

Documentación técnica de la base de datos

Notas

- El código o script de sql los pongo en inglés.
- Las tablas están en el orden o algo así de la forma que recibe las llaves foráneas.
- En los ejercicios decidí que la zona a trabajar sea mi tabla y que el ejercicio sea el multivaluado por que? cuando uno va hacer un ejercicio decide qué zona va a trabajar y luego el ejercicio .
- También de acuerdo a las recomendaciones del profe:
 - Cree la relación entre cliente y la sede de muchos a muchos,igual deje lo del cliente asociado al instructor.
 - Agregue la tabla intermedia entre la zona a trabajar y rutina

gym				
Atributo/campo	Tipo de dato	Índice	Restricción	Default
codigo	INT NOT NULL IDENTITY(1,1)	Clustered,Primary key PK_CODE_GYM		
nombre	VARCHAR(50) NOT NULL		Unique	
telefono	VARCHAR(18) NOT NULL			
contacto_general	VARCHAR(70) NOT NULL			

sede				
Atributo/campo	Tipo de dato	Índice	Restricción	Default
id_sede	INT NOT NULL IDENTITY(1,1)	Clustered,Primary key PK_ID_CAMPUS		
nombre_sede	VARCHAR(40) NOT NULL		Unique	
email	VARCHAR(40) NOT NULL			

provincia	VARCHAR(40) NOT NULL			
canton	VARCHAR(40) NOT NULL			
id_gym	INT NOT NULL		Foreign key,FK_CODE_ GYM	

telefonos_sede				
Atributo/campo	Tipo de dato	Índice	Restricción	Default
numero_telefono	VARCHAR(18) NOT NULL		Unique	
campo_pertenec e	INT NOT NULL		Foreign key,FK_ID_CAM PUS_BELONG	

Empleados				
Atributo/campo	Tipo de dato	Índice	Restricción	Default
cedula	VARCHAR(15) NOT NULL	Clustered,Primary key PK_IDENTIFICATI ON	Unique	
nombre	VARCHAR(40) NOT NULL			
email	VARCHAR(40) NOT NULL			
fecha_nacimiento	DATE NOT NULL			
salario	MONEY NOT NULL			DEFAULT 0
fecha_nacimiento	DATE NOT NULL			
sede	INT NOT NULL		Foreign key,FK_ID_CAM PUS	

administrador				
Atributo/campo	Tipo de dato	Índice	Restricción	Default
id_empleado_administrador	INT NOT NULL IDENTITY(1,1)	Clustered,Primary key PK_IDENTIFICATI ON_ADMIN		
puesto	VARCHAR(30) NOT NULL			
id_cd_empleado	VARCHAR(18) NOT NULL		Foreign key,FK_ID_ADM IN	

Instructor				
Atributo/campo	Tipo de dato	Índice	Restricción	Default
id_empleado_instructor	INT NOT NULL IDENTITY(1,1)	Clustered,Primary key PK_IDENTIFICATI ON_INSTRUC		
id_cd_empleado	VARCHAR(18) NOT NULL		Foreign key,FK_ID_INST RUTOR	

Certificaciones				
Atributo/campo	Tipo de dato	Índice	Restricción	Default
id_instructor	INT NOT NULL		Foreign key,FK_INTRUC TOR	
nombre	VARCHAR(70) NOT NULL			

clientes				
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Atributo/campo	Tipo de dato	Índice	Restricción	Default
cedula	VARCHAR(15) NOT NULL	Clustered,Primary key PK_CLIENT_IDENTIFICATION	Unique	
nombre	VARCHAR(40) NOT NULL			
email	VARCHAR(40) NOT NULL			
sexo	CHAR(1) NOT NULL			
estatura	DECIMAL(3,2)			DEFAULT 0
riesgo	CHAR(2) NOT NULL			
fecha_nacimiento	DATE NOT NULL			
instructor_afiliado	INT NOT NULL		Foreign key,FK_INSTRUCTOR_ASSOCIATED	

cita_instructor				
Atributo/campo	Tipo de dato	Índice	Restricción	Default
sede	INT NOT NULL		Foreign key,FK_CAMPU S_CLIENT	
cliente	VARCHAR(15) NOT NULL		Foreign key,FK_CAMPU S_CLIENT	

