**S.I.G.A.T.**

**Base de Datos II**SURU

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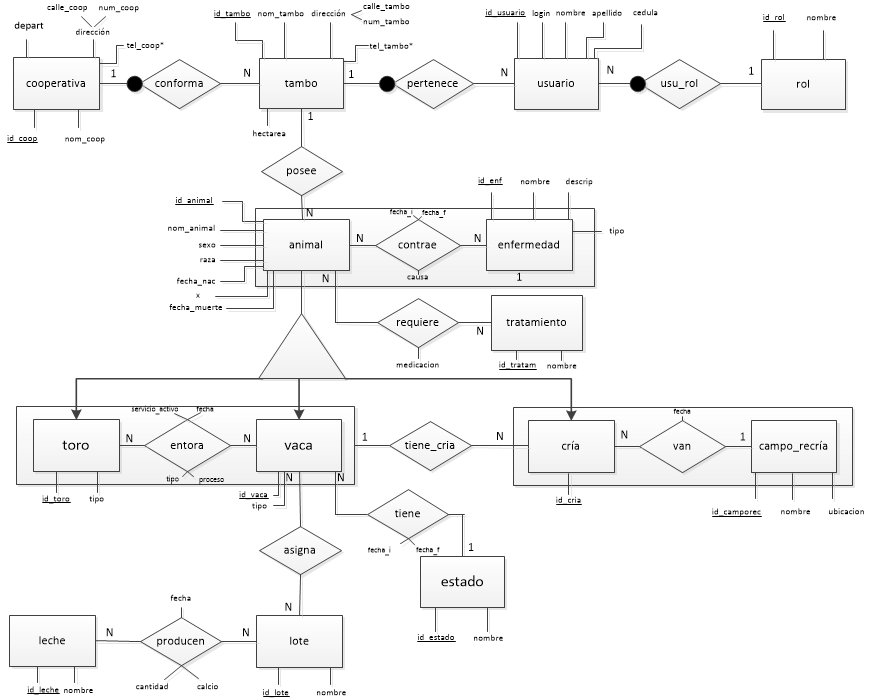
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**Diagrama Entidad-Relación**

¿Qué es?

El diagrama entidad-relación (MER) es una herramienta para el modelado de datos que permite representar cualquier abstracción, percepción y conocimiento en un sistema de información, formado por un conjunto de objetos denominados entidades y relaciones.

Representación:

Modelo Relacional

¿Qué es?

Es la descripción del esquema de la base de datos a crear para representar la situación real descripta por el DER a través de las tablas.

Además tiene un proceso de normalización, en éste caso usaremos la tercera forma normal.

Pasaje a tablas:

Referencias:

**- Verde = Entidad**

**- Azul = Relación**

**- Rojo = Clave primaria**

**- Naranja = Atributos multivaluados**

cooperativa (id\_coop, nom\_coop, depart, calle\_coop, num\_coop)

tel\_coop (id\_coop, tel\_coop)

tambo (id\_tambo, nom\_tambo, calle\_tambo, num\_tambo, hectárea)

tel\_tambo (id\_tambo, tel\_tambo)

conforma (id\_tambo, id\_coop)

usuario (id\_usuario, cedula, login, nombre, apellido)

rol (id\_rol, nombre)

usu\_rol (id\_usuario, id\_rol)

pertenece (id\_usuario, id\_tambo)

animales (id\_animal, nom\_animal, sexo, raza, fecha\_nac, x, fecha\_muerte)

posee (id\_animal, id\_tambo)

toro (id\_toro, tipo)

vaca (id\_vaca, tipo)

cria (id\_cria, id\_vaca, id\_toro)

entora (id\_vaca, id\_toro, tipo, proceso, fecha, servicio\_activo)

campo-recría (id\_camporec, nombre, ubicacion)

van (id\_cria, id\_camporec, fecha)

lote (id\_lote, nombre)

asigna (id\_vaca, id\_lote)

leche (id\_leche, tipo)

producen (id\_lote, id\_leche, cantidad, calcio, fecha)

estado (id\_estado, nombre)

tiene (id\_vaca, id\_estado, fecha\_i, fecha\_f)

enfermedad (id\_enf, nombre, tipo, descrip)

contrae (id\_animal, id\_enf, cont, fecha\_i, fecha\_f)

tratamiento (id\_tratam, nombre)

requiere (id\_animal, id\_tratam, medicacion)

**Restricciones no estructurales**

¿Qué son?

(RNE) Son restricciones que no se pueden contemplar desde una base de datos. Se van a tener en cuenta desde software (Programación).

Restricciones: (Verde < / <= Azul) (Menor o menor igual)

La fecha en que un animal contrae una enfermedad debe ser menor o igual a la fecha actual y a la de su tratamiento.

La fecha cuando un veterinario atiende a un animal debe ser menor o igual a la fecha actual.

La fecha de inicio del estado de la vaca debe ser menor a la fecha de finalización.

La fecha en que una cría ingresa al campo de recría debe ser menor o igual a la fecha actual.

La fecha de entore debe ser menor o igual a la fecha actual.

La fecha de entore debe ser menor a la fecha de parto.

La fecha en que una vaca es preñada debe ser menor o igual a la fecha actual.

La fecha en que una vaca fue preñada debe ser mayor a la fecha de entore.

La fecha en que una vaca es preñada debe ser menor a la fecha en que una vaca tiene cría.

La fecha de nacimiento de una cría debe ser menor o igual a la fecha actual.

La fecha en que una cría entra al campo de recría debe ser mayor a la fecha de su nacimiento.

La fecha en que una cría entra al campo de recría debe ser menor a la fecha en que la cría sale del mismo.

La actualización del peso de un animal debe ser mayor hasta que éste alcance la adultez.

La hora de inicio de un ordeñe debe ser menor a la hora en que termina.

La hora de fin del primer ordeñe debe ser menor a la hora de inicio del segundo ordeñe y así sucesivamente.

La fecha de ordeñe de una vaca debe ser menor o igual a la fecha actual.

La fecha de producción de leche debe ser menor o igual a la fecha actual.

**Diccionario de datos:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| cooperativa | | | | | | |
| Nombre | **Tipo** | **Longitud** | **Primaria** | **Foránea** | **FK (Tabla)** | **Null** |
| id\_coop | Serial | - | Si | No | - | No |
| Descripción: Número con que se identifica a la cooperativa de forma única. | | | | | | |
| nom\_coop | Varchar | 40,0 | No | No | - | No |
| Descripción: Nombre que tiene la Cooperativa. | | | | | | |
| depart | Varchar | 40,0 | No | No | - | No |
| Descripción: Departamento donde está ubicado la cooperativa. | | | | | | |
| calle\_coop | Varchar | 40,0 | No | No | - | No |
| Descripción: Calle donde está ubicada la cooperativa. | | | | | | |
| num\_coop | Integer | - | No | No | - | No |
| Descripción: Dirección de la cooperativa identificado con un número. | | | | | | |

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| --- | --- | --- | --- | --- | --- | --- |
| tambo | | | | | | |
| Nombre | **Tipo** | **Longitud** | **Primaria** | **Foránea** | **FK (Tabla)** | **Null** |
| id\_tambo | Serial | - | Si | No | - | No |
| Descripción: Número con que se identifica al tambo de forma única. | | | | | | |
| nom\_tambo | Varchar | 40,0 | No | No | - | No |
| Descripción: Nombre que posee el tambo. | | | | | | |
| calle\_tambo | Varchar | 40,0 | No | No | - | No |
| Descripción: Ubicación del tambo (Calle). | | | | | | |
| num\_tambo | Integer | - | No | No | - | No |
| Descripción: Ubicación del tambo (Número). | | | | | | |
| hectarea | Integer | - | No | No | - | No |
| Descripción: Indica la cantidad de hectáreas que tiene un tambo. | | | | | | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| tel\_coop | | | | | | |
| Nombre | **Tipo** | **Longitud** | **Primaria** | **Foránea** | **FK (Tabla)** | **Null** |
| id\_coop | Integer | - | Si | Si | cooperativa | No |
| Descripción: Número con que se identifica a la cooperativa de forma única. | | | | | | |
| tel\_coop | Varchar | 15,0 | Si | Si | cooperativa | No |
| Descripción: Número con el cual se puede comunicar con la cooperativa. | | | | | | |

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| --- | --- | --- | --- | --- | --- | --- |
| tel\_tambo | | | | | | |
| Nombre | **Tipo** | **Longitud** | **Primaria** | **Foránea** | **FK (Tabla)** | **Null** |
| id\_tambo | Integer | - | Si | Si | tambo | No |
| Descripción: Número con que se identifica al tambo de forma única. | | | | | | |
| tel\_tambo | Varchar | 15,0 | Si | Si | tambo | No |
| Descripción: Es el número con el cual se puede comunicar con el tambo. | | | | | | |

