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);