zona_muscular				
Atributo/campo	Tipo de dato	Índice	Restricción	Default
id_zona_muscular	INT NOT NULL IDENTITY(1,1)	Clustered,Primary key PK_MUSCLE		
area_que_se_trabaja	VARCHAR(30) NOT NULL		Unique	

ejercicios				
Atributo/campo	Tipo de dato	Índice	Restricción	Default
id_ejercicio	INT NOT NULL IDENTITY(1,1)	Clustered,Primary key PK_ID_EXERCISE		
nombre_ejercicio	VARCHAR(40) NOT NULL		Unique	
area_ejercitada	INT NOT NULL		Foreign key,FK_EXERCISES	

rutina				
Atributo/campo	Tipo de dato	Índice	Restricción	Default
id_rutina	INT NOT NULL IDENTITY(1,1)	Clustered,Primary key PK_ID_GRID		
fecha_creacion	DATE NOT NULL			
fecha_expiracion	DATE NOT NULL			
cliente	VARCHAR(15) NOT NULL		Foreign key,FK_CLIENT	

rutina_ejercicios				
Atributo/campo	Tipo de dato	Índice	Restricción	Default
rutina	INT NOT NULL IDENTITY		Foreign key,FK_RUOTINE	
ejercicios	INT NOT NULL IDENTITY		Foreign key,FK_THE_EXERCISES	

cita				
Atributo/campo	Tipo de dato	Índice	Restricción	Default
id_cita	INT NOT NULL IDENTITY(1,1)	Clustered,Primary key PK_ID_APPOINTMENT		
fecha_cita	DATE NOT NULL			

hora_cita	TIME NOT NULL			
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cita_instructor				
Atributo/campo	Tipo de dato	Índice	Restricción	Default
fk_cr_instructor	VARCHAR(10) NOT NULL		Foreign key,FK_INSTRU CTOR_DATE	
fk_cita	INT NOT NULL		Foreign key,FK_DATE_I NSTRUCTOR	

cita_cliente				
Atributo/campo	Tipo de dato	Índice	Restricción	Default
fk_cr_cliente	VARCHAR(10) NOT NULL		Foreign key,FK_CLIENT _DATE	
fk_cita	INT NOT NULL		Foreign key,FK_DATE_ CLIENT	

medicion				
Atributo/campo	Tipo de dato	Índice	Restricción	Default
id_medidas	INT NOT NULL IDENTITY(1,1)	Clustered,Primary key PK_ID_MEASURY N		
masa_cliente	TINYINT NOT NULL			DEFAULT 0
porcentaje_grasa	DECIMAL(4,2) NOT NULL			DEFAULT 0
porcentaje_musc ulo	DECIMAL(4,2) NOT NULL			DEFAULT 0
grasa_viseral	DECIMAL(4,2) NOT NULL			DEFAULT 0
edad_metabolica	TINYINT NOT NULL			DEFAULT 0
cita	INT NOT NULL		Foreign key,FK_ID_APP OIMENT	