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| --- | --- | --- | --- | --- | --- | --- |
| conforma | | | | | | |
| Nombre | **Tipo** | **Longitud** | **Primaria** | **Foránea** | **FK (Tabla)** | **Null** |
| id\_coop | Integer | - | No | Si | cooperativa | No |
| Descripción: Número con que se identifica a la cooperativa de forma única. | | | | | | |
| id\_tambo | Integer | - | Si | Si | tambo | No |
| Descripción: Número con que se identifica al tambo de forma única. | | | | | | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| usuario | | | | | | |
| Nombre | **Tipo** | **Longitud** | **Primaria** | **Foránea** | **FK (Tabla)** | **Null** |
| id\_usuario | Serial | - | Si | No | - | No |
| Descripción: Número con que se identifica al usuario de forma única. | | | | | | |
| cedula | Integer | - | No | No | - | No |
| Descripción: Cédula perteneciente al usuario. | | | | | | |
| login | Varchar | 40,0 | No | No | - | No |
| Descripción: Nombre de usuario en el sistema (Login). | | | | | | |
| nombre | Varchar | 40,0 | No | No | - | No |
| Descripción: Nombre del usuario. | | | | | | |
| apellido | Varchar | 40,0 | No | No | - | No |
| Descripción: Apellido del usuario. | | | | | | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| rol | | | | | | |
| Nombre | **Tipo** | **Longitud** | **Primaria** | **Foránea** | **FK (Tabla)** | **Null** |
| id\_rol | Smallint | - | Si | No | - | No |
| Descripción: Número con que se identifica al rol de forma única. | | | | | | |
| nombre | Varchar | 40,0 | No | No | - | No |
| Descripción: Nombre del rol registrado. | | | | | | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| usu\_rol | | | | | | |
| Nombre | **Tipo** | **Longitud** | **Primaria** | **Foránea** | **FK (Tabla)** | **Null** |
| id\_usuario | Integer | - | Si | Si | usuario | No |
| Descripción: Número con que se identifica al rol de forma única. | | | | | | |
| id\_rol | smallint | - | No | Si | rol | No |
| Descripción: Número con que se identifica al rol de forma única. | | | | | | |

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| --- | --- | --- | --- | --- | --- | --- |
| pertenece | | | | | | |
| Nombre | **Tipo** | **Longitud** | **Primaria** | **Foránea** | **FK (Tabla)** | **Null** |
| id\_usuario | Integer | - | Si | Si | usuario | No |
| Descripción: Número con que se identifica al usuario de forma única. | | | | | | |
| id\_tambo | Integer | - | No | Si | tambo | No |
| Descripción: Número con que se identifica al tambo de forma única. | | | | | | |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| animal | | | | | | | |
| Nombre | **Tipo** | | **Longitud** | **Primaria** | **Foránea** | **FK (Tabla)** | **Null** |
| id\_animal | Serial | | - | Si | No | - | No |
| Descripción: Número con que se identifica al animal de forma única. | | | | | | | |
| nom\_animal | | Varchar | 40,0 | No | No | - | No |
| Descripción: Nombre que se asigna le asigna al animal. | | | | | | | |
| sexo | | Varchar | 40,0 | No | No | - | No |
| Descripción: Orientación con la cual nació el animal. | | | | | | | |
| raza | | Varchar | 40,0 | No | No | - | No |
| Descripción: Raza a la cual pertenece el animal. | | | | | | | |
| fecha\_nac | | Date | - | No | No | - | Si |
| Descripción: Fecha de nacimiento del animal. | | | | | | | |
| x | | Smallint | - | No | No | - | No |
| Descripción: 1- Indica que el animal está vivo. 2- Indica que el animal no está vivo. | | | | | | | |
| fecha\_muerte | | Date | - | No | No | - | Si |
| Descripción: Fecha de muerte del acontecimiento. | | | | | | | |

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| --- | --- | --- | --- | --- | --- | --- |
| posee | | | | | | |
| Nombre | **Tipo** | **Longitud** | **Primaria** | **Foránea** | **FK (Tabla)** | **Null** |
| id\_animal | Integer | - | Si | Si | animales | No |
| Descripción: Número con que se identifica al animal de forma única. | | | | | | |
| id\_tambo | Integer | - | No | Si | tambo | No |
| Descripción: Número con que se identifica al tambo de forma única. | | | | | | |

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| --- | --- | --- | --- | --- | --- | --- |
| toro | | | | | | |
| Nombre | **Tipo** | **Longitud** | **Primaria** | **Foránea** | **FK (Tabla)** | **Null** |
| id\_toro | Integer | - | Si | Si | animal | No |
| Descripción: Número con que se identifica al toro de forma única. | | | | | | |
| tipo | Varchar | 40,0 | No | No | - | No |
| Descripción: Caracteriza al toro por su tipo. | | | | | | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| vaca | | | | | | |
| Nombre | **Tipo** | **Longitud** | **Primaria** | **Foránea** | **FK (Tabla)** | **Null** |
| id\_vaca | Integer | - | Si | Si | animal | No |
| Descripción: Número con que se identifica a la vaca de forma única. | | | | | | |
| tipo | Varchar | 40,0 | No | No | - | No |
| Descripción: Caracteriza a la vaca por su tipo. | | | | | | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| cria | | | | | | |
| Nombre | **Tipo** | **Longitud** | **Primaria** | **Foránea** | **FK (Tabla)** | **Null** |
| id\_cria | Integer | - | Si | Si | animal | No |
| Descripción: Número con que se identifica a la cría de forma única. | | | | | | |
| id\_vaca | Integer | - | No | Si | vaca | No |
| Descripción: Progenitor de la cría (Vaca). | | | | | | |
| id\_toro | Integer | - | No | Si | toro | No |
| Descripción: Progenitor de la cría (Toro). | | | | | | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| entora | | | | | | |
| Nombre | **Tipo** | **Longitud** | **Primaria** | **Foránea** | **FK (Tabla)** | **Null** |
| id\_vaca | Integer | - | Si | Si | animal | No |
| Descripción: Número con que se identifica a la vaca de forma única. | | | | | | |
| id\_toro | Integer | - | Si | Si | animal | No |
| Descripción: Número con que se identifica al toro de forma única. | | | | | | |
| tipo | Varchar | 40,0 | No | No | - | No |
| Descripción: Si fue natural o por inseminación artificial. | | | | | | |
| proceso | Varchar | 40,0 | No | No | - | No |
| Descripción: Especificación del proceso, continuo o estacionado. | | | | | | |
| fecha | Date | - | No | No | - | No |
| Descripción: Fecha en que se registra el entoramiento. | | | | | | |
| servicio\_a-  ctivo | Smallint | - | No | No | - | No |
| Descripción: En 1 Indica si la vaca aún no parió. En 0 la vaca ya parió. | | | | | | |

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| --- | --- | --- | --- | --- | --- | --- |
| campo\_recria | | | | | | |
| Nombre | **Tipo** | **Longitud** | **Primaria** | **Foránea** | **FK (Tabla)** | **Null** |
| id\_camporec | Serial | - | Si | No | - | No |
| Descripción: Número con que se identifica al campo de recría de forma única. | | | | | | |
| nombre | Varchar | 40,0 | No | No | - | No |
| Descripción: Nombre descriptivo del campo de recría. | | | | | | |
| ubicacion | Varchar | 40,0 | No | No | - | No |
| Descripción: Ubicación del campo de recría. | | | | | | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| van | | | | | | |
| Nombre | **Tipo** | **Longitud** | **Primaria** | **Foránea** | **FK (Tabla)** | **Null** |
| id\_cria | Integer | - | Si | Si | cria | No |
| Descripción: Número con que se identifica a la cría de forma única. | | | | | | |
| id\_camporec | Integer | - | No | Si | campo\_recria | No |
| Descripción: Número con que se identifica al campo de recría de forma única.. | | | | | | |
| fecha | Date | - | No | No | - | No |
| Descripción: Fecha que registra cuando una cría es situada en un campo de recría. | | | | | | |

