

# **Instituto Tecnológico Superior De Jerez**



**Carrera:**

Ingeniería en Sistemas Computacionales

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**Semestre:**

Quinto Semestre

**Materia:**

Taller de bases de datos

**Actividad:**

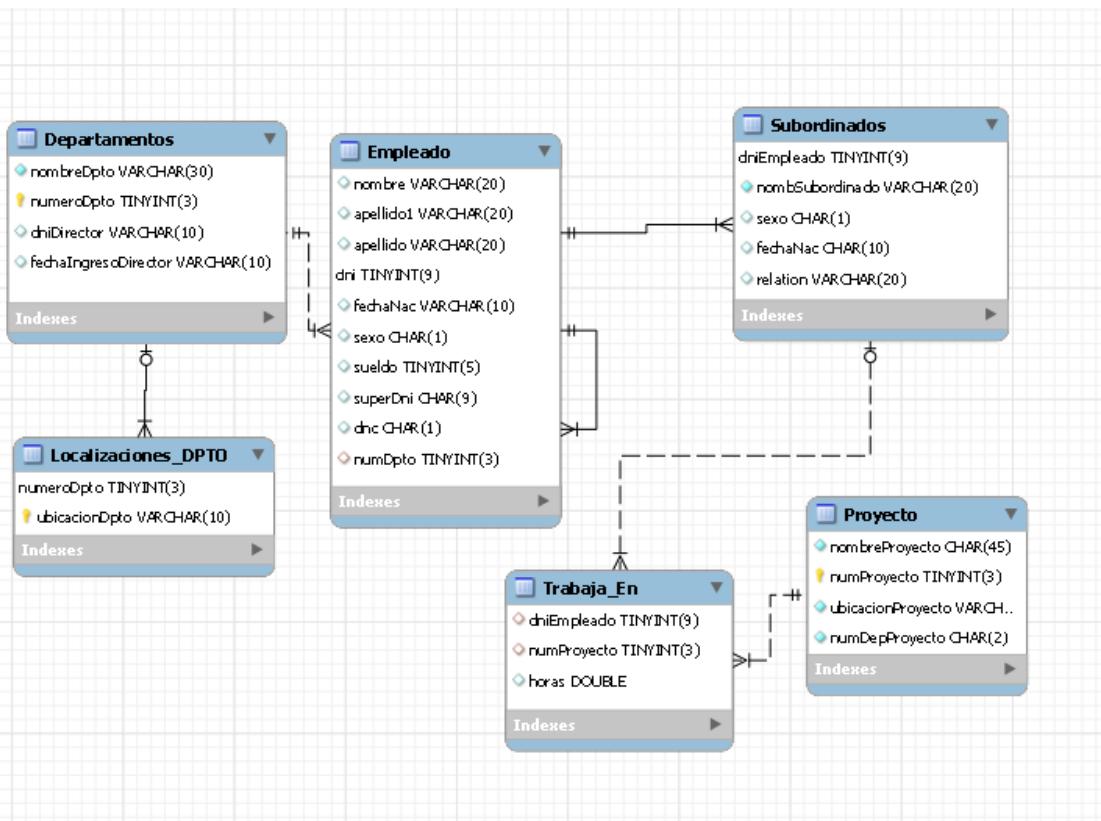
Esquema y bases de datos

**Docente:**

M.T.I. Salvador Acevedo Sandoval

**Jerez de García Salinas, a viernes 02 de octubre del 2020**

## Diagrama entidad-relación



## Capturas del proceso

Se creó la base de datos

```

C:\Windows\System32\cmd.exe - mysql -u root -p
Microsoft Windows [Versión 10.0, 18363.1082]
(c) 2019 Microsoft Corporation. Todos los derechos reservados.

C:\Users\Osvaldo>mysql -u root -p
Enter password: *****
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 15
Server version: 8.0.21 MySQL Community Server - GPL

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> CREATE DATABASE Empresa_DB;
Query OK, 1 row affected (0.00 sec)

mysql>