Script

```
CREATE DATABASE db_gyms
GO
USE db_gyms
GO
CREATE TABLE gym(
    code_gym INT NOT NULL IDENTITY(1,1), --codigo de gimnasio
    gym_name VARCHAR(50) NOT NULL UNIQUE, --nombre del gimnasio
    phone VARCHAR(18) NOT NULL UNIQUE, --telefono
    contact_general VARCHAR(70) NOT NULL,--contacto general

    CONSTRAINT PK_CODE_GYM PRIMARY KEY CLUSTERED (code_gym),--llave
primaria
)
CREATE TABLE campus(
    id_campus INT IDENTITY(1,1) NOT NULL ,--id de la sede
    campus_name VARCHAR(50) NOT NULL UNIQUE,-- nombre sede
    email VARCHAR(40) NOT NULL,
    canton VARCHAR(40) NOT NULL,
    province VARCHAR(40) NOT NULL,--provincia

    id_gym INT NOT NULL ,--llave foranea

    CONSTRAINT PK_ID_CAMPUS PRIMARY KEY CLUSTERED (id_campus),--llave
primaria
    CONSTRAINT FK_CODE_GYM FOREIGN KEY (id_gym) REFERENCES
gym(code_gym),--llave foranea
)
CREATE TABLE phones_campus(
    phone_number VARCHAR(18) NOT NULL UNIQUE,
    campus_belong INT NOT NULL,

    CONSTRAINT FK_ID_CAMPUS_BELONG FOREIGN KEY (campus_belong)
REFERENCES campus(id_campus),--llave foranea
)
CREATE TABLE employee(
    indentification_card VARCHAR(15) NOT NULL UNIQUE,--cedula
    employee_name VARCHAR(40) NOT NULL,--nombre del empleado
    email VARCHAR(40) NOT NULL UNIQUE,
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salary MONEY NOT NULL DEFAULT 0,--salario
date_birt DATE NOT NULL,--fecha de nacimiento

campus INT NOT NULL, --llave foranea

CONSTRAINT PK_IDENTIFICATION PRIMARY KEY CLUSTERED
(indentification_card),--llave primaria
CONSTRAINT FK_ID_CAMPUS FOREIGN KEY (campus) REFERENCES
campus(id_campus),--llave foranea
)
CREATE TABLE administrator(
    id_employee VARCHAR(10) NOT NULL ,--llave primaria
    position VARCHAR(30) NOT NULL,
    id_admin VARCHAR(15) NOT NULL,--llave foranea cedula

CONSTRAINT PK_IDENTIFICATION_ADMIN PRIMARY KEY CLUSTERED
(id_employee),
CONSTRAINT FK_ID_ADMIN FOREIGN KEY (id_admin) REFERENCES
employee(indentification_card),--llave foranea
)
CREATE TABLE instructor(
    id_employee VARCHAR(10) NOT NULL ,--llave primaria
    id_instruc VARCHAR(15) NOT NULL,--llave foranea
CONSTRAINT PK_IDENTIFICATION_INSTRUC PRIMARY KEY CLUSTERED
(id_employee),
CONSTRAINT FK_ID_INSTRUCTOR FOREIGN KEY (id_instruc) REFERENCES
employee(indentification_card),--llave foranea
)
CREATE TABLE certifications(
    id_instructor VARCHAR(10) NOT NULL, --llave foranea
    name_certifications VARCHAR(70) NOT NULL,--nombre de la
certificacion
CONSTRAINT FK_INSTRUCTOR FOREIGN KEY (id_instructor) REFERENCES
instructor(id_employee),
)
CREATE TABLE client(--tabla de clientes
    id_card_client VARCHAR(15) NOT NULL UNIQUE,--identificacion
    name_client VARCHAR(40) NOT NULL,--nombre
    email VARCHAR(40) NOT NULL UNIQUE,
    sex CHAR(1) NOT NULL,--sexo F o M
    height DECIMAL(3,2) NOT NULL DEFAULT 0,--estatura
    risk CHAR(2) NOT NULL,--si es de riesgo si no

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```

date_birt DATE NOT NULL,--fecha de nacimiento

affiliated_instructor VARCHAR(10) NOT NULL,--llave foranea instructor

CONSTRAINT PK_CLIENT_IDENTIFICATION PRIMARY KEY CLUSTERED
(id_card_client),--llave primaria
CONSTRAINT FK_INSTRUCTOR_ASSOCIATED FOREIGN KEY
(affiliated_instructor) REFERENCES instructor(id_employee),--llave
foranea
)
CREATE TABLE client_campus(