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| --- | --- | --- | --- | --- | --- | --- |
| lote | | | | | | |
| Nombre | **Tipo** | **Longitud** | **Primaria** | **Foránea** | **FK (Tabla)** | **Null** |
| id\_lote | Serial | - | Si | No | - | No |
| Descripción: Número con que se identifica al lote de forma única. | | | | | | |
| nombre | Varchar | 40,0 | No | No | - | No |
| Descripción: Nombre descriptivo del lote. | | | | | | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| asigna | | | | | | |
| Nombre | **Tipo** | **Longitud** | **Primaria** | **Foránea** | **FK (Tabla)** | **Null** |
| id\_vaca | Integer | - | Si | Si | animal | No |
| Descripción: Número con que se identifica al animal de forma única. | | | | | | |
| id\_lote | Integer | - | Si | Si | lote | No |
| Descripción: Número con que se identifica al lote de forma única. | | | | | | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| leche | | | | | | |
| Nombre | **Tipo** | **Longitud** | **Primaria** | **Foránea** | **FK (Tabla)** | **Null** |
| id\_leche | Serial | - | Si | No | - | No |
| Descripción: Número con que se identifica a la leche de forma única. | | | | | | |
| tipo | Varchar | 40,0 | No | No | - | No |
| Descripción: Tipo de leche. | | | | | | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| producen | | | | | | |
| Nombre | **Tipo** | **Longitud** | **Primaria** | **Foránea** | **FK (Tabla)** | **Null** |
| id\_lote | Integer | - | Si | Si | lote | No |
| Descripción: Número con que se identifica al lote de forma única. | | | | | | |
| id\_leche | Integer | - | Si | Si | leche | No |
| Descripción: Número con que se identifica a la leche de forma única. | | | | | | |
| cantidad | Integer | - | No | No | - | No |
| Descripción: Cantidad de leche producida. | | | | | | |
| calcio | Smallfloat | - | No | No | - | No |
| Descripción: Cantidad de calcio que contiene la leche producida. | | | | | | |
| fecha | Date | - | Si | No | - | No |
| Descripción: Fecha donde se registra la producción. | | | | | | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| estado | | | | | | |
| Nombre | **Tipo** | **Longitud** | **Primaria** | **Foránea** | **FK (Tabla)** | **Null** |
| id\_estado | Serial | - | Si | No | - | No |
| Descripción: Número con que se identifica al estado de forma única. | | | | | | |
| nombre | Varchar | 40,0 | No | No | - | No |
| Descripción: Nombre del estado registrado. | | | | | | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| tiene | | | | | | |
| Nombre | **Tipo** | **Longitud** | **Primaria** | **Foránea** | **FK (Tabla)** | **Null** |
| id\_vaca | Integer | - | Si | Si | vaca | No |
| Descripción: Número con que se identifica al animal de forma única. | | | | | | |
| id\_estado | Integer | - | No | Si | estado | No |
| Descripción: Número con que se identifica al estado de forma única. | | | | | | |
| fecha\_i | Date | - | No | No | - | No |
| Descripción: Fecha en la cual se le diagnostica cierto estado a una vaca. | | | | | | |
| fecha\_f | Date | - | No | No | - | Si |
| Descripción: Fecha de finalización del estado de una vaca. | | | | | | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| enfermedad | | | | | | |
| Nombre | **Tipo** | **Longitud** | **Primaria** | **Foránea** | **FK (Tabla)** | **Null** |
| id\_enf | Serial | - | Si | No | - | No |
| Descripción: Número con que se identifica una enfermedad de forma única. | | | | | | |
| nombre | Varchar | 40,0 | No | No | - | No |
| Descripción: Nombre que se le asigna a la enfermedad. | | | | | | |
| tipo | Varchar | 40,0 | No | No | - | No |
| Descripción: Tipo de enfermedad que tiene un animal. | | | | | | |
| descrip | Varchar | 120,0 | No | No | - | No |
| Descripción: Detalles sobre la enfermedad. | | | | | | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| contrae | | | | | | |
| Nombre | **Tipo** | **Longitud** | **Primaria** | **Foránea** | FK (Tabla) | Null |
| id\_animal | Integer | - | Si | Si | animal | No |
| Descripción: Número con que se identifica al animal de forma única. | | | | | | |
| id\_enf | Integer | - | Si | Si | enfermedad | No |
| Descripción: Número con que se identifica una enfermedad de forma única. | | | | | | |
| cont | Smallint | - | No | No | - | Si |
| Descripción: En 1 indica que el animal aún sigue enfermo. En 0 indica lo contrario. | | | | | | |
| fecha\_i | Date | - | No | No | - | No |
| Descripción: Fecha a la cual se registra una enfermedad a cierto animal. | | | | | | |
| fecha\_f | Date | - | No | No | - | Si |
| Descripción: Fecha donde un animal deja de estar enfermo. | | | | | | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| tratamiento | | | | | | |
| Nombre | **Tipo** | **Longitud** | **Primaria** | **Foránea** | **FK (Tabla)** | **Null** |
| id\_tratam | Serial | - | Si | No | - | No |
| Descripción: Número con que se identifica al tratamiento de forma única. | | | | | | |
| nombre | Varchar | 40,0 | No | No | - | No |
| Descripción: Nombre que se le asigna al tratamiento. | | | | | | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| requiere | | | | | | |
| Nombre | **Tipo** | **Longitud** | **Primaria** | **Foránea** | **FK (Tabla)** | **Null** |
| id\_animal | Integer | - | Si | Si | animal | No |
| Descripción: Número con que se identifica al animal de forma única. | | | | | | |
| id\_tratam | Integer | - | Si | Si | tratamiento | No |
| Descripción: Número con que se identifica al tratamiento de forma única. | | | | | | |
| medicacion | Varchar | 40,0 | No | No | - | No |
| Descripción: Medicación que se le da al animal para su tratamiento. | | | | | | |

**Permisos sobre la Base de Datos dependiendo el rol del usuario**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| coopertiva | | | | |
|  | suru\_programador | suru\_general | suru\_individual | suru\_auxiliar |
| -Select | Si | Si | No | No |
| -Update | No | Si | No | No |
| -Insert | No | Si | No | No |
| -Delete | No | Si | No | No |
| -Alter | Si | No | No | No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| tel\_coop | | | | |
|  | suru\_programador | suru\_general | suru\_individual | suru\_auxiliar |
| -Select | Si | Si | No | No |
| -Update | No | Si | No | No |
| -Insert | No | Si | No | No |
| -Delete | No | Si | No | No |
| -Alter | Si | No | No | No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| tambo | | | | |
|  | suru\_programador | suru\_general | suru\_individual | suru\_auxiliar |
| -Select | Si | Si | Si | No |
| -Update | No | Si | No | No |
| -Insert | No | Si | No | No |
| -Delete | No | Si | No | No |
| -Alter | Si | No | No | No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| tel\_tambo | | | | |
|  | suru\_programador | suru\_general | suru\_individual | suru\_auxiliar |
| -Select | Si | Si | Si | No |
| -Update | No | No | Si | No |
| -Insert | No | No | Si | No |
| -Delete | No | No | Si | No |
| -Alter | Si | No | No | No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| conforma | | | | |
|  | suru\_programador | suru\_general | suru\_individual | suru\_auxiliar |
| -Select | Si | Si | Si | No |
| -Update | No | S | No | No |
| -Insert | No | Si | No | No |
| -Delete | No | Si | No | No |
| -Alter | Si | No | No | No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| pertenece | | | | |
|  | suru\_programador | suru\_general | suru\_individual | suru\_auxiliar |
| -Select | Si | Si | Si | No |
| -Update | No | Si | No | No |
| -Insert | No | Si | No | No |
| -Delete | No | Si | No | No |
| -Alter | Si | No | No | No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| usuario | | | | |
|  | suru\_programador | suru\_general | suru\_individual | suru\_auxiliar |
| -Select | Si | Si | Si | Si |
| -Update | No | No | Si | No |
| -Insert | No | No | Si | No |
| -Delete | No | No | Si | No |
| -Alter | Si | No | No | No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| rol | | | | |
|  | suru\_programador | suru\_general | suru\_individual | suru\_auxiliar |
| -Select | Si | Si | Si | Si |
| -Update | No | No | Si | No |
| -Insert | No | No | Si | No |
| -Delete | No | No | Si | No |
| -Alter | Si | No | No | No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| usu\_rol | | | | |
|  | suru\_programador | suru\_general | suru\_individual | suru\_auxiliar |
| -Select | Si | Si | Si | Si |
| -Update | No | No | Si | No |
| -Insert | No | No | Si | No |
| -Delete | No | No | Si | No |
| -Alter | Si | No | No | No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| posee | | | | |
|  | suru\_programador | suru\_general | suru\_individual | suru\_auxiliar |
| -Select | Si | Si | Si | Si |
| -Update | No | No | Si | Si |
| -Insert | No | No | Si | Si |
| -Delete | No | No | Si | No |
| -Alter | Si | No | No | No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| animal | | | | |
|  | suru\_programador | suru\_general | suru\_individual | suru\_auxiliar |
| -Select | Si | Si | Si | Si |
| -Update | No | No | Si | Si |
| -Insert | No | No | Si | Si |
| -Delete | No | No | Si | No |
| -Alter | Si | No | No | No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| toro | | | | |
|  | suru\_programador | suru\_general | suru\_individual | suru\_auxiliar |
| -Select | Si | Si | Si | Si |
| -Update | No | No | Si | Si |
| -Insert | No | No | Si | Si |
| -Delete | No | No | Si | No |
| -Alter | Si | No | No | No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| vaca | | | | |
|  | suru\_programador | suru\_general | suru\_individual | suru\_auxiliar |
| -Select | Si | Si | Si | Si |
| -Update | No | No | Si | Si |
| -Insert | No | No | Si | Si |
| -Delete | No | No | Si | No |
| -Alter | Si | No | No | No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| entora | | | | |
|  | suru\_programador | suru\_general | suru\_individual | suru\_auxiliar |
| -Select | Si | Si | Si | Si |
| -Update | No | No | Si | Si |
| -Insert | No | No | Si | Si |
| -Delete | No | No | Si | No |
| -Alter | Si | No | No | No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| cría | | | | |
|  | suru\_programador | suru\_general | suru\_individual | suru\_auxiliar |
| -Select | Si | Si | Si | Si |
| -Update | No | No | Si | Si |
| -Insert | No | No | Si | Si |
| -Delete | No | No | Si | No |
| -Alter | Si | No | No | No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| campo\_recria | | | | |
|  | suru\_programador | suru\_general | suru\_individual | suru\_auxiliar |
| -Select | Si | Si | Si | Si |
| -Update | No | No | Si | Si |
| -Insert | No | No | Si | Si |
| -Delete | No | No | Si | No |
| -Alter | Si | No | No | No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| van | | | | |
|  | suru\_programador | suru\_general | suru\_individual | suru\_auxiliar |
| -Select | Si | Si | Si | Si |
| -Update | No | No | Si | Si |
| -Insert | No | No | Si | Si |
| -Delete | No | No | Si | No |
| -Alter | Si | No | No | No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| asigna | | | | |
|  | suru\_programador | suru\_general | suru\_individual | suru\_auxiliar |
| -Select | Si | Si | Si | Si |
| -Update | No | No | Si | Si |
| -Insert | No | No | Si | Si |
| -Delete | No | No | Si | No |
| -Alter | Si | No | No | No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| lote | | | | |
|  | suru\_programador | suru\_general | suru\_individual | suru\_auxiliar |
| -Select | Si | Si | Si | Si |
| -Update | No | No | Si | Si |
| -Insert | No | No | Si | Si |
| -Delete | No | No | Si | No |
| -Alter | Si | No | No | No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| producen | | | | |
|  | suru\_programador | suru\_general | suru\_individual | suru\_auxiliar |
| -Select | Si | Si | Si | Si |
| -Update | No | No | Si | Si |
| -Insert | No | No | Si | Si |
| -Delete | No | No | Si | No |
| -Alter | Si | No | No | No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| leche | | | | |
|  | suru\_programador | suru\_general | suru\_individual | suru\_auxiliar |
| -Select | Si | Si | Si | Si |
| -Update | No | No | Si | Si |
| -Insert | No | No | Si | Si |
| -Delete | No | No | Si | No |
| -Alter | Si | No | No | No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| estados | | | | |
|  | suru\_programador | suru\_general | suru\_individual | suru\_auxiliar |
| -Select | Si | Si | Si | Si |
| -Update | No | No | Si | Si |
| -Insert | No | No | Si | Si |
| -Delete | No | No | Si | No |
| -Alter | Si | No | No | No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| tiene | | | | |
|  | suru\_programador | suru\_general | suru\_individual | suru\_auxiliar |
| -Select | Si | Si | Si | Si |
| -Update | No | No | Si | Si |
| -Insert | No | No | Si | Si |
| -Delete | No | No | Si | No |
| -Alter | Si | No | No | No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| enfermedad | | | | |
|  | suru\_programador | suru\_general | suru\_individual | suru\_auxiliar |
| -Select | Si | Si | Si | Si |
| -Update | No | No | Si | Si |
| -Insert | No | No | Si | Si |
| -Delete | No | No | Si | No |
| -Alter | Si | No | No | No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| contrae | | | | |
|  | suru\_programador | suru\_general | suru\_individual | suru\_auxiliar |
| -Select | Si | Si | Si | Si |
| -Update | No | No | Si | Si |
| -Insert | No | No | Si | Si |
| -Delete | No | No | Si | No |
| -Alter | Si | No | No | No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| tratamiento | | | | |
|  | suru\_programador | suru\_general | suru\_individual | suru\_auxiliar |
| -Select | Si | Si | Si | Si |
| -Update | No | No | Si | Si |
| -Insert | No | No | Si | Si |
| -Delete | No | No | Si | No |
| -Alter | Si | No | No | No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| requiere | | | | |
|  | suru\_programador | suru\_general | suru\_individual | suru\_auxiliar |
| -Select | Si | Si | Si | Si |
| -Update | No | No | Si | Si |
| -Insert | No | No | Si | Si |
| -Delete | No | No | Si | No |
| -Alter | Si | No | No | No |