```

## Se creó la tabla Departamentos

```
cmd C:\Windows\system32\cmd.exe - mysql -u root -p
Your MySQL connection id is 15
Server version: 8.0.21 MySQL Community Server - GPL

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> CREATE DATABASE Empresa_DB;
Query OK, 1 row affected (0.00 sec)

mysql> USE Empresa_DB;
Database changed

mysql> CREATE TABLE Departamentos(
    -> nombreDpto VARCHAR(30) NOT NULL,
    -> numeroDpto TINYINT(3) NOT NULL,
    -> dniDirector VARCHAR(10) NULL,
    -> fechaIngresoDirector VARCHAR(10) NULL,
    -> PRIMARY KEY ('numeroDpto'))ENGINE = InnoDB;
Query OK, 0 rows affected, 1 warning (0.09 sec)

mysql> DESCRIBE Departamentos;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default |
+-----+-----+-----+-----+-----+
| nombreDpto | varchar(30) | NO | PRI | NULL |
| numeroDpto | tinyint | NO | PRI | NULL |
| dniDirector | varchar(10) | YES | NULL | NULL |
| fechaIngresoDirector | varchar(10) | YES | NULL | NULL |
+-----+-----+-----+-----+-----+
4 rows in set (0.04 sec)

mysql>
```

## Se creó la tabla Localizaciones\_DPTO

```
cmd C:\Windows\system32\cmd.exe - mysql -u root -p
Query OK, 8 rows affected, 1 warning (0.09 sec)

mysql> DESCRIBE Departamentos;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default |
+-----+-----+-----+-----+-----+
| nombreDpto | varchar(30) | NO | PRI | NULL |
| numeroDpto | tinyint | NO | PRI | NULL |
| dniDirector | varchar(10) | YES | NULL | NULL |
| fechaIngresoDirector | varchar(10) | YES | NULL | NULL |
+-----+-----+-----+-----+-----+
4 rows in set (0.04 sec)

mysql> CREATE TABLE Localizaciones_DPTO(
    -> numeroDpto TINYINT(3) NOT NULL,
    -> ubicacionDpto VARCHAR(10) NOT NULL,
    -> INDEX numeroDpto_idx (numeroDpto ASC) VISIBLE,
    -> PRIMARY KEY (numeroDpto,ubicacionDpto),
    -> CONSTRAINT numeroDpto FOREIGN KEY (numeroDpto) REFERENCES Departamentos (numeroDpto)
    -> ON DELETE CASCADE ON UPDATE CASCADE)ENGINE = InnoDB;
Query OK, 0 rows affected, 1 warning (0.05 sec)

mysql> DESCRIBE Localizaciones_DPTO;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default |
+-----+-----+-----+-----+-----+
| numeroDpto | tinyint | NO | PRI | NULL |
| ubicacionDpto | varchar(10) | NO | PRI | NULL |
+-----+-----+-----+-----+-----+
2 rows in set (0.01 sec)

mysql>
```

## Se creó la tabla Proyectos

```
on C:\Windows\system32\cmd.exe - mysql -u root -p

mysql> DESCRIBE Localizaciones_Dpto;
+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+
| numeroDpto | tinyint | NO | PRI | NULL |
| ubicacionDpto | varchar(10) | NO | PRI | NULL |
+-----+-----+-----+-----+
2 rows in set (0.01 sec)

mysql> CREATE TABLE Proyecto(
-> nombreProyecto CHAR(45) NOT NULL,
-> numProyecto TINYINT(3) NOT NULL,
-> ubicacionProyecto VARCHAR(20) NOT NULL,
-> numDepProyecto CHAR(2) NOT NULL,
-> PRIMARY KEY (`numProyecto`))ENGINE = InnoDB;
Query OK, 0 rows affected, 1 warning (0.05 sec)

mysql> DESCRIBE Proyecto;
+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+
| nombreProyecto | char(45) | NO | NULL |
| numProyecto | tinyint | NO | PRI | NULL |
| ubicacionProyecto | varchar(20) | NO | NULL |
| numDepProyecto | char(2) | NO | NULL |
+-----+-----+-----+-----+
4 rows in set (0.01 sec)

mysql>
```

