from Services
where Services_price between 150 and 350
order by Services_price desc;
```

price list
Swedish Massage || 350
Vitamin C Session || 350
Hair Color || 350
Relaxing Massage || 300
Spa Manicure || 200
Spa Pedicure || 200
Acrylic Nails || 150

7 rows returned in 0.02 seconds Download

REPORT

important report in the system

- Report to show client names and bill date that between specific dates:

```
select Fname ,Lname,Bill_date
from  Client  ,Bill
where Client.client_ID = Bill.client_ID and Bill_date between '11-3-
2020' and '11-5-2020';
```

FNAME	LNAME	BILL_DATE
sara	Ali	11/05/2020
Nashwa	Ahmed	11/03/2020

2 rows returned in 0.04 seconds Download

- Report that displays the last name of the clients without duplication and in descending order:

```
select Distinct lname
from Client
order by lname asc;
```

LNAME
Ahmed
Ali
Amir
Mohamed
Saad

5 rows returned in 0.00 seconds Download

SQL code

SQL code

In oracle

```
CREATE TABLE Department(
dep_ID varchar2(6) ,
dep_name varchar2(20) not null,
 PRIMARY KEY (dep_ID)
);

insert into Department values ('D101' ,'Skin Care');
insert into Department values ('D102' ,'Body Care');
insert into Department values ('D103' ,'NailCare ');
insert into Department values ('D104' ,'Hair Care’);

select * from Department;

CREATE TABLE Employee(
Emp_ID varchar2(6),
fname varchar2(15) not null,
lname varchar2(15) not null,
phone_number int UNIQUE ,
hire_date DATE not null,
salary int check(salary>2000),
job_name varchar2(15),
Manger_id  varchar2(6),
dep_ID varchar2(6),
 PRIMARY KEY (Emp_ID),
 FOREIGN KEY (dep_ID) REFERENCES Department(dep_ID),
 FOREIGN KEY (Manger_id) REFERENCES Employee(Emp_ID)
);

insert into Employee values ('E100','fatma','ahmed','0569274892','02-10-
2018','8000','manager','E100','D101');
insert into Employee values ('E200','norhan','mohamed','0565453787','02-11-
2018','5000','employee','E100','D101');
insert into Employee values ('E300','salma','nader','0565451117','12-07-
2018','8000','manager','E300','D102');
insert into Employee values ('E400','Lauren','Hershey','0512344892','12-07-
2018','5000','employee','E300','D102');
insert into Employee values ('E500','Elia','Fawcett','0556783787','02-11-
2019','8000','manager','E500','D103');
insert into Employee values ('E600','Goldie','Montand','0598761117','02-02-
2019','5000','employee','E500','D103');
insert into Employee values ('E700','Faye','Glenn','0565451234','02-09-
2017','8000','manager','E700','D104');
insert into Employee values ('E800','Josie','Davis','0565455678','06-12-
2019','5000','employee','E700','D104');
insert into Employee values ('E900','Dheeraj','Alexander','0565454567','05-08-
2020','3000','receptionist','E900','D101');
insert into Employee values ('E010','Rozii','Tanner','0565453456','03-06-
2020','2500','Clean Worker','E900','D101');

select * from employee;
```

SQL code

In oracle

```
create table Services(
Services_ID varchar2(6),
Services_name varchar2(20) not null,
Services_price int,
 PRIMARY KEY (Services_ID) );

insert into Services values ('SV101','Detox Facial','400');
insert into Services values ('SV102','Collagen Session','500');
insert into Services values ('SV103','Vitamin C Session','350');
insert into Services values ('SV104','Relaxing Massage','300');
insert into Services values ('SV105','Hot Stone Massage','400');
insert into Services values ('SV106','Swedish Massage','350');
insert into Services values ('SV107','Spa Manicure','200');
insert into Services values ('SV108','Spa Pedicure','200');
insert into Services values ('SV109','Acrylic Nails','150');
insert into Services values ('SV110','Blow dry','140');
insert into Services values ('SV111','Hair Cut','90');
insert into Services values ('SV112','Hair Color','350’);
select * from Services;

create table Client(
client_ID varchar2(6) ,
Fname varchar2(15) not null,
Lname varchar2(15) not null,
phone int,
 PRIMARY KEY (client_ID) );

insert into Client values ('C101','Nashwa','Ahmed','0545323456');
insert into Client values ('C102','Eman','Mohamed','0545311116');
insert into Client values ('C103','Rana','Amir','0544443453');
insert into Client values ('C104','sara ','Ali','0563274872');
insert into Client values ('C105','maha','Ahmed','0532400300');
insert into Client values ('C106','rawan','Saad ','0566389000');
select* from Client;

create table Bill(
Bill_ID varchar2(6),
client_ID varchar2(6),
Services_ID varchar2(6),
Emp_ID varchar2(6),
Bill_date date,
 PRIMARY KEY (Bill_ID),
 FOREIGN KEY (client_ID) REFERENCES Client(client_ID),
 FOREIGN KEY (Services_ID) REFERENCES Services(Services_ID),
 FOREIGN KEY (Emp_ID) REFERENCES Employee(Emp_ID) );
```

SQL code

In oracle

```
insert into Bill values ('B401','C101','SV104','E400','11-3-2020');
insert into Bill values ('B402','C102','SV101','E200','05-9-2020');
insert into Bill values ('B403','C103','SV107','E600','04-1-2020');
insert into Bill values ('B404','C104','SV111','E800','11-5-2020');
insert into Bill values ('B405','C105','SV110','E700','05-7-2020');
insert into Bill values ('B406','C106','SV107','E600','04-2-2020’);

select * from Bill;

Create table Employee_Bill(
Emp_id varchar2(6),
Bill_id varchar2(6),
FOREIGN KEY (Emp_ID) REFERENCES Employee(Emp_ID),
FOREIGN KEY (bill_id) REFERENCES Bill(Bill_ID));

select fname,job_name,salary,
    CASE job_name when 'manager' then  (1.2*salary)
                  when 'employee' then  (1.15*salary)
                  when 'receptionist' then  (1.1*salary)
                  when 'Clean Worker' then  (1.1*salary)
    End as "salary_after_pay_raise"
from employee;

select fname,lname,count(*) AS "Number of Bills"
from Bill NATURAL JOIN Employee
group by Fname,Lname
having count(*)>1;

select fname,salary,dep_ID
from Employee
where lname like '_o%' or hire_date >= '06-12-2019’;

select dep_name As "Department Name ", count(*) AS "Number of employee"
from Department,Employee
where Department.dep_ID = Employee.dep_ID
group by dep_name;


select *
from Employee
where salary = (select max(salary) from employee);

select Manger_id, count(*) AS "Number of employee"
from Employee
group by Manger_id;

select fname,Services_name,Services_price,(Services_price-
(Services_price*20/100)) AS "Services price  after discount"
from Client,Services,Bill
where Bill.client_ID= Client.client_ID and Bill.Services_ID= Services.Services_ID;
```

SQL code

In oracle

```
select (Services_name ||'  ||  '|| Services_price)  "price list"
from Services
where Services_price between 150 and 350
order by Services_price desc;

select Fname ,Lname,Bill_date
from  Client  ,Bill
where Client.client_ID = Bill.client_ID and Bill_date between '11-3-2020' and '11-
5-2020’;

select Distinct lname
from Client
order by lname asc;
```