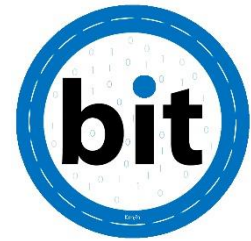


Dbschema

Primera entrega 26/6/2019

Ruta en GitLab: /Actividades/BD01006/



```
grant dba to "root";
```

```
create role "operario" ;  
create role "transportista" ;  
create role "administrativo" ;
```

```
{ TABLE "root".usuario row size = 575 number of columns = 14 index size = 44 }
```

```
create table "root".usuario  
(  
    idusuario serial not null ,  
    nombredeusuario varchar(20) not null ,  
    hash_contra char(60) not null ,  
    email varchar(255) not null ,  
    fechanac date ,  
    telefono varchar(15) not null ,  
    primernombre varchar(50) not null ,  
    primerapellido varchar(50) not null ,  
    preguntasecreta varchar(50),  
    respuestasecreta varchar(50),  
    creador integer ,  
    fechacreacion date not null ,  
    sexo char(1) not null ,  
    rol char(1) not null ,  
    unique (nombredeusuario) ,  
  
    check (rol IN ('A' , 'O' , 'T' )),  
  
    check (sexo IN ('M' , 'F' , 'O' )),  
    primary key (idusuario)  
);
```

```
revoke all on "root".usuario from "public" as "root";
```

```
{ TABLE "root".cliente row size = 129 number of columns = 6 index size = 36 }
```

```
create table "root".cliente  
(
```

```

    rut varchar(12) not null ,
    nombre varchar(100) not null ,
    idcliente serial not null ,
    fecharegistro datetime year to day not null ,
    invalido "informix".boolean not null ,
    usuarioregistro integer not null ,
    unique (rut) ,
    primary key (idcliente)
);

```

```

revoke all on "root".cliente from "public" as "root";

```

```

{ TABLE "root".lugar row size = 153 number of columns = 8 index size = 18 }

```

```

create table "root".lugar
(
    idlugar serial not null ,
    nombre varchar(100) not null ,
    capacidad integer not null ,
    geox float not null ,
    geoy float not null ,
    usuariocreador integer not null ,
    fecharegistro datetime year to second not null ,
    tipo varchar(15) not null ,

    check (capacidad > 0 ),

    check (tipo IN ('Patio' , 'Puerto' , 'Establecimiento' , 'Zona' , 'Subzona' )),
    primary key (idlugar)
);

```

```

revoke all on "root".lugar from "public" as "root";

```

```

{ TABLE "root".incluye row size = 8 number of columns = 2 index size = 18 }

```

```

create table "root".incluye
(
    menor integer,
    mayor integer,
    primary key (menor)
);

```

```

revoke all on "root".incluye from "public" as "root";

```

```

{ TABLE "root".pertenecea row size = 8 number of columns = 2 index size = 18 }

```

```

create table "root".pertenecea
(
    idlugar integer,
    clienteid integer,
    primary key (idlugar)
);

```

```

revoke all on "root".pertenecea from "public" as "root";