**DDL**

{ DATABASE suru delimiter | }

grant dba to "informix";

grant connect to "suru\_general";

grant connect to "suru\_individual";

grant connect to "suru\_auxiliar";

{ TABLE "informix".conforma row size = 8 number of columns = 2 index size = 18 }

{ unload file name = confo00100.unl number of rows = 0 }

create table "informix".conforma

(

id\_coop integer not null ,

id\_tambo integer not null ,

primary key (id\_tambo) constraint "informix".pkconforma

);

revoke all on "informix".conforma from "public" as "informix";

{ TABLE "informix".pertenece row size = 8 number of columns = 2 index size = 18 }

{ unload file name = perte00101.unl number of rows = 0 }

create table "informix".pertenece

(

id\_usuario integer not null ,

id\_tambo integer not null ,

primary key (id\_usuario) constraint "informix".pkpertenece

);

revoke all on "informix".pertenece from "public" as "informix";

{ TABLE "informix".posee row size = 8 number of columns = 2 index size = 18 }

{ unload file name = posee00102.unl number of rows = 0 }

create table "informix".posee

(

id\_animal integer not null ,

id\_tambo integer not null ,

primary key (id\_animal) constraint "informix".pkposee

);

revoke all on "informix".posee from "public" as "informix";

{ TABLE "informix".campo\_recria row size = 86 number of columns = 3 index size =

9 }

{ unload file name = campo00104.unl number of rows = 2 }

create table "informix".campo\_recria

(

id\_camporec serial not null ,

nombre varchar(40) not null ,

ubicacion varchar(40) not null

);

revoke all on "informix".campo\_recria from "public" as "informix";

{ TABLE "informix".van row size = 12 number of columns = 3 index size = 18 }

{ unload file name = van\_\_00105.unl number of rows = 0 }

create table "informix".van

(

id\_cria integer not null ,

id\_camporec integer not null ,

fecha date not null ,

primary key (id\_cria) constraint "informix".pkvan

);

revoke all on "informix".van from "public" as "informix";

{ TABLE "informix".lote row size = 45 number of columns = 2 index size = 9 }

{ unload file name = lote\_00106.unl number of rows = 1 }

create table "informix".lote

(

id\_lote serial not null ,

nombre varchar(40) not null

);

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

{ TABLE "informix".asigna row size = 8 number of columns = 2 index size = 31 }

{ unload file name = asign00107.unl number of rows = 0 }

create table "informix".asigna

(

id\_vaca integer not null ,

id\_lote integer not null ,

primary key (id\_vaca,id\_lote) constraint "informix".pkasigna

);

revoke all on "informix".asigna from "public" as "informix";

{ TABLE "informix".tiene row size = 16 number of columns = 4 index size = 18 }

{ unload file name = tiene00108.unl number of rows = 1 }

create table "informix".tiene

(

id\_vaca integer not null ,

id\_estado integer not null ,

fecha\_i date not null ,

fecha\_f date,

primary key (id\_vaca) constraint "informix".fktiene

);

revoke all on "informix".tiene from "public" as "informix";

{ TABLE "informix".contrae row size = 18 number of columns = 5 index size = 31 }

{ unload file name = contr00109.unl number of rows = 0 }

create table "informix".contrae

(

id\_animal integer not null ,

id\_enf integer not null ,

cont smallint not null ,

fecha\_i date not null ,

fecha\_f date,

primary key (id\_animal,id\_enf) constraint "informix".pkcontrae

);

revoke all on "informix".contrae from "public" as "informix";

{ TABLE "informix".animal row size = 137 number of columns = 7 index size = 9 }

{ unload file name = anima00110.unl number of rows = 13 }

create table "informix".animal

(

id\_animal serial not null ,

nom\_animal varchar(40) not null ,

sexo varchar(40) not null ,

raza varchar(40) not null ,

fecha\_nac date not null ,

x smallint not null ,

fecha\_muerte date

);

revoke all on "informix".animal from "public" as "informix";

{ TABLE "informix".cooperativa row size = 131 number of columns = 5 index size =

9 }

{ unload file name = coope00111.unl number of rows = 0 }

create table "informix".cooperativa

(

id\_coop serial not null ,

nom\_coop varchar(40) not null ,

depart varchar(40) not null ,

calle\_coop varchar(40) not null ,

num\_coop integer not null

);

revoke all on "informix".cooperativa from "public" as "informix";

{ TABLE "informix".cria row size = 12 number of columns = 3 index size = 27 }

{ unload file name = cria\_00112.unl number of rows = 2 }

create table "informix".cria

(

id\_cria integer not null ,

id\_vaca integer not null ,

id\_toro integer not null ,

primary key (id\_cria) constraint "informix".pkcria

);

revoke all on "informix".cria from "public" as "informix";

{ TABLE "informix".entora row size = 96 number of columns = 6 index size = 31 }

{ unload file name = entor00114.unl number of rows = 0 }

create table "informix".entora

(

id\_vaca integer not null ,

id\_toro integer not null ,

tipo varchar(40) not null ,

proceso varchar(40) not null ,

fecha date not null ,

servicio\_activo smallint,

primary key (id\_vaca,id\_toro) constraint "informix".pkentora

);

revoke all on "informix".entora from "public" as "informix";

{ TABLE "informix".estado row size = 45 number of columns = 2 index size = 9 }

{ unload file name = estad00115.unl number of rows = 6 }

create table "informix".estado

(

id\_estado serial not null ,

nombre varchar(40) not null

);

revoke all on "informix".estado from "public" as "informix";

{ TABLE "informix".leche row size = 45 number of columns = 2 index size = 9 }

{ unload file name = leche00116.unl number of rows = 3 }

create table "informix".leche

(

id\_leche serial not null ,

tipo varchar(40) not null

);

revoke all on "informix".leche from "public" as "informix";

{ TABLE "informix".requiere row size = 49 number of columns = 3 index size = 31 }

{ unload file name = requi00117.unl number of rows = 3 }

create table "informix".requiere

(

id\_animal integer not null ,

id\_tratam integer not null ,

medicacion varchar(40) not null ,

primary key (id\_animal,id\_tratam) constraint "informix".pkrequiere

);

revoke all on "informix".requiere from "public" as "informix";

{ TABLE "informix".rol row size = 43 number of columns = 2 index size = 7 }

{ unload file name = rol\_\_00119.unl number of rows = 4 }

create table "informix".rol

(

id\_rol smallint not null ,

nombre varchar(40) not null ,

primary key (id\_rol) constraint "informix".pkrol

);

revoke all on "informix".rol from "public" as "informix";

{ TABLE "informix".tambo row size = 92 number of columns = 5 index size = 9 }

{ unload file name = tambo00120.unl number of rows = 5 }

create table "informix".tambo

(

id\_tambo serial not null ,

nom\_tambo varchar(40) not null ,

calle\_tambo varchar(40) not null ,

num\_tambo integer not null ,

sector varchar(1) not null

);

revoke all on "informix".tambo from "public" as "informix";

{ TABLE "informix".tel\_coop row size = 20 number of columns = 2 index size = 34 }

{ unload file name = tel\_c00121.unl number of rows = 0 }

create table "informix".tel\_coop

(

id\_coop integer not null ,

tel\_coop varchar(15) not null ,

primary key (id\_coop,tel\_coop) constraint "informix".pktel\_coop

);

revoke all on "informix".tel\_coop from "public" as "informix";

{ TABLE "informix".tel\_tambo row size = 20 number of columns = 2 index size = 34