## Se creó la tabla Empleados

```
on C:\Windows\system32\cmd.exe - mysql -u root -p
3 rows in set (0.02 sec)

mysql> CREATE TABLE Empleado(
-> nombre VARCHAR(20) NULL,
-> apellido1 VARCHAR(20) NULL,
-> apellido2 VARCHAR(20) NULL,
-> dni TINYINT(9) NOT NULL,
-> fechaNac VARCHAR(18) NULL,
-> sexo CHAR(1) NULL,
-> sueldo TINYINT(5) NULL,
-> superDni CHAR(9) NULL,
-> dnc CHAR(1) NULL,
-> numDpto TINYINT(3) NULL,
-> INDEX numDpto_idx (numDpto ASC) VISIBLE,
-> PRIMARY KEY (dni),
-> CONSTRAINT numDpto FOREIGN KEY (numDpto) REFERENCES Departamentos (numeroDpto) ON DELETE CASCADE ON UPDATE CASCADE)
-> ENGINE = InnoDB;
Query OK, 0 rows affected, 3 warnings (0.05 sec)

mysql> DESCRIBE Empleado;
+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+
| nombre | varchar(20) | YES | NULL |
| apellido1 | varchar(20) | YES | NULL |
| apellido2 | varchar(20) | YES | NULL |
| dni | tinyint | NO | PRI | NULL |
| fechaNac | varchar(10) | YES | NULL |
| sexo | char(1) | YES | NULL |
| sueldo | tinyint | YES | NULL |
| superDni | char(9) | YES | NULL |
| dnc | char(1) | YES | NULL |
| numDpto | tinyint | YES | MUL | NULL |
+-----+-----+-----+-----+
10 rows in set (0.01 sec)

mysql>
```

## Se creó la tabla Subordinados

```
on C:\Windows\system32\cmd.exe - mysql -u root -p
+-----+-----+-----+-----+
| superDni | char(9) | YES | NULL |
+-----+-----+-----+-----+
| dnc | char(1) | YES | NULL |
+-----+-----+-----+-----+
| numDpto | tinyint | YES | MUL |
+-----+-----+-----+-----+
10 rows in set (0.01 sec)

mysql> CREATE TABLE Subordinados (
    -> dniEmpleado TINYINT(9) NOT NULL,
    -> nomSubordinado VARCHAR(20) NOT NULL,
    -> sexo CHAR(1) NULL,
    -> fechaNac CHAR(10) NULL,
    -> relation VARCHAR(20) NULL,
    -> PRIMARY KEY (dniEmpleado),
    -> CONSTRAINT dniEmpleado FOREIGN KEY (dniEmpleado) REFERENCES Empleado (dni)
    -> ON DELETE CASCADE ON UPDATE CASCADE) ENGINE = InnoDB;
Query OK, 0 rows affected, 1 warning (0.04 sec)

mysql> DESCRIBE Subordinados;
+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+
| dniEmpleado | tinyint | NO | PRI | NULL |
+-----+-----+-----+-----+
| nomSubordinado | varchar(20) | NO | NULL |
+-----+-----+-----+-----+
| sexo | char(1) | YES | NULL |
+-----+-----+-----+-----+
| fechaNac | char(10) | YES | NULL |
+-----+-----+-----+-----+
| relation | varchar(20) | YES | NULL |
+-----+-----+-----+-----+
5 rows in set (0.01 sec)

mysql>
```

## Se creó la tabla Trabaja\_En

```
on C:\Windows\system32\cmd.exe - mysql -u root -p
mysql> DESCRIBE Subordinados;
+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+
| dniEmpleado | tinyint | NO | PRI | NULL |
+-----+-----+-----+-----+
| nomSubordinado | varchar(20) | NO | NULL |
+-----+-----+-----+-----+
| sexo | char(1) | YES | NULL |
+-----+-----+-----+-----+
| fechaNac | char(10) | YES | NULL |
+-----+-----+-----+-----+
| relation | varchar(20) | YES | NULL |
+-----+-----+-----+-----+
5 rows in set (0.01 sec)

mysql> CREATE TABLE Trabaja_En(
    -> dniEmpleado TINYINT(9) NULL,
    -> numProyecto TINYINT(3) NULL,
    -> horas DOUBLE NULL,
    -> INDEX numProyecto_idx (numProyecto ASC) VISIBLE,
    -> CONSTRAINT numProyecto FOREIGN KEY (numProyecto) REFERENCES Proyecto (numProyecto)
    -> ON DELETE CASCADE ON UPDATE CASCADE)ENGINE = InnoDB;
Query OK, 0 rows affected, 2 warnings (0.05 sec)

mysql> DESCRIBE Trabaja_En
-> ;
+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+
| dniEmpleado | tinyint | YES | MUL | NULL |
+-----+-----+-----+-----+
| numProyecto | tinyint | YES | MUL | NULL |
+-----+-----+-----+-----+
| horas | double | YES | NULL | NULL |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql>
```