```

```
{ TABLE "root".trabajaen row size = 20 number of columns = 5 index size = 27 }
```

```
create table "root".trabajaen
```

```
(
  id serial not null ,
  idlugar integer,
  idusuario integer not null ,
  fechainicio date not null ,
  fechafin date,
  primary key (id)
);
```

```
revoke all on "root".trabajaen from "public" as "root";
```

```
{ TABLE "root".conexion row size = 20 number of columns = 3 index size = 26 }
```

```
create table "root".conexion
```

```
(
  idtrabajaen integer,
  horaingreso datetime year to second not null ,
  horasalida datetime year to second,
  primary key (idtrabajaen,horaingreso)
);
```

```
revoke all on "root".conexion from "public" as "root";
```

```
{ TABLE "root".vehiculo row size = 145 number of columns = 8 index size = 40 }
```

```
create table "root".vehiculo
```

```
(
  idvehiculo serial not null ,
  vin char(17) not null ,
  marca varchar(50),
  modelo varchar(50),
  color char(6),
  tipo varchar(7) not null ,
  anio integer,
  cliente integer not null ,
  unique (vin) ,

  check (tipo IN ('Auto' , 'MiniVan' , 'SUV' , 'Camion' , 'Van' )),

  check ((anio >= 1900 ) AND (anio <= 10000 ) ),
  primary key (idvehiculo)
);
```

```
revoke all on "root".vehiculo from "public" as "root";
```

```
{ TABLE "root".vehiculoingresa row size = 27 number of columns = 4 index size = 39 }
```

```
create table "root".vehiculoingresa
```

```
(
  idvehiculo integer,
```

```

    fecha datetime year to second,
    tipoingreso varchar(10) not null ,
    usuario integer,

    check (tipoingreso IN ('Precarga' , 'Alta' , 'Baja' )),
    primary key (idvehiculo,usuario,fecha)
);

revoke all on "root".vehiculoingresa from "public" as "root";

{ TABLE "root".informedanios row size = 285 number of columns = 7 index size = 40 }

create table "root".informedanios
(
    id serial not null ,
    descripcion varchar(255) not null ,
    fecha datetime year to day not null ,
    tipo varchar(7) not null ,
    idvehiculo integer not null ,
    idlugar integer not null ,
    idusuario integer not null ,

    check (tipo IN ('Total' , 'Parcial' )),
    primary key (id,idvehiculo)
);

revoke all on "root".informedanios from "public" as "root";

{ TABLE "root".registrodanios row size = 268 number of columns = 4 index size = 30 }

create table "root".registrodanios
(
    idvehiculo integer not null ,
    informedanios integer not null ,
    idregistro serial not null ,
    descripcion varchar(255) not null ,
    primary key (idvehiculo,informedanios,idregistro)
);

revoke all on "root".registrodanios from "public" as "root";

{ TABLE "root".imagenregistro row size = 72 number of columns = 5 index size = 38 }

create table "root".imagenregistro
(
    vehiculo integer,
    informe integer,
    nrolista integer,
    nroimagen serial not null ,
    imagen byte not null ,
    primary key (vehiculo,informe,nrolista,nroimagen)
);

revoke all on "root".imagenregistro from "public" as "root";

```

```
{ TABLE "root".actualiza row size = 40 number of columns = 7 index size = 34 }
```

```
create table "root".actualiza
(
    vehiculo1 integer,
    informe1 integer,
    registro1 integer,
    vehiculo2 integer,
    informe2 integer,
    registro2 integer,
    tipo varchar(15) not null ,

    check (tipo IN ( 'Anulacion' , 'Correccion' )),

    check (vehiculo1 = vehiculo2 ),
    primary key (vehiculo1,informe1,registro1)
);
```

```
revoke all on "root".actualiza from "public" as "root";
```

```
{ TABLE "root".posicionado row size = 32 number of columns = 6 index size = 48 }
```

```
create table "root".posicionado
(
    idlugar integer,
    idvehiculo integer,
    desde datetime year to second,
    hasta datetime year to second,
    posicion integer not null ,
    idusuario integer,

    check (posicion > 0 ),
    primary key (idlugar,idvehiculo,desde)
);
```

```
revoke all on "root".posicionado from "public" as "root";
```

```
{ TABLE "root".tipotransporte row size = 55 number of columns = 2 index size = 65 }
```

```
create table "root".tipotransporte
(
    idtipo serial not null ,
    nombre varchar(50) not null ,
    unique (nombre) ,
    primary key (idtipo)
);
```

```
revoke all on "root".tipotransporte from "public" as "root";
```

```
{ TABLE "root".habilitado row size = 8 number of columns = 2 index size = 31 }
```

```
create table "root".habilitado
(
```

```
    idlugar integer,  
    idtipo integer,  
    primary key (idtipo,idlugar)  
);
```

```
revoke all on "root".habilitado from "public" as "root";
```

```
{ TABLE "root".mediotransporte row size = 185 number of columns = 11 index size = 134 }
```

```
create table "root".mediotransporte  
(  
    idtipo integer,  
    idlegal varchar(50),  
    nombre varchar(50) not null ,  
    tipo varchar(50) not null ,  
    creador integer not null ,  
    fechacreacion date not null ,  
    cantcamiones integer not null ,  
    cantautos integer not null ,  
    cantsuv integer not null ,  
    cantvan integer not null ,  
    cantminivan integer not null ,  
  
    check (cantcamiones > -1 ),  
  
    check (cantautos > -1 ),  
  
    check (cantsuv > -1 ),  
  
    check (cantvan > -1 ),  
  
    check (cantminivan > -1 ),  
    primary key (idtipo,idlegal)  
);
```

```
revoke all on "root".mediotransporte from "public" as "root";
```

```
{ TABLE "root".permite row size = 61 number of columns = 4 index size = 133 }
```

```
create table "root".permite  
(  
    idtipo integer,  
    idlegal varchar(50),  
    usuario integer,  
    invalido "informix".boolean,  
    primary key (idtipo,idlegal,usuario)  
);
```

```
revoke all on "root".permite from "public" as "root";
```

```
{ TABLE "root".lote row size = 66 number of columns = 9 index size = 36 }
```

```
create table "root".lote  
(
```

```

    idlote serial not null ,
    nombre varchar(20),
    origen integer not null ,
    destino integer not null ,
    creadorid integer not null ,
    fechacreacion datetime year to day not null ,
    prioridad varchar(10) not null ,
    estado varchar(10) not null ,
    invalido "informix".boolean
        default 'f' not null ,

    check (prioridad IN ('Normal' , 'Alta' )),

    check (estado IN ('Abierto' , 'Cerrado' )),
    primary key (idlote)
);

revoke all on "root".lote from "public" as "root";

{ TABLE "root".integra row size = 21 number of columns = 5 index size = 47 }

create table "root".integra
(
    idvehiculo integer,
    lote integer,
    fecha datetime year to minute,
    invalidado "informix".boolean not null ,
    idusuario integer not null ,
    primary key (idvehiculo,lote,fecha)
);

revoke all on "root".integra from "public" as "root";

{ TABLE "root".transporte row size = 77 number of columns = 6 index size = 73 }

create table "root".transporte
(
    transporteid serial not null ,
    usuario integer not null ,
    idtipo integer not null ,
    idlegal varchar(50) not null ,
    fechahoracreacion datetime year to minute not null ,
    fechahorasalida datetime year to minute,
    primary key (transporteid)
);

revoke all on "root".transporte from "public" as "root";

{ TABLE "root".transporta row size = 33 number of columns = 5 index size = 31 }

create table "root".transporta
(
    transporteid integer,
    idlote integer,