    campus INT NOT NULL,
    client VARCHAR(15) NOT NULL ,

    CONSTRAINT FK_CAMPUS_CLIENT FOREIGN KEY (campus) REFERENCES
campus(id_campus ),--llave foranea
    CONSTRAINT FK_CLIENT_CAMPUS FOREIGN KEY (client) REFERENCES client(
id_card_client),--llave foranea
)
CREATE TABLE muscle_group(--tabla de los ejercicios por zona
    id_zone_moscular INT NOT NULL IDENTITY(1,1),
    worked_area VARCHAR(30) NOT NULL UNIQUE,

    CONSTRAINT PK_MUSCLE PRIMARY KEY CLUSTERED (id_zone_moscular),--llave
primaria
)
CREATE TABLE exercises(--tabla de ejercicios
    id_exercise INT NOT NULL IDENTITY(1,1),
    name_exercise VARCHAR(40) NOT NULL UNIQUE,

    exercised_area INT NOT NULL,--llave foranea

    CONSTRAINT PK_ID_EXERCISE PRIMARY KEY CLUSTERED (id_exercise),
    CONSTRAINT FK_EXERCISES FOREIGN KEY (exercised_area) REFERENCES
muscle_group(id_zone_moscular),--llave foranea
)
CREATE TABLE grind(--rutina
    id_grind INT NOT NULL IDENTITY(1,1),
    create_date DATE NOT NULL,--fecha de creacion
    expiration_date DATE NOT NULL,--fecha de expiracion
    customer VARCHAR(15) NOT NULL,--el dueño de la rutina

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    CONSTRAINT PK_ID_GRIND PRIMARY KEY CLUSTERED (id_grind),--llave
primaria
    CONSTRAINT FK_CLIENT FOREIGN KEY (customer) REFERENCES
client(id_card_client),--llave foranea
)
CREATE TABLE routine_muscle_focus (
    routine INT NOT NULL,
    training_exercises INT NOT NULL,

    CONSTRAINT FK_ROUTINE FOREIGN KEY (routine) REFERENCES
grind(id_grind),
    CONSTRAINT FK_THE_EXERCISES FOREIGN KEY (training_exercises)
REFERENCES muscle_group(id_zone_moscular),--lave foranea
)
CREATE TABLE appointment(--cita
    id_appointment INT IDENTITY(1,1) NOT NULL,--id de cita
    date_appointment DATE NOT NULL,--día de la cita
    time_appointment TIME NOT NULL,--hora de la cita

    CONSTRAINT PK_ID_APPOINTMENT PRIMARY KEY CLUSTERED (id_appointment),
)
CREATE TABLE date_instructor(--cita que atiende el instructor
    fk_cr_instructor VARCHAR(10) NOT NULL,
    fk_appointment INT NOT NULL,

    CONSTRAINT FK_DATE_INSTRU FOREIGN KEY (fk_appointment) REFERENCES
appointment(id_appointment),
    CONSTRAINT FK_INSTRUCTOR_DATE FOREIGN KEY (fk_cr_instructor)
REFERENCES instructor(id_employee),
)
CREATE TABLE date_client(--cita que asite el cliente
    fk_cr_client VARCHAR(15) NOT NULL,
    fk_appointment INT NOT NULL,

    CONSTRAINT FK_DATE_CLIENT FOREIGN KEY (fk_appointment) REFERENCES
appointment(id_appointment),
    CONSTRAINT FK_CLIENT_DATE FOREIGN KEY (fk_cr_client) REFERENCES
client(id_card_client),
)
CREATE TABLE measuring(--medidas
    id_measuring INT NOT NULL IDENTITY(1,1) ,
    weight_client TINYINT NOT NULL DEFAULT 0,--peso cliente

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    fat_percentage DECIMAL(4,2) NOT NULL DEFAULT 0,--porcentaje grasa
    muscle_percentage DECIMAL(4,2) NOT NULL DEFAULT 0,--porcentaje
musculo
    visceral_fat_percentage DECIMAL(4,2) NOT NULL DEFAULT 0,--grasa
visceral
    metabolic_age TINYINT NOT NULL DEFAULT 0,--edad metabolica

    appointment INT NOT NULL,--llave foranea

    CONSTRAINT PK_ID_MEASURING PRIMARY KEY CLUSTERED
(id_measuring),--llave primaria
    CONSTRAINT FK_ID_APPOINTMET FOREIGN KEY (appointment) REFERENCES
appointment(id_appointment),--llave foranea de la cita
)

