INSTITUTO TECNOLOGICO DE MEXICALI

Carrera:
ING. en Sistemas.

Materia:
Fundamento de base de datos.

Alumno:
Marin Salazar Juan Sebastian 22490423.

Correo Institucional:
a22490423@itmexicali.edu.mx

Profesor:
Jose Ramon Bogarin Valenzuela

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```sql
create table Employees(
employee_id serial primary key,
first_name varchar(50) not null,
last_name varchar(50) not null,
email varchar(50) unique not null,
"position" varchar(50)
)
create table Projects(
project_id serial primary key,
project_name varchar(50) not null,
start_date date not null,
end_date date
)
create table Assignments(
assignment_id serial primary key,
employee_id int not null,
project_id int not null,
assigned_date default current_date,
foreign key (employee_id) references Employees(employee_id),
foreign key (project_id) references Projects(project_id)
)

alter table Employees
add column salary decimal(10, 2);

alter table Employees
alter column "position" type varchar(100);

alter table Assignments
rename to TeamAssignments;

alter table Employees
drop column salary;

drop table TeamAssignments;

insert into Employees (first_name, last_name, email, "position")
values
('Juan', 'Pérez', 'juan.perez@gmail.com', 'Desarrollador'),
('Ana', 'Gómez', 'ana.gomez@gmail.com', 'Diseñadora'),
('Luis', 'Martínez', 'luis.martinez@gmail.com', 'Gerente');
```

```sql
insert into Projects (project_name, start_date, end_date)
values
('Proyecto X', '2025-01-01', '2025-06-30'),
('Proyecto Avengers', '2025-02-15', '2025-08-15');

insert into Assignments (employee_id, project_id, assigned_date)
values
(1, 1, current_date),
(2, 1, current_date),
(3, 2, current_date);

select e.employee_id, e.first_name, e.last_name, e.email, e."position"
from Employees e
join inner Assignments a on e.employee_id = a.employee_id
where a.project_id = 1;

select e.employee_id, e.first_name, e.last_name, email, e."position"
from Employees e
where e.email LIKE '%@company.com';

update Employees
set email = 'nuevo@company.com'
where employee_id = 1;

update Projects
set project_name = 'Proyecto Tlayuda'
where project_id = 1;

delete from Assignments
where employee_id = 1 and project_id = 1;

delete from Employees e
where not exists (
    select 1
    from Assignments a
    where a.employee_id = e.employee_id
);
```

```sql
select (e.first_name || ' ' || e.last_name) AS empleado, p.project_name AS proyecto,
a.assigned_date as fecha_asignacion
from Employees e
inner join Assignments a on e.employee_id = a.employee_id
inner join Projects p on a.project_id = p.project_id
where p.start_date > '2023-01-31';

with ProyectoPorEmpleado as (
select e.employee_id, (e.first_name || ' ' || e.last_name) as nombre_completo,
count (a.project_id) as cantidad_proyectos
from Employees e
inner join Assignments a ON e.employee_id = a.employee_id
group by e.employee_id, e.first_name, e.last_name
)
select nombre_completo, cantidad_proyectos
from ProyectoPorEmpleado
where cantidad_proyectos > 1
order by cantidad_proyectos desc;
```