}

{ unload file name = tel\_t00122.unl number of rows = 6 }

create table "informix".tel\_tambo

(

id\_tambo integer not null ,

tel\_tambo varchar(15) not null ,

primary key (id\_tambo,tel\_tambo) constraint "informix".pktel\_tambo

);

revoke all on "informix".tel\_tambo from "public" as "informix";

{ TABLE "informix".toro row size = 45 number of columns = 2 index size = 9 }

{ unload file name = toro\_00123.unl number of rows = 4 }

create table "informix".toro

(

id\_toro integer not null ,

tipo varchar(40) not null ,

primary key (id\_toro) constraint "informix".pktoro

);

revoke all on "informix".toro from "public" as "informix";

{ TABLE "informix".tratamiento row size = 45 number of columns = 2 index size = 9

}

{ unload file name = trata00124.unl number of rows = 4 }

create table "informix".tratamiento

(

id\_tratam serial not null ,

nombre varchar(40) not null

);

revoke all on "informix".tratamiento from "public" as "informix";

{ TABLE "informix".usu\_rol row size = 6 number of columns = 2 index size = 16 }

{ unload file name = usu\_r00125.unl number of rows = 4 }

create table "informix".usu\_rol

(

id\_usuario integer not null ,

id\_rol smallint not null ,

primary key (id\_usuario) constraint "informix".pkusu\_rol

);

revoke all on "informix".usu\_rol from "public" as "informix";

{ TABLE "informix".vaca row size = 45 number of columns = 2 index size = 9 }

{ unload file name = vaca\_00126.unl number of rows = 7 }

create table "informix".vaca

(

id\_vaca integer not null ,

tipo varchar(40) not null ,

primary key (id\_vaca) constraint "informix".pkvaca

);

revoke all on "informix".vaca from "public" as "informix";

{ TABLE "informix".usuario row size = 131 number of columns = 5 index size = 55 }

{ unload file name = usuar00127.unl number of rows = 4 }

create table "informix".usuario

(

id\_usuario serial not null ,

cedula integer not null ,

login varchar(40) not null ,

nombre varchar(40) not null ,

apellido varchar(40) not null

);

revoke all on "informix".usuario from "public" as "informix";

{ TABLE "informix".enfermedad row size = 207 number of columns = 4 index size = 55

}

{ unload file name = enfer00129.unl number of rows = 7 }

create table "informix".enfermedad

(

id\_enf serial not null ,

nombre varchar(40) not null ,

tipo varchar(40) not null ,

descrip varchar(120) not null

);

revoke all on "informix".enfermedad from "public" as "informix";

{ TABLE "informix".producen row size = 20 number of columns = 5 index size = 35 }

{ unload file name = produ00131.unl number of rows = 0 }

create table "informix".producen

(

id\_lote integer not null ,

id\_leche integer not null ,

cantidad integer not null ,

calcio integer not null ,

fecha date not null ,

primary key (id\_lote,id\_leche,fecha) constraint "informix".pkproducen

);

revoke all on "informix".producen from "public" as "informix";

grant select on "informix".conforma to "public" as "informix";

grant update on "informix".conforma to "public" as "informix";

grant insert on "informix".conforma to "public" as "informix";

grant delete on "informix".conforma to "public" as "informix";

grant index on "informix".conforma to "public" as "informix";

grant select on "informix".conforma to "suru\_general" as "informix";

grant update on "informix".conforma to "suru\_general" as "informix";

grant insert on "informix".conforma to "suru\_general" as "informix";

grant delete on "informix".conforma to "suru\_general" as "informix";

grant select on "informix".conforma to "suru\_programador" as "informix";

grant alter on "informix".conforma to "suru\_programador" as "informix";

grant select on "informix".conforma to "suru\_individual" as "informix";

grant select on "informix".pertenece to "suru\_general" as "informix";

grant update on "informix".pertenece to "suru\_general" as "informix";

grant insert on "informix".pertenece to "suru\_general" as "informix";

grant delete on "informix".pertenece to "suru\_general" as "informix";

grant select on "informix".pertenece to "public" as "informix";

grant update on "informix".pertenece to "public" as "informix";

grant insert on "informix".pertenece to "public" as "informix";

grant delete on "informix".pertenece to "public" as "informix";

grant index on "informix".pertenece to "public" as "informix";

grant select on "informix".pertenece to "suru\_individual" as "informix";

grant select on "informix".pertenece to "suru\_programador" as "informix";

grant alter on "informix".pertenece to "suru\_programador" as "informix";

grant select on "informix".posee to "suru\_auxiliar" as "informix";

grant update on "informix".posee to "suru\_auxiliar" as "informix";

grant insert on "informix".posee to "suru\_auxiliar" as "informix";

grant select on "informix".posee to "public" as "informix";

grant update on "informix".posee to "public" as "informix";

grant insert on "informix".posee to "public" as "informix";

grant delete on "informix".posee to "public" as "informix";

grant index on "informix".posee to "public" as "informix";

grant select on "informix".posee to "suru\_general" as "informix";

grant select on "informix".posee to "suru\_programador" as "informix";

grant alter on "informix".posee to "suru\_programador" as "informix";

grant select on "informix".posee to "suru\_individual" as "informix";

grant update on "informix".posee to "suru\_individual" as "informix";

grant insert on "informix".posee to "suru\_individual" as "informix";

grant delete on "informix".posee to "suru\_individual" as "informix";

grant select on "informix".campo\_recria to "public" as "informix";

grant update on "informix".campo\_recria to "public" as "informix";

grant insert on "informix".campo\_recria to "public" as "informix";

grant delete on "informix".campo\_recria to "public" as "informix";

grant index on "informix".campo\_recria to "public" as "informix";

grant select on "informix".campo\_recria to "suru\_programador" as "informix";

grant alter on "informix".campo\_recria to "suru\_programador" as "informix";

grant select on "informix".campo\_recria to "suru\_auxiliar" as "informix";

grant update on "informix".campo\_recria to "suru\_auxiliar" as "informix";

grant insert on "informix".campo\_recria to "suru\_auxiliar" as "informix";

grant select on "informix".campo\_recria to "suru\_general" as "informix";

grant select on "informix".campo\_recria to "suru\_individual" as "informix";

grant update on "informix".campo\_recria to "suru\_individual" as "informix";

grant insert on "informix".campo\_recria to "suru\_individual" as "informix";

grant delete on "informix".campo\_recria to "suru\_individual" as "informix";

grant select on "informix".van to "suru\_individual" as "informix";

grant update on "informix".van to "suru\_individual" as "informix";

grant insert on "informix".van to "suru\_individual" as "informix";

grant delete on "informix".van to "suru\_individual" as "informix";

grant select on "informix".van to "suru\_programador" as "informix";

grant alter on "informix".van to "suru\_programador" as "informix";

grant select on "informix".van to "suru\_general" as "informix";

grant select on "informix".van to "public" as "informix";

grant update on "informix".van to "public" as "informix";

grant insert on "informix".van to "public" as "informix";

grant delete on "informix".van to "public" as "informix";

grant index on "informix".van to "public" as "informix";

grant select on "informix".van to "suru\_auxiliar" as "informix";

grant update on "informix".van to "suru\_auxiliar" as "informix";

grant insert on "informix".van to "suru\_auxiliar" as "informix";

grant select on "informix".lote to "suru\_programador" as "informix";

grant alter on "informix".lote to "suru\_programador" as "informix";

grant select on "informix".lote to "public" as "informix";

grant update on "informix".lote to "public" as "informix";

grant insert on "informix".lote to "public" as "informix";

grant delete on "informix".lote to "public" as "informix";

grant index on "informix".lote to "public" as "informix";

grant select on "informix".lote to "suru\_auxiliar" as "informix";

grant update on "informix".lote to "suru\_auxiliar" as "informix";

grant insert on "informix".lote to "suru\_auxiliar" as "informix";

grant select on "informix".lote to "suru\_individual" as "informix";

grant update on "informix".lote to "suru\_individual" as "informix";

grant insert on "informix".lote to "suru\_individual" as "informix";

grant delete on "informix".lote to "suru\_individual" as "informix";

grant select on "informix".lote to "suru\_general" as "informix";

grant select on "informix".asigna to "suru\_auxiliar" as "informix";

grant update on "informix".asigna to "suru\_auxiliar" as "informix";

grant insert on "informix".asigna to "suru\_auxiliar" as "informix";

grant select on "informix".asigna to "public" as "informix";

grant update on "informix".asigna to "public" as "informix";

grant insert on "informix".asigna to "public" as "informix";

grant delete on "informix".asigna to "public" as "informix";

grant index on "informix".asigna to "public" as "informix";

grant select on "informix".asigna to "suru\_programador" as "informix";

grant alter on "informix".asigna to "suru\_programador" as "informix";

grant select on "informix".asigna to "suru\_individual" as "informix";

grant update on "informix".asigna to "suru\_individual" as "informix";

grant insert on "informix".asigna to "suru\_individual" as "informix";

grant delete on "informix".asigna to "suru\_individual" as "informix";

grant select on "informix".asigna to "suru\_general" as "informix";

grant select on "informix".tiene to "public" as "informix";

grant update on "informix".tiene to "public" as "informix";

grant insert on "informix".tiene to "public" as "informix";

grant delete on "informix".tiene to "public" as "informix";

grant index on "informix".tiene to "public" as "informix";

grant select on "informix".tiene to "suru\_auxiliar" as "informix";

grant update on "informix".tiene to "suru\_auxiliar" as "informix";

grant insert on "informix".tiene to "suru\_auxiliar" as "informix";

grant select on "informix".tiene to "suru\_programador" as "informix";

grant alter on "informix".tiene to "suru\_programador" as "informix";