```

Inserts

```

--Gimnasio
INSERT INTO gym(gym_name,phone,contact_general)
VALUES('Las Americas','88419907','Hatillo centro carretera de
circunvalación 1101 San José')
INSERT INTO gym(gym_name,phone,contact_general)
VALUES('Dumbell','70890055','Escazu centro')
--sede
INSERT INTO campus(campus_name,email,canton,province,id_gym)
VALUES('Las Americas Gírl','gymGírl1234@gmail.com','Hatillo','San
José',1)
INSERT INTO campus(campus_name,email,canton,province,id_gym)
VALUES('Silverman','silverman@gmail.com','Sabana','San José',2)
--sede numeros
INSERT INTO phones_campus(phone_number,campus_belong)
VALUES('70701254',1)
INSERT INTO phones_campus(phone_number,campus_belong)
VALUES('89705600',1)
INSERT INTO phones_campus(phone_number,campus_belong)
VALUES('60691232',2)
INSERT INTO phones_campus(phone_number,campus_belong)
VALUES('88903310',2)
--empleado

```

```

INSERT INTO
employee(indentification_card,employee_name,email,salary,date_birt,camp
us)
VALUES('015544249','Anna Victoria
Campbell','jesinta_franklin@gmail.com',456000,'1988-02-13',1)

INSERT INTO
employee(indentification_card,employee_name,email,salary,date_birt,camp
us)
VALUES('055674890','Calos Campos
Jimenez','calosj_j@gmail.com',500000,'1993-09-24',1)

INSERT INTO
employee(indentification_card,employee_name,email,salary,date_birt,camp
us)
VALUES('090034678','Lee Jun
fan','iKnowlikeWater@gmail.com',500000,'1987-11-27',1)

INSERT INTO
employee(indentification_card,employee_name,email,salary,date_birt,camp
us)
VALUES('010033144','Vadym
Calavera','vadymBuffacademy@gmail.com',500000,'1987-08-27',1)

INSERT INTO
employee(indentification_card,employee_name,email,salary,date_birt,camp
us)
VALUES('040567880','Machio
Naruzo','muscleMachio@gmail.com',505000,'2000-08-27',2)

--administrador
INSERT INTO administrator(id_employee,position,id_admin)
VALUES('admin-01','Contador','015544249')

--entrenadores
INSERT INTO instructor(id_employee,id_instruc)
VALUES('instruc-01','015544249')
INSERT INTO instructor(id_employee,id_instruc)
VALUES('instruc-02','090034678')
INSERT INTO instructor(id_employee,id_instruc)
VALUES('instruc-03','010033144')
INSERT INTO instructor(id_employee,id_instruc)
VALUES('instruc-04','040567880')

--certificaciones

```

```

INSERT INTO certifications(id_instructor,name_certifications)
VALUES('instruc-01','Entrenamiento Funcional')
INSERT INTO certifications(id_instructor,name_certifications)
VALUES('instruc-02','Maestro de Wing Chun')
INSERT INTO certifications(id_instructor,name_certifications)
VALUES('instruc-02','Maestro de Jeet kune do')
INSERT INTO certifications(id_instructor,name_certifications)
VALUES('instruc-03','Street workout')
INSERT INTO certifications(id_instructor,name_certifications)
VALUES('instruc-04','Entrenador Personal')
--clientes
INSERT INTO
client(id_card_client,name_client,email,sex,height,risk,date_birt,affiliated_instructor)
VALUES('060439045','Farid Gamboa
Matarrita','iamfarid1997@gmail.com','M',1.75,'no','1996-01-12','instruc-02')
INSERT INTO
client(id_card_client,name_client,email,sex,height,risk,date_birt,affiliated_instructor)
VALUES('604923730','Sakura
Hibiki','hibikiss@gmail.com','F',1.60,'no','2003-06-22','instruc-04')
--clientes_campus
INSERT INTO client_campus(campus,client)
VALUES(1,'060439045')
INSERT INTO client_campus(campus,client)
VALUES(2,'604923730')
--muscle_group
INSERT INTO muscle_group(worked_area)
VALUES('Pecho')
INSERT INTO muscle_group(worked_area)
VALUES('Espalda')
INSERT INTO muscle_group(worked_area)
VALUES('Piernas')
INSERT INTO muscle_group(worked_area)
VALUES('Biceps')
INSERT INTO muscle_group(worked_area)
VALUES('Triceps')
INSERT INTO muscle_group(worked_area)
VALUES('Antebrazos')
INSERT INTO muscle_group(worked_area)
VALUES('Abdominales')
INSERT INTO muscle_group(worked_area)

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VALUES ('Isquiotibiales')
INSERT INTO muscle_group(worked_area)
VALUES ('Caudriceps')
INSERT INTO muscle_group(worked_area)
VALUES ('Glúteos')

--ejercicios
--pecho
INSERT INTO exercises(name_exercise,exercised_area)
VALUES ('Press de banca',1)
INSERT INTO exercises(name_exercise,exercised_area)
VALUES ('Lagartijas',1)
INSERT INTO exercises(name_exercise,exercised_area)
VALUES ('Press de banca inclinado',1)
INSERT INTO exercises(name_exercise,exercised_area)
VALUES ('Aleteo con cable',1)
--espalda
INSERT INTO exercises(name_exercise,exercised_area)
VALUES ('Dominadas agarre supino',2)
INSERT INTO exercises(name_exercise,exercised_area)
VALUES ('Dominadas agarre prono',2)
INSERT INTO exercises(name_exercise,exercised_area)
VALUES ('Remo con pesa',2)
INSERT INTO exercises(name_exercise,exercised_area)
VALUES ('Muscle up',2)
--pierna
INSERT INTO exercises(name_exercise,exercised_area)
VALUES ('Sentadilla',3)
INSERT INTO exercises(name_exercise,exercised_area)
VALUES ('Extensión de rodilla',3)
INSERT INTO exercises(name_exercise,exercised_area)
VALUES ('Sentadilla con salto',3)
INSERT INTO exercises(name_exercise,exercised_area)
VALUES ('Peso muerto',3)
--cita
INSERT INTO appointment(date_appointment,time_appointment)
VALUES ('2020-11-20','3:00')
INSERT INTO appointment(date_appointment,time_appointment)
VALUES ('2020-12-12','2:00')
--citas_instructor
INSERT INTO date_instructor(fk_cr_instructor,fk_appointment)
VALUES ('instruc-03',1)
INSERT INTO date_instructor(fk_cr_instructor,fk_appointment)