```

```

    estado varchar(10) not null ,
    fechahorallegadaestm datetime year to minute,
    fechahorallegadareal datetime year to minute,

    check (estado IN ('Proceso' , 'Fallo' , 'Exitoso' , 'Cancelado' )),
    primary key (transporteid,idlote)
);

revoke all on "root".transporta from "public" as "root";

{ TABLE "root".link row size = 260 number of columns = 2 index size = 270 }

create table "root".link
(
    link varchar(255),
    transportista integer not null ,
    primary key (link)
);

revoke all on "root".link from "public" as "root";

grant select on "root".usuario to "administrativo" as "root";
grant update on "root".usuario to "administrativo" as "root";
grant insert on "root".usuario to "administrativo" as "root";
grant delete on "root".usuario to "administrativo" as "root";
grant index on "root".usuario to "administrativo" as "root";
grant alter on "root".usuario to "administrativo" as "root";
grant references on "root".usuario to "administrativo" as "root";
grant select on "root".usuario to "operario" as "root";
grant update on "root".usuario to "operario" as "root";
grant select on "root".usuario to "transportista" as "root";
grant update on "root".usuario to "transportista" as "root";
grant select on "root".cliente to "administrativo" as "root";
grant update on "root".cliente to "administrativo" as "root";
grant insert on "root".cliente to "administrativo" as "root";
grant delete on "root".cliente to "administrativo" as "root";
grant index on "root".cliente to "administrativo" as "root";
grant alter on "root".cliente to "administrativo" as "root";
grant references on "root".cliente to "administrativo" as "root";
grant select on "root".cliente to "operario" as "root";
grant select on "root".cliente to "transportista" as "root";
grant select on "root".lugar to "administrativo" as "root";
grant update on "root".lugar to "administrativo" as "root";
grant insert on "root".lugar to "administrativo" as "root";
grant delete on "root".lugar to "administrativo" as "root";
grant index on "root".lugar to "administrativo" as "root";
grant alter on "root".lugar to "administrativo" as "root";
grant references on "root".lugar to "administrativo" as "root";
grant select on "root".lugar to "operario" as "root";
grant select on "root".lugar to "transportista" as "root";
grant select on "root".incluye to "administrativo" as "root";
grant update on "root".incluye to "administrativo" as "root";
grant insert on "root".incluye to "administrativo" as "root";