grant select on "informix".tiene to "suru\_individual" as "informix";

grant update on "informix".tiene to "suru\_individual" as "informix";

grant insert on "informix".tiene to "suru\_individual" as "informix";

grant delete on "informix".tiene to "suru\_individual" as "informix";

grant select on "informix".tiene to "suru\_general" as "informix";

grant select on "informix".contrae to "suru\_auxiliar" as "informix";

grant update on "informix".contrae to "suru\_auxiliar" as "informix";

grant insert on "informix".contrae to "suru\_auxiliar" as "informix";

grant select on "informix".contrae to "public" as "informix";

grant update on "informix".contrae to "public" as "informix";

grant insert on "informix".contrae to "public" as "informix";

grant delete on "informix".contrae to "public" as "informix";

grant index on "informix".contrae to "public" as "informix";

grant select on "informix".contrae to "suru\_individual" as "informix";

grant update on "informix".contrae to "suru\_individual" as "informix";

grant insert on "informix".contrae to "suru\_individual" as "informix";

grant delete on "informix".contrae to "suru\_individual" as "informix";

grant select on "informix".contrae to "suru\_programador" as "informix";

grant alter on "informix".contrae to "suru\_programador" as "informix";

grant select on "informix".contrae to "suru\_general" as "informix";

grant select on "informix".animal to "suru\_individual" as "informix";

grant update on "informix".animal to "suru\_individual" as "informix";

grant insert on "informix".animal to "suru\_individual" as "informix";

grant delete on "informix".animal to "suru\_individual" as "informix";

grant select on "informix".animal to "suru\_auxiliar" as "informix";

grant update on "informix".animal to "suru\_auxiliar" as "informix";

grant insert on "informix".animal to "suru\_auxiliar" as "informix";

grant select on "informix".animal to "suru\_programador" as "informix";

grant alter on "informix".animal to "suru\_programador" as "informix";

grant select on "informix".animal to "suru\_general" as "informix";

grant select on "informix".animal to "public" as "informix";

grant update on "informix".animal to "public" as "informix";

grant insert on "informix".animal to "public" as "informix";

grant delete on "informix".animal to "public" as "informix";

grant index on "informix".animal to "public" as "informix";

grant select on "informix".cooperativa to "suru\_programador" as "informix";

grant alter on "informix".cooperativa to "suru\_programador" as "informix";

grant select on "informix".cooperativa to "public" as "informix";

grant update on "informix".cooperativa to "public" as "informix";

grant insert on "informix".cooperativa to "public" as "informix";

grant delete on "informix".cooperativa to "public" as "informix";

grant index on "informix".cooperativa to "public" as "informix";

grant select on "informix".cooperativa to "suru\_general" as "informix";

grant update on "informix".cooperativa to "suru\_general" as "informix";

grant insert on "informix".cooperativa to "suru\_general" as "informix";

grant delete on "informix".cooperativa to "suru\_general" as "informix";

grant select on "informix".cria to "public" as "informix";

grant update on "informix".cria to "public" as "informix";

grant insert on "informix".cria to "public" as "informix";

grant delete on "informix".cria to "public" as "informix";

grant index on "informix".cria to "public" as "informix";

grant select on "informix".cria to "suru\_general" as "informix";

grant select on "informix".cria to "suru\_programador" as "informix";

grant alter on "informix".cria to "suru\_programador" as "informix";

grant select on "informix".cria to "suru\_auxiliar" as "informix";

grant update on "informix".cria to "suru\_auxiliar" as "informix";

grant insert on "informix".cria to "suru\_auxiliar" as "informix";

grant select on "informix".cria to "suru\_individual" as "informix";

grant update on "informix".cria to "suru\_individual" as "informix";

grant insert on "informix".cria to "suru\_individual" as "informix";

grant delete on "informix".cria to "suru\_individual" as "informix";

grant select on "informix".entora to "public" as "informix";

grant update on "informix".entora to "public" as "informix";

grant insert on "informix".entora to "public" as "informix";

grant delete on "informix".entora to "public" as "informix";

grant index on "informix".entora to "public" as "informix";

grant select on "informix".entora to "suru\_programador" as "informix";

grant alter on "informix".entora to "suru\_programador" as "informix";

grant select on "informix".entora to "suru\_auxiliar" as "informix";

grant update on "informix".entora to "suru\_auxiliar" as "informix";

grant insert on "informix".entora to "suru\_auxiliar" as "informix";

grant select on "informix".entora to "suru\_general" as "informix";

grant select on "informix".entora to "suru\_individual" as "informix";

grant update on "informix".entora to "suru\_individual" as "informix";

grant insert on "informix".entora to "suru\_individual" as "informix";

grant delete on "informix".entora to "suru\_individual" as "informix";

grant select on "informix".estado to "suru\_programador" as "informix";

grant alter on "informix".estado to "suru\_programador" as "informix";

grant select on "informix".estado to "suru\_individual" as "informix";

grant update on "informix".estado to "suru\_individual" as "informix";

grant insert on "informix".estado to "suru\_individual" as "informix";

grant delete on "informix".estado to "suru\_individual" as "informix";

grant select on "informix".estado to "public" as "informix";

grant update on "informix".estado to "public" as "informix";

grant insert on "informix".estado to "public" as "informix";

grant delete on "informix".estado to "public" as "informix";

grant index on "informix".estado to "public" as "informix";

grant select on "informix".estado to "suru\_general" as "informix";

grant select on "informix".estado to "suru\_auxiliar" as "informix";

grant update on "informix".estado to "suru\_auxiliar" as "informix";

grant insert on "informix".estado to "suru\_auxiliar" as "informix";

grant select on "informix".leche to "suru\_individual" as "informix";

grant update on "informix".leche to "suru\_individual" as "informix";

grant insert on "informix".leche to "suru\_individual" as "informix";

grant delete on "informix".leche to "suru\_individual" as "informix";

grant select on "informix".leche to "suru\_general" as "informix";

grant select on "informix".leche to "suru\_auxiliar" as "informix";

grant update on "informix".leche to "suru\_auxiliar" as "informix";

grant insert on "informix".leche to "suru\_auxiliar" as "informix";

grant select on "informix".leche to "suru\_programador" as "informix";

grant alter on "informix".leche to "suru\_programador" as "informix";

grant select on "informix".leche to "public" as "informix";

grant update on "informix".leche to "public" as "informix";

grant insert on "informix".leche to "public" as "informix";

grant delete on "informix".leche to "public" as "informix";

grant index on "informix".leche to "public" as "informix";

grant select on "informix".requiere to "suru\_auxiliar" as "informix";

grant update on "informix".requiere to "suru\_auxiliar" as "informix";

grant insert on "informix".requiere to "suru\_auxiliar" as "informix";

grant select on "informix".requiere to "public" as "informix";

grant update on "informix".requiere to "public" as "informix";

grant insert on "informix".requiere to "public" as "informix";

grant delete on "informix".requiere to "public" as "informix";

grant index on "informix".requiere to "public" as "informix";

grant select on "informix".requiere to "suru\_individual" as "informix";

grant update on "informix".requiere to "suru\_individual" as "informix";

grant insert on "informix".requiere to "suru\_individual" as "informix";

grant delete on "informix".requiere to "suru\_individual" as "informix";

grant select on "informix".requiere to "suru\_programador" as "informix";

grant alter on "informix".requiere to "suru\_programador" as "informix";

grant select on "informix".requiere to "suru\_general" as "informix";

grant select on "informix".rol to "suru\_auxiliar" as "informix";

grant select on "informix".rol to "public" as "informix";

grant update on "informix".rol to "public" as "informix";

grant insert on "informix".rol to "public" as "informix";

grant delete on "informix".rol to "public" as "informix";

grant index on "informix".rol to "public" as "informix";

grant select on "informix".rol to "suru\_general" as "informix";

grant select on "informix".rol to "suru\_programador" as "informix";

grant alter on "informix".rol to "suru\_programador" as "informix";

grant select on "informix".rol to "suru\_individual" as "informix";

grant update on "informix".rol to "suru\_individual" as "informix";

grant insert on "informix".rol to "suru\_individual" as "informix";

grant delete on "informix".rol to "suru\_individual" as "informix";

grant select on "informix".tambo to "suru\_individual" as "informix";

grant select on "informix".tambo to "suru\_general" as "informix";

grant update on "informix".tambo to "suru\_general" as "informix";

grant insert on "informix".tambo to "suru\_general" as "informix";

grant delete on "informix".tambo to "suru\_general" as "informix";

grant select on "informix".tambo to "suru\_programador" as "informix";

grant alter on "informix".tambo to "suru\_programador" as "informix";

grant select on "informix".tambo to "public" as "informix";

grant update on "informix".tambo to "public" as "informix";

grant insert on "informix".tambo to "public" as "informix";

grant delete on "informix".tambo to "public" as "informix";

grant index on "informix".tambo to "public" as "informix";

grant select on "informix".tel\_coop to "public" as "informix";

grant update on "informix".tel\_coop to "public" as "informix";

grant insert on "informix".tel\_coop to "public" as "informix";

grant delete on "informix".tel\_coop to "public" as "informix";

grant index on "informix".tel\_coop to "public" as "informix";

grant select on "informix".tel\_coop to "suru\_programador" as "informix";

grant alter on "informix".tel\_coop to "suru\_programador" as "informix";

grant select on "informix".tel\_coop to "suru\_general" as "informix";

grant update on "informix".tel\_coop to "suru\_general" as "informix";

grant insert on "informix".tel\_coop to "suru\_general" as "informix";

grant delete on "informix".tel\_coop to "suru\_general" as "informix";

grant select on "informix".tel\_tambo to "suru\_general" as "informix";