```

```

VALUES ('instruc-04',2)
--citas_clientes
INSERT INTO date_client(fk_cr_client,fk_appointment)
VALUES ('060439045',1)
INSERT INTO date_client(fk_cr_client,fk_appointment)
VALUES ('604923730',2)

--medicion
INSERT INTO
measuring(weight_client,fat_percentage,muscle_percentage,viseral_fat_percentage,metabolic_ege,appointment)
VALUES (60,10,50.4,3,18,1)
INSERT INTO
measuring(weight_client,fat_percentage,muscle_percentage,viseral_fat_percentage,metabolic_ege,appointment)
VALUES (56.1,35,40.5,20,22,2)

```

Algunas consultas de prueba

```

--consulta de prueba xd
SELECT c.campus_name,e.employee_name FROM campus as c
inner join employee as e on c.id_campus = e.campus

--ver los empleados instructores
SELECT * FROM campus as c
inner join employee as e on c.id_campus = e.campus
inner join instructor as i on i.id_instruc = e.indentification_card
--ver los certificados del instructor
SELECT c.campus_name, e.indentification_card, e.employee_name as
instructor , cc.descript_certification FROM campus as c
inner join employee as e on c.id_campus = e.campus
inner join instructor as i on i.id_instruc = e.indentification_card
inner join certifications as cc on cc.id_instructor = i.id_employee
--administradores
SELECT c.campus_name, e.employee_name, i.position FROM campus as c
inner join employee as e on c.id_campus = e.campus
inner join administrator as i on i.id_admin = e.indentification_card
--cliente con su cita y medidas
select * from appointment as p
inner join date_client as dcli on dcli.fk_appointment =
p.id_appointment
inner join client as cli on cli.id_card_client= dcli.fk_cr_client
inner join measuring as mea on mea.appointment = p.id_appointment
--cita programa

```

```
select p.date_appointment,em.employee_name,cli.name_client from
appointment as p
inner join date_instructor as di on di.fk_appointment=p.id_appointment
inner join instructor as i on i.id_employee =di.fk_cr_instructor
inner join employee as em on em.indentification_card = i.id_instruc

inner join date_client as dcli on dcli.fk_appointment =
p.id_appointment
inner join client as cli on cli.id_card_client= dcli.fk_cr_client
inner join measuring as mea on mea.appointment = p.id_appointment
--sede y cliente
select cc.campus_name,c.name_client,c.sex from client as c
inner join client_campus as cps on cps.client = c.id_card_client
inner join campus as cc on cc.id_campus = cps.campus
```