```



```
grant delete on "root".incluye to "administrativo" as "root";
grant index on "root".incluye to "administrativo" as "root";
grant alter on "root".incluye to "administrativo" as "root";
grant references on "root".incluye to "administrativo" as "root";
grant select on "root".incluye to "operario" as "root";
grant select on "root".incluye to "transportista" as "root";
grant select on "root".pertenecea to "administrativo" as "root";
grant update on "root".pertenecea to "administrativo" as "root";
grant insert on "root".pertenecea to "administrativo" as "root";
grant delete on "root".pertenecea to "administrativo" as "root";
grant index on "root".pertenecea to "administrativo" as "root";
grant alter on "root".pertenecea to "administrativo" as "root";
grant references on "root".pertenecea to "administrativo" as "root";
grant select on "root".pertenecea to "operario" as "root";
grant select on "root".pertenecea to "transportista" as "root";
grant select on "root".trabajaen to "administrativo" as "root";
grant update on "root".trabajaen to "administrativo" as "root";
grant insert on "root".trabajaen to "administrativo" as "root";
grant delete on "root".trabajaen to "administrativo" as "root";
grant index on "root".trabajaen to "administrativo" as "root";
grant alter on "root".trabajaen to "administrativo" as "root";
grant references on "root".trabajaen to "administrativo" as "root";
grant select on "root".trabajaen to "operario" as "root";
grant select on "root".trabajaen to "transportista" as "root";
grant select on "root".conexion to "administrativo" as "root";
grant update on "root".conexion to "administrativo" as "root";
grant insert on "root".conexion to "administrativo" as "root";
grant delete on "root".conexion to "administrativo" as "root";
grant index on "root".conexion to "administrativo" as "root";
grant alter on "root".conexion to "administrativo" as "root";
grant references on "root".conexion to "administrativo" as "root";
grant select on "root".conexion to "operario" as "root";
grant update on "root".conexion to "operario" as "root";
grant insert on "root".conexion to "operario" as "root";
grant select on "root".conexion to "transportista" as "root";
grant update on "root".conexion to "transportista" as "root";
grant insert on "root".conexion to "transportista" as "root";
grant select on "root".vehiculo to "administrativo" as "root";
grant update on "root".vehiculo to "administrativo" as "root";
grant insert on "root".vehiculo to "administrativo" as "root";
grant delete on "root".vehiculo to "administrativo" as "root";
grant index on "root".vehiculo to "administrativo" as "root";
grant alter on "root".vehiculo to "administrativo" as "root";
grant references on "root".vehiculo to "administrativo" as "root";
grant select on "root".vehiculo to "operario" as "root";
grant update on "root".vehiculo to "operario" as "root";
grant select on "root".vehiculoingresa to "administrativo" as "root";
grant update on "root".vehiculoingresa to "administrativo" as "root";
grant insert on "root".vehiculoingresa to "administrativo" as "root";
grant delete on "root".vehiculoingresa to "administrativo" as "root";
grant index on "root".vehiculoingresa to "administrativo" as "root";
grant alter on "root".vehiculoingresa to "administrativo" as "root";
grant references on "root".vehiculoingresa to "administrativo" as "root";
grant select on "root".vehiculoingresa to "operario" as "root";
```

```
grant insert on "root".vehiculoingresa to "operario" as "root";
grant select on "root".informedanios to "administrativo" as "root";
grant update on "root".informedanios to "administrativo" as "root";
grant insert on "root".informedanios to "administrativo" as "root";
grant delete on "root".informedanios to "administrativo" as "root";
grant index on "root".informedanios to "administrativo" as "root";
grant alter on "root".informedanios to "administrativo" as "root";
grant references on "root".informedanios to "administrativo" as "root";
grant select on "root".informedanios to "operario" as "root";
grant update on "root".informedanios to "operario" as "root";
grant insert on "root".informedanios to "operario" as "root";
grant select on "root".registrodanios to "administrativo" as "root";
grant update on "root".registrodanios to "administrativo" as "root";
grant insert on "root".registrodanios to "administrativo" as "root";
grant delete on "root".registrodanios to "administrativo" as "root";
grant index on "root".registrodanios to "administrativo" as "root";
grant alter on "root".registrodanios to "administrativo" as "root";
grant references on "root".registrodanios to "administrativo" as "root";
grant select on "root".registrodanios to "operario" as "root";
grant update on "root".registrodanios to "operario" as "root";
grant insert on "root".registrodanios to "operario" as "root";
grant select on "root".imagenregistro to "administrativo" as "root";
grant update on "root".imagenregistro to "administrativo" as "root";
grant insert on "root".imagenregistro to "administrativo" as "root";
grant delete on "root".imagenregistro to "administrativo" as "root";
grant index on "root".imagenregistro to "administrativo" as "root";
grant alter on "root".imagenregistro to "administrativo" as "root";
grant references on "root".imagenregistro to "administrativo" as "root";
grant select on "root".imagenregistro to "operario" as "root";
grant insert on "root".imagenregistro to "operario" as "root";
grant select on "root".actualiza to "administrativo" as "root";
grant update on "root".actualiza to "administrativo" as "root";
grant insert on "root".actualiza to "administrativo" as "root";
grant delete on "root".actualiza to "administrativo" as "root";
grant index on "root".actualiza to "administrativo" as "root";
grant alter on "root".actualiza to "administrativo" as "root";
grant references on "root".actualiza to "administrativo" as "root";
grant select on "root".actualiza to "operario" as "root";
grant update on "root".actualiza to "operario" as "root";
grant insert on "root".actualiza to "operario" as "root";
grant select on "root".posicionado to "administrativo" as "root";
grant update on "root".posicionado to "administrativo" as "root";
grant insert on "root".posicionado to "administrativo" as "root";
grant delete on "root".posicionado to "administrativo" as "root";
grant index on "root".posicionado to "administrativo" as "root";
grant alter on "root".posicionado to "administrativo" as "root";
grant references on "root".posicionado to "administrativo" as "root";
grant select on "root".posicionado to "operario" as "root";
grant update on "root".posicionado to "operario" as "root";
grant insert on "root".posicionado to "operario" as "root";
grant select on "root".posicionado to "transportista" as "root";
grant update on "root".posicionado to "transportista" as "root";
grant insert on "root".posicionado to "transportista" as "root";
grant select on "root".tipotransporte to "administrativo" as "root";
```

```
grant update on "root".tipotransporte to "administrativo" as "root";
grant insert on "root".tipotransporte to "administrativo" as "root";
grant delete on "root".tipotransporte to "administrativo" as "root";
grant index on "root".tipotransporte to "administrativo" as "root";
grant alter on "root".tipotransporte to "administrativo" as "root";
grant references on "root".tipotransporte to "administrativo" as "root";
grant select on "root".tipotransporte to "transportista" as "root";
grant select on "root".habilitado to "administrativo" as "root";
grant update on "root".habilitado to "administrativo" as "root";
grant insert on "root".habilitado to "administrativo" as "root";
grant delete on "root".habilitado to "administrativo" as "root";
grant index on "root".habilitado to "administrativo" as "root";
grant alter on "root".habilitado to "administrativo" as "root";
grant references on "root".habilitado to "administrativo" as "root";
grant select on "root".habilitado to "operario" as "root";
grant select on "root".habilitado to "transportista" as "root";
grant select on "root".mediotransporte to "administrativo" as "root";
grant update on "root".mediotransporte to "administrativo" as "root";
grant insert on "root".mediotransporte to "administrativo" as "root";
grant delete on "root".mediotransporte to "administrativo" as "root";
grant index on "root".mediotransporte to "administrativo" as "root";
grant alter on "root".mediotransporte to "administrativo" as "root";
grant references on "root".mediotransporte to "administrativo" as "root";
grant select on "root".mediotransporte to "transportista" as "root";
grant select on "root".permite to "administrativo" as "root";
grant update on "root".permite to "administrativo" as "root";
grant insert on "root".permite to "administrativo" as "root";
grant delete on "root".permite to "administrativo" as "root";
grant index on "root".permite to "administrativo" as "root";
grant alter on "root".permite to "administrativo" as "root";
grant references on "root".permite to "administrativo" as "root";
grant select on "root".permite to "operario" as "root";
grant select on "root".lote to "administrativo" as "root";
grant update on "root".lote to "administrativo" as "root";
grant insert on "root".lote to "administrativo" as "root";
grant delete on "root".lote to "administrativo" as "root";
grant index on "root".lote to "administrativo" as "root";
grant alter on "root".lote to "administrativo" as "root";
grant references on "root".lote to "administrativo" as "root";
grant select on "root".lote to "operario" as "root";
grant update on "root".lote to "operario" as "root";
grant insert on "root".lote to "operario" as "root";
grant select on "root".lote to "transportista" as "root";
grant select on "root".integra to "administrativo" as "root";
grant update on "root".integra to "administrativo" as "root";
grant insert on "root".integra to "administrativo" as "root";
grant delete on "root".integra to "administrativo" as "root";
grant index on "root".integra to "administrativo" as "root";
grant alter on "root".integra to "administrativo" as "root";
grant references on "root".integra to "administrativo" as "root";
grant select on "root".integra to "operario" as "root";
grant update on "root".integra to "operario" as "root";
grant insert on "root".integra to "operario" as "root";
grant select on "root".integra to "transportista" as "root";
```

```

grant select on "root".transporte to "administrativo" as "root";
grant update on "root".transporte to "administrativo" as "root";
grant insert on "root".transporte to "administrativo" as "root";
grant delete on "root".transporte to "administrativo" as "root";
grant index on "root".transporte to "administrativo" as "root";
grant alter on "root".transporte to "administrativo" as "root";
grant references on "root".transporte to "administrativo" as "root";
grant select on "root".transporte to "transportista" as "root";
grant update on "root".transporte to "transportista" as "root";
grant insert on "root".transporte to "transportista" as "root";
grant select on "root".transporta to "administrativo" as "root";
grant update on "root".transporta to "administrativo" as "root";
grant insert on "root".transporta to "administrativo" as "root";
grant delete on "root".transporta to "administrativo" as "root";
grant index on "root".transporta to "administrativo" as "root";
grant alter on "root".transporta to "administrativo" as "root";
grant references on "root".transporta to "administrativo" as "root";
grant update on "root".transporta to "transportista" as "root";
grant insert on "root".transporta to "transportista" as "root";
grant select on "root".link to "administrativo" as "root";
grant update on "root".link to "administrativo" as "root";
grant insert on "root".link to "administrativo" as "root";
grant delete on "root".link to "administrativo" as "root";
grant index on "root".link to "administrativo" as "root";
grant alter on "root".link to "administrativo" as "root";
grant references on "root".link to "administrativo" as "root";
grant select on "root".link to "transportista" as "root";

```

```

create function "root".crear_lugar(nombrel like lugar.nombre, pos_x like lugar.geox, pos_y
like lugar.geoy, tipo like lugar.tipo, capacidad like lugar.capacidad, creador like
lugar.usuariocreador)
    returning integer
DEFINE lugarid int;
IF capacidad < 1 THEN
    return -1;
END IF
IF tipo not in ('Puerto', 'Patio', 'Establecimiento') THEN
    return -2;
END IF
insert into lugar
(idlugar, nombre, geox, geoy, capacidad, usuariocreador, tipo, fecharegistro)
values
(0,      nombrel,pos_x,pos_y,capacidad, creador,      tipo, current);
select dbinfo('sqlca.sqlerrd1') into lugarid from systables where tabid=1;
return lugarid;
end function;

```

```

create function "root".crear_subzona(nombrez like lugar.Nombre, enLugar like
lugar.IDLugar, capacidadz int)
    returning integer
DEFINE existelugar, capacidadlugar, creador, lugarid int;
DEFINE gx, gy float;
SELECT count(*), capacidad, geox, geoy, usuariocreador

```

```

into existelugar, capacidadlugar, gx, gy, creador
from lugar where idlugar=enLugar and tipo='Zona'
group by idlugar, capacidad, geox, geoy, usuariocreador;
IF existelugar < 1 THEN
    return -1;
END IF;
IF capacidadlugar < capacidadz THEN
    return -1;
END IF;
IF gx is null or gy is null THEN
END IF;
insert into lugar(idlugar, nombre, capacidad, geox, geoy,
    usuariocreador, tipo,fechaRegistro)
    values(0, nombrez, capacidadz, gx, gy, creador, 'Subzona',current);
select dbinfo('sqlca.sqlerrd1') into lugarid from systables where tabid=1;
insert into incluye values(lugarid, enLugar);
return lugarid;
end function;

create function "root".crear_zona(nombrez like lugar.Nombre, enLugar like lugar.IDLugar,
capacidadz int)
    returning integer
DEFINE existelugar, capacidadlugar, creador, lugarid int;
DEFINE gx, gy float;
SELECT count(*), capacidad, geox, geoy, usuariocreador
into existelugar, capacidadlugar, gx, gy, creador
from lugar where idlugar=enLugar and tipo in ('Puerto', 'Patio')
group by idlugar, capacidad, geox, geoy, usuariocreador;
IF existelugar < 1 THEN
    return -1;
END IF;
IF capacidadlugar < capacidadz THEN
    return -1;
END IF;
insert into lugar(idlugar, nombre, capacidad, geox, geoy,
    usuariocreador, tipo,fechaRegistro) values(0, nombrez, capacidadz, gx, gy, creador,
'Zona', current);
select dbinfo('sqlca.sqlerrd1') into lugarid from systables where tabid=1;
insert into incluye values(lugarid, enLugar);
return lugarid;
end function;

create function "root".zonas_en_lugar(lugarid like lugar.idlugar)
    returning integer, varchar(100), integer
DEFINE idz integer;
DEFINE nmz varchar(100);
DEFINE cpz integer;
FOREACH cursor1 FOR
    select lugar.idlugar, nombre, capacidad
into idz, nmz, cpz
from lugar inner join
(select menor as idlugar from incluye
start with mayor=lugarid
connect by prior menor=mayor) as children on lugar.idlugar=children.idlugar

```

```

        where lugar.tipo="Zona"
        return idz, nmz, cpz WITH RESUME;
    END FOREACH;
end function;

```

```

create function "root".subzonas_en_zona(lugarid like lugar.idlugar, zonaid like
lugar.idlugar)
    returning integer, varchar(100), integer
    DEFINE idz integer;
    DEFINE nmz varchar(100);
    DEFINE cpz integer;
    FOREACH cursor1 FOR
        select lugar.idlugar, nombre, capacidad
        into idz, nmz, cpz
        from lugar inner join
        (select menor as idlugar from incluye
         start with mayor=lugarid and menor=zonaid
         connect by prior menor=mayor) as children on lugar.idlugar=children.idlugar
        where lugar.tipo="Subzona"
        return idz, nmz, cpz WITH RESUME;
    END FOREACH;
end function;

```

```

create function "root".subzonas_en_lugar(lugarid like lugar.idlugar)
    returning integer, varchar(100), integer
    DEFINE idz integer;
    DEFINE nmz varchar(100);
    DEFINE cpz integer;
    FOREACH cursor1 FOR
        select lugar.idlugar, nombre, capacidad
        into idz, nmz, cpz
        from lugar inner join
        (select menor as idlugar from incluye
         start with mayor=lugarid
         connect by prior menor=mayor) as children on lugar.idlugar=children.idlugar
        where lugar.tipo="Subzona"
        return idz, nmz, cpz WITH RESUME;
    END FOREACH;
end function;

```

```

create function "root".ocupacion_en_lugar(lugarid like lugar.idlugar)
    returning integer
    DEFINE tipo varchar(15);
    DEFINE ocup integer;
    select lugar.tipo into tipo from lugar where idlugar=lugarid;
    IF tipo <> "Subzona" THEN
        select count(*) into ocup
        from posicionado where hasta is null
        and idlugar in (select unnamed_col_1 from table(subzonas_en_lugar(lugarid)));
    ELSE
        select count(*) into ocup
        from posicionado where hasta is null and idlugar = lugarid;
    END IF;
    return ocup;

```



```
end function;
```

```
create function "root".subzonas_en_lugar_por_nombre(lugarnombre like lugar.nombre)
    returning integer, varchar(100), integer
    DEFINE idz integer;
    DEFINE nmz varchar(100);
    DEFINE cpz integer;
    DEFINE lugarid integer;
    select lugar.idlugar into lugarid from lugar where nombre=lugarnombre;
    FOREACH cursor1 FOR
        select lugar.idlugar, nombre, capacidad
        into idz, nmz, cpz
        from lugar inner join
        (select menor as idlugar from incluye
        start with mayor=lugarid
        connect by prior menor=mayor) as children on lugar.idlugar=children.idlugar
        where lugar.tipo="Subzona"
        return idz, nmz, cpz WITH RESUME;
    END FOREACH;
end function;
```

```
create function "root".cerrar_lote(loteid like lote.idlote)
    returning boolean
    DEFINE unverif boolean;
    select count(*) > 0
    into unverif
    from integra
    inner join vehiculo on integra.idvehiculo=vehiculo.idvehiculo and integra.lote=loteid
and integra.invalidado='f'
    inner join lote on integra.lote=lote.idlote
    left join informedanios on informedanios.idvehiculo=vehiculo.idvehiculo and
informedanios.idlugar=lote.origen
    where informedanios.id is null;
    IF unverif THEN
        return 'f';
    ELSE
        update lote set estado="Cerrado" where idlote=loteid;
        return 't';
    END IF;
end function;
```

```
grant execute on function "root".crear_lugar (char,char,char,char,char,char) to "public"
as "root";
grant execute on function "root".crear_subzona (char,char,integer) to "public" as "root";
grant execute on function "root".crear_zona (char,char,integer) to "public" as "root";
grant execute on function "root".zonas_en_lugar (char) to "public" as "root";
grant execute on function "root".subzonas_en_zona (char,char) to "public" as "root";
grant execute on function "root".subzonas_en_lugar (char) to "public" as "root";
grant execute on function "root".ocupacion_en_lugar (char) to "public" as "root";
grant execute on function "root".subzonas_en_lugar_por_nombre (char) to "public" as
"root";
grant execute on function "root".cerrar_lote (char) to "public" as "root";
```

```
revoke usage on language SPL from public ;
```

```
grant usage on language SPL to public ;
```

```
alter table "root".usuario add constraint (foreign key (creador)
references "root".usuario );
alter table "root".cliente add constraint (foreign key (usuarioregistro)
references "root".usuario );
alter table "root".lugar add constraint (foreign key (usuariocreador)
references "root".usuario );
alter table "root".incluye add constraint (foreign key (menor)
references "root".lugar );
alter table "root".incluye add constraint (foreign key (mayor)
references "root".lugar );
alter table "root".pertenecea add constraint (foreign key (idlugar)
references "root".lugar );
alter table "root".pertenecea add constraint (foreign key (clienteid)
references "root".cliente );
alter table "root".trabajaen add constraint (foreign key (idlugar)
references "root".lugar on delete cascade);
alter table "root".trabajaen add constraint (foreign key (idusuario)
references "root".usuario on delete cascade);
alter table "root".conexion add constraint (foreign key (idtrabajaen)
references "root".trabajaen on delete cascade);
alter table "root".vehiculo add constraint (foreign key (cliente)
references "root".cliente on delete cascade);
alter table "root".vehiculoingresa add constraint (foreign key
(idvehiculo) references "root".vehiculo on delete cascade);

alter table "root".vehiculoingresa add constraint (foreign key
(usuario) references "root".usuario on delete cascade);
alter table "root".informedanios add constraint (foreign key
(idusuario) references "root".usuario on delete cascade);

alter table "root".informedanios add constraint (foreign key
(idvehiculo) references "root".vehiculo on delete cascade);

alter table "root".informedanios add constraint (foreign key
(idlugar) references "root".lugar on delete cascade);
alter table "root".registrodanios add constraint (foreign key
(informedanios,idvehiculo) references "root".informedanios
on delete cascade);
alter table "root".imagenregistro add constraint (foreign key
(vehiculo,informe,nrolista) references "root".registrodanios
on delete cascade);
alter table "root".actualiza add constraint (foreign key (vehiculo1,
informe1,registro1) references "root".registrodanios on delete
cascade);
alter table "root".actualiza add constraint (foreign key (vehiculo2,
informe2,registro2) references "root".registrodanios on delete
cascade);
```



```

alter table "root".posicionado add constraint (foreign key (idvehiculo)
    references "root".vehiculo on delete cascade);
alter table "root".posicionado add constraint (foreign key (idlugar)
    references "root".lugar on delete cascade);
alter table "root".posicionado add constraint (foreign key (idusuario)
    references "root".usuario on delete cascade);
alter table "root".habilitado add constraint (foreign key (idlugar)
    references "root".lugar );
alter table "root".habilitado add constraint (foreign key (idtipo)
    references "root".tipotransporte );
alter table "root".mediotransporte add constraint (foreign key
    (tipo) references "root".tipotransporte (nombre) on delete
    cascade);
alter table "root".mediotransporte add constraint (foreign key
    (idtipo) references "root".tipotransporte on delete cascade);

alter table "root".mediotransporte add constraint (foreign key
    (creador) references "root".usuario on delete cascade);
alter table "root".permite add constraint (foreign key (idtipo,
    idlegal) references "root".mediotransporte on delete cascade);

alter table "root".permite add constraint (foreign key (usuario)
    references "root".usuario on delete cascade);
alter table "root".lote add constraint (foreign key (origen)
    references "root".lugar on delete cascade);
alter table "root".lote add constraint (foreign key (destino)
    references "root".lugar on delete cascade);
alter table "root".lote add constraint (foreign key (creadorid)
    references "root".usuario on delete cascade);
alter table "root".integra add constraint (foreign key (idvehiculo)
    references "root".vehiculo on delete cascade);
alter table "root".integra add constraint (foreign key (lote)
    references "root".lote on delete cascade);
alter table "root".integra add constraint (foreign key (idusuario)
    references "root".usuario on delete cascade);
alter table "root".transporte add constraint (foreign key (idtipo,
    idlegal,usuario) references "root".permite on delete cascade);

alter table "root".transporta add constraint (foreign key (transporteid)
    references "root".transporte on delete cascade);
alter table "root".transporta add constraint (foreign key (idlote)
    references "root".lote on delete cascade);
alter table "root".link add constraint (foreign key (transportista)
    references "root".usuario on delete cascade);

```