grant select on "informix".tel\_tambo to "suru\_individual" as "informix";

grant update on "informix".tel\_tambo to "suru\_individual" as "informix";

grant insert on "informix".tel\_tambo to "suru\_individual" as "informix";

grant delete on "informix".tel\_tambo to "suru\_individual" as "informix";

grant select on "informix".tel\_tambo to "suru\_programador" as "informix";

grant alter on "informix".tel\_tambo to "suru\_programador" as "informix";

grant select on "informix".tel\_tambo to "public" as "informix";

grant update on "informix".tel\_tambo to "public" as "informix";

grant insert on "informix".tel\_tambo to "public" as "informix";

grant delete on "informix".tel\_tambo to "public" as "informix";

grant index on "informix".tel\_tambo to "public" as "informix";

grant select on "informix".toro to "suru\_programador" as "informix";

grant alter on "informix".toro to "suru\_programador" as "informix";

grant select on "informix".toro to "suru\_individual" as "informix";

grant update on "informix".toro to "suru\_individual" as "informix";

grant insert on "informix".toro to "suru\_individual" as "informix";

grant delete on "informix".toro to "suru\_individual" as "informix";

grant select on "informix".toro to "suru\_auxiliar" as "informix";

grant update on "informix".toro to "suru\_auxiliar" as "informix";

grant insert on "informix".toro to "suru\_auxiliar" as "informix";

grant select on "informix".toro to "public" as "informix";

grant update on "informix".toro to "public" as "informix";

grant insert on "informix".toro to "public" as "informix";

grant delete on "informix".toro to "public" as "informix";

grant index on "informix".toro to "public" as "informix";

grant select on "informix".toro to "suru\_general" as "informix";

grant select on "informix".tratamiento to "public" as "informix";

grant update on "informix".tratamiento to "public" as "informix";

grant insert on "informix".tratamiento to "public" as "informix";

grant delete on "informix".tratamiento to "public" as "informix";

grant index on "informix".tratamiento to "public" as "informix";

grant select on "informix".tratamiento to "suru\_auxiliar" as "informix";

grant update on "informix".tratamiento to "suru\_auxiliar" as "informix";

grant insert on "informix".tratamiento to "suru\_auxiliar" as "informix";

grant select on "informix".tratamiento to "suru\_programador" as "informix";

grant alter on "informix".tratamiento to "suru\_programador" as "informix";

grant select on "informix".tratamiento to "suru\_individual" as "informix";

grant update on "informix".tratamiento to "suru\_individual" as "informix";

grant insert on "informix".tratamiento to "suru\_individual" as "informix";

grant delete on "informix".tratamiento to "suru\_individual" as "informix";

grant select on "informix".tratamiento to "suru\_general" as "informix";

grant select on "informix".usu\_rol to "suru\_individual" as "informix";

grant update on "informix".usu\_rol to "suru\_individual" as "informix";

grant insert on "informix".usu\_rol to "suru\_individual" as "informix";

grant delete on "informix".usu\_rol to "suru\_individual" as "informix";

grant select on "informix".usu\_rol to "public" as "informix";

grant update on "informix".usu\_rol to "public" as "informix";

grant insert on "informix".usu\_rol to "public" as "informix";

grant delete on "informix".usu\_rol to "public" as "informix";

grant index on "informix".usu\_rol to "public" as "informix";

grant select on "informix".usu\_rol to "suru\_auxiliar" as "informix";

grant select on "informix".usu\_rol to "suru\_general" as "informix";

grant select on "informix".usu\_rol to "suru\_programador" as "informix";

grant alter on "informix".usu\_rol to "suru\_programador" as "informix";

grant select on "informix".vaca to "suru\_general" as "informix";

grant select on "informix".vaca to "public" as "informix";

grant update on "informix".vaca to "public" as "informix";

grant insert on "informix".vaca to "public" as "informix";

grant delete on "informix".vaca to "public" as "informix";

grant index on "informix".vaca to "public" as "informix";

grant select on "informix".vaca to "suru\_auxiliar" as "informix";

grant update on "informix".vaca to "suru\_auxiliar" as "informix";

grant insert on "informix".vaca to "suru\_auxiliar" as "informix";

grant select on "informix".vaca to "suru\_individual" as "informix";

grant update on "informix".vaca to "suru\_individual" as "informix";

grant insert on "informix".vaca to "suru\_individual" as "informix";

grant delete on "informix".vaca to "suru\_individual" as "informix";

grant select on "informix".vaca to "suru\_programador" as "informix";

grant alter on "informix".vaca to "suru\_programador" as "informix";

grant select on "informix".usuario to "suru\_programador" as "informix";

grant alter on "informix".usuario to "suru\_programador" as "informix";

grant select on "informix".usuario to "suru\_individual" as "informix";

grant update on "informix".usuario to "suru\_individual" as "informix";

grant insert on "informix".usuario to "suru\_individual" as "informix";

grant delete on "informix".usuario to "suru\_individual" as "informix";

grant select on "informix".usuario to "public" as "informix";

grant update on "informix".usuario to "public" as "informix";

grant insert on "informix".usuario to "public" as "informix";

grant delete on "informix".usuario to "public" as "informix";

grant index on "informix".usuario to "public" as "informix";

grant select on "informix".usuario to "suru\_general" as "informix";

grant select on "informix".usuario to "suru\_auxiliar" as "informix";

grant select on "informix".enfermedad to "suru\_general" as "informix";

grant select on "informix".enfermedad to "suru\_individual" as "informix";

grant update on "informix".enfermedad to "suru\_individual" as "informix";

grant insert on "informix".enfermedad to "suru\_individual" as "informix";

grant delete on "informix".enfermedad to "suru\_individual" as "informix";

grant select on "informix".enfermedad to "suru\_programador" as "informix";

grant alter on "informix".enfermedad to "suru\_programador" as "informix";

grant select on "informix".enfermedad to "suru\_auxiliar" as "informix";

grant update on "informix".enfermedad to "suru\_auxiliar" as "informix";

grant insert on "informix".enfermedad to "suru\_auxiliar" as "informix";

grant select on "informix".enfermedad to "public" as "informix";

grant update on "informix".enfermedad to "public" as "informix";

grant insert on "informix".enfermedad to "public" as "informix";

grant delete on "informix".enfermedad to "public" as "informix";

grant index on "informix".enfermedad to "public" as "informix";

grant select on "informix".producen to "suru\_programador" as "informix";

grant alter on "informix".producen to "suru\_programador" as "informix";

grant select on "informix".producen to "public" as "informix";

grant update on "informix".producen to "public" as "informix";

grant insert on "informix".producen to "public" as "informix";

grant delete on "informix".producen to "public" as "informix";

grant index on "informix".producen to "public" as "informix";

grant select on "informix".producen to "suru\_general" as "informix";

grant select on "informix".producen to "suru\_auxiliar" as "informix";

grant update on "informix".producen to "suru\_auxiliar" as "informix";

grant insert on "informix".producen to "suru\_auxiliar" as "informix";

grant select on "informix".producen to "suru\_individual" as "informix";

grant update on "informix".producen to "suru\_individual" as "informix";

grant insert on "informix".producen to "suru\_individual" as "informix";

grant delete on "informix".producen to "suru\_individual" as "informix";

revoke usage on language SPL from public ;

grant usage on language SPL to public ;

create unique index "informix".ix114\_1 on "informix".campo\_recria

(id\_camporec) using btree ;

alter table "informix".campo\_recria add constraint primary key

(id\_camporec) constraint "informix".pkcampo\_recria ;

create unique index "informix".ix116\_1 on "informix".lote (id\_lote)

using btree ;

alter table "informix".lote add constraint primary key (id\_lote)

constraint "informix".pklote ;

create unique index "informix".ix107\_1 on "informix".animal (id\_animal)

using btree ;

alter table "informix".animal add constraint primary key (id\_animal)

constraint "informix".pkanimal ;

create unique index "informix".ix100\_1 on "informix".cooperativa

(id\_coop) using btree ;

alter table "informix".cooperativa add constraint primary key

(id\_coop) constraint "informix".pkcooperativa ;

create unique index "informix".ix124\_1 on "informix".tratamiento

(id\_tratam) using btree ;

alter table "informix".tratamiento add constraint primary key

(id\_tratam) constraint "informix".pktratamiento ;

create unique index "informix".ix120\_1 on "informix".estado (id\_estado)

using btree ;

alter table "informix".estado add constraint primary key (id\_estado)

constraint "informix".pkestado ;

create unique index "informix".ix118\_1 on "informix".leche (id\_leche)

using btree ;

alter table "informix".leche add constraint primary key (id\_leche)

constraint "informix".pkleche ;

create unique index "informix".ix115\_2 on "informix".enfermedad

(nombre) using btree ;

create unique index "informix".ix122\_1 on "informix".enfermedad

(id\_enf) using btree ;

alter table "informix".enfermedad add constraint primary key

(id\_enf) constraint "informix".pkenfermedad ;

create unique index "informix".ix101\_1 on "informix".tambo (id\_tambo)

using btree ;

alter table "informix".tambo add constraint primary key (id\_tambo)

constraint "informix".pktambo ;

create unique index "informix".ix131\_3 on "informix".usuario (login)

using btree ;

create unique index "informix".ix134\_1 on "informix".usuario (id\_usuario)

using btree ;

alter table "informix".usuario add constraint primary key (id\_usuario)

constraint "informix".pkusuario ;

alter table "informix".cria add constraint (foreign key (id\_vaca)

references "informix".vaca on delete cascade constraint "informix"

.fkcria2);

alter table "informix".cria add constraint (foreign key (id\_toro)

references "informix".toro on delete cascade constraint "informix"

.fkcria3);

alter table "informix".usu\_rol add constraint (foreign key (id\_rol)

references "informix".rol on delete cascade constraint "informix"

.fkusu\_rol2);

alter table "informix".pertenece add constraint (foreign key

(id\_usuario) references "informix".usuario on delete cascade

constraint "informix".fkpertenece1);

alter table "informix".tel\_coop add constraint (foreign key (id\_coop)

references "informix".cooperativa on delete cascade constraint

"informix".fktel\_coop);

alter table "informix".tel\_tambo add constraint (foreign key

(id\_tambo) references "informix".tambo on delete cascade

constraint "informix".fltel\_tambo);

alter table "informix".conforma add constraint (foreign key (id\_coop)

references "informix".cooperativa on delete cascade constraint

"informix".fkconforma1);

alter table "informix".conforma add constraint (foreign key (id\_tambo)

references "informix".tambo on delete cascade constraint

"informix".fkconforma2);

alter table "informix".pertenece add constraint (foreign key

(id\_tambo) references "informix".tambo on delete cascade

constraint "informix".fkpertenece2);

alter table "informix".posee add constraint (foreign key (id\_animal)

references "informix".animal on delete cascade constraint

"informix".fkposee1);

alter table "informix".posee add constraint (foreign key (id\_tambo)

references "informix".tambo on delete cascade constraint

"informix".fkposee2);

alter table "informix".toro add constraint (foreign key (id\_toro)

references "informix".animal on delete cascade constraint

"informix".fktoro);

alter table "informix".vaca add constraint (foreign key (id\_vaca)

references "informix".animal on delete cascade constraint

"informix".fkvaca);

alter table "informix".cria add constraint (foreign key (id\_cria)

references "informix".animal on delete cascade constraint

"informix".fkcria);

alter table "informix".entora add constraint (foreign key (id\_vaca)

references "informix".vaca on delete cascade constraint "informix"

.fkentora1);

alter table "informix".entora add constraint (foreign key (id\_toro)

references "informix".toro on delete cascade constraint "informix"

.fkentora2);

alter table "informix".van add constraint (foreign key (id\_cria)

references "informix".cria on delete cascade constraint "informix"

.fkvan1);

alter table "informix".van add constraint (foreign key (id\_camporec)

references "informix".campo\_recria on delete cascade constraint

"informix".fkvan2);

alter table "informix".asigna add constraint (foreign key (id\_vaca)

references "informix".vaca on delete cascade constraint "informix"

.fkasigna1);

alter table "informix".asigna add constraint (foreign key (id\_lote)

references "informix".lote on delete cascade constraint "informix"

.fkasigna2);

alter table "informix".producen add constraint (foreign key (id\_lote)

references "informix".lote on delete cascade constraint "informix"

.fkproducen1);

alter table "informix".producen add constraint (foreign key (id\_leche)

references "informix".leche on delete cascade constraint

"informix".fkproducen2);

alter table "informix".tiene add constraint (foreign key (id\_vaca)

references "informix".vaca on delete cascade constraint "informix"

.fktiene1);

alter table "informix".tiene add constraint (foreign key (id\_estado)

references "informix".estado on delete cascade constraint

"informix".fktiene2);

alter table "informix".contrae add constraint (foreign key (id\_animal)

references "informix".animal on delete cascade constraint

"informix".fkcontrae1);

alter table "informix".contrae add constraint (foreign key (id\_enf)

references "informix".enfermedad on delete cascade constraint

"informix".fkcontrae2);

alter table "informix".requiere add constraint (foreign key (id\_animal)

references "informix".animal on delete cascade constraint

"informix".fkrequiere1);

alter table "informix".requiere add constraint (foreign key (id\_tratam)

references "informix".tratamiento on delete cascade constraint

"informix".fkrequiere2);

alter table "informix".usu\_rol add constraint (foreign key (id\_usuario)

references "informix".usuario on delete cascade constraint

"informix".fkusu\_rol1);

update statistics high for table animal (

id\_animal)

resolution 1.00000 ;

update statistics high for table estado (

id\_estado)

resolution 1.00000 ;

update statistics high for table rol (

id\_rol)

resolution 1.00000 ;

update statistics high for table usu\_rol (

id\_rol)

resolution 1.00000 ;

Consultas SQL (Obligatorias):

1. Listado de crías en campo de recría con más de 3 meses.

select today - fecha as tiempo, id\_cria

from van

where (today - fecha) >90

2. Cantidad de producción en el último mes.

select sum (cantidad) as cantidad

from producen

where (today - fecha) =30

3. Número de lote que tuvo más producción hoy.

select first 1 max(cantidad)as cantidad, id\_lote

from producen

where (fecha = today)

4. Promedio por día de producción lechera.

select avg (cantidad) as promedio

from producen

where (fecha = today)

5. Listar cantidad de animales por tipo de animal.

select count(vaca.id\_vaca) as vaca

from vaca;

select count(toro.id\_toro) as toro

from toro;

select count(cria.id\_cria) as cria

from cria;

6. Listar todos los animales por tipo de animal.

select \* from vaca;

select \* from toro;

select \* from cria;

select \* from toro, vaca where tipo

Consultas SQL (Opcionales):

1. Listado de crías que se encuentran hoy en el campo de recria.

select today - fecha as Hoy, id\_cria

from van

where (today - fecha) <2

2. Cantidad de producción y número de lote que tuvo más producción hoy.

select today - fecha as hoy, cantidad, id\_lote

from producen

where (today - fecha) <2

3. Animales que han sido atendidos por algún problema o control y detalle de los controles en el último mes.

select today - fecha as ultimo\_mes, medicacion

from requiere

where (today - fecha) < 31

4. Listado de tambos indicando cantidad de hectáreas.

select id\_tambo, nom\_tambo, hectarea from tambo

5. historial de controles de cada animal.

select id\_animal, id\_tratam from requiere

6. Listado de vacas que se encuentran secas en el día de hoy.

select today - fecha\_i as hoy, id\_estado=4

from tiene

where (today - fecha\_i) <2

7. Listar todas las vacas con mastitis en el día de hoy.

select today - fecha\_i as hoy, id\_animal, id\_enf

from contrae

where (today - fecha\_i) <2 and

id\_enf=25

8. Listado de vacas preñadas.

select id\_vaca, id\_estado from tiene where id\_estado=2

Política de respaldo de la base de datos

¿Para qué respaldar?

Respaldar información regularmente ayuda a protegerla de ser perdida si se daña la computadora. Un respaldo de información puede también ser usado para transferir importantes archivos de una computadora a otra o para archivar versiones previas de un archivo en particular.

La frecuencia con la que se debe hacer copias de respaldo dependerá del tipo de datos que se vaya a respaldar. Por ejemplo, si se está trabajando en un entorno de red con datos críticos almacenados en los servidores como puede ser un banco nacional, una empresa de préstamos donde se manejen tarjetas de créditos y se realicen múltiples transacciones un período corto de tiempo, es posible que ni siquiera resulte suficiente hacer una copia de respaldo todas las noches.

Por otro lado, respaldar los datos en un equipo personal de un usuario básico cada hora sería sumamente innecesario.

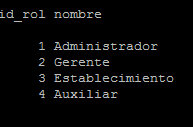
Suru le ofrecerá al cliente una política de respaldo bastante segura ya que éste procedimiento respaldara la base de datos de lunes a viernes de 23:30 hs. Éste respaldo quedará alojado en los servidores de la cooperativa en un archivo encriptado para mayor seguridad del mismo.

Datos predeterminados en la base de datos Suru:

Suru cuenta con datos predeterminados en el sistema necesarios para un correcto funcionamiento del software, además de darle al usuario lo que necesita para comenzar a utilizarlo.

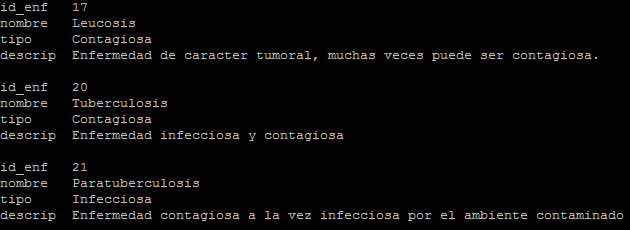
Roles:

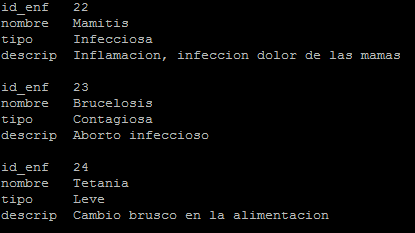
Dentro de la tabla rol de la base de datos como se puede observar a continuación ya hay datos ingresados que el usuario final no tendrá permisos ni para agregar, modificar y/o eliminar ya que es un punto vital para el sistema de logueo. Dependiendo del rol que tenga un usuario, el software determinará el acceso a los distintos formularios, botones, etc.

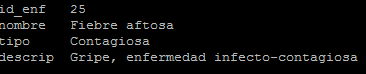


Enfermedades:

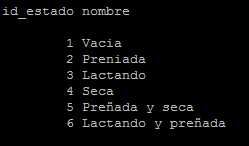
Dentro de la tabla -enfermedad-, -estado-, -tratamiento- y -leche- también hay datos ingresados con la diferencia de que el usuario final si podrá modificarlos a su gusto y/o eliminarlos e incluso agregar nuevos registros.



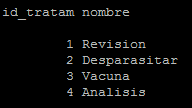


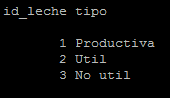


Estados de una vaca:



Tratamientos:



Leche: