Homework

1) Theory

Database types:

<https://www.matillion.com/resources/blog/the-types-of-databases-with-examples>

W3schools links:

<https://www.w3schools.com/sql/sql_create_db.asp>

<https://www.w3schools.com/sql/sql_drop_db.asp>

<https://www.w3schools.com/sql/sql_create_table.asp>

<https://www.w3schools.com/sql/sql_drop_table.asp>

<https://www.w3schools.com/sql/sql_alter.asp>

<https://www.w3schools.com/sql/sql_primarykey.asp>

<https://www.w3schools.com/sql/sql_foreignkey.asp>

<https://www.w3schools.com/sql/sql_foreignkey.asp>

MySql data types:

<https://www.w3schools.com/sql/sql_datatypes.asp>

DB Tables relationships:

<https://www.ibm.com/docs/en/mam/7.6.0?topic=structure-database-relationships>

Normalization of DB (3 normal forms):

<https://www.guru99.com/database-normalization.html>

2) Practical tasks

Create a database schema using Mysql Workbench for the new hierarchy (not one which was implemented in Java block) with at least 12 tables and all relations.

The schema should satisfy the 3 Normal Forms.

CREATE TABLE `aloja` (  
 `NroAlojamiento` int NOT NULL,  
 `dniVisitante` int NOT NULL,  
 `F\_Llegada` date DEFAULT NULL,  
 `F\_Salida` date DEFAULT NULL,  
 `habitacion` varchar(66) DEFAULT NULL,  
 PRIMARY KEY (`NroAlojamiento`,`dniVisitante`),  
 KEY `dniVisitante` (`dniVisitante`),  
 CONSTRAINT `aloja\_ibfk\_1` FOREIGN KEY (`NroAlojamiento`) REFERENCES `alojamiento` (`NroAlojamiento`),  
 CONSTRAINT `aloja\_ibfk\_2` FOREIGN KEY (`dniVisitante`) REFERENCES `visitantes` (`DNI`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;

CREATE TABLE `alojamiento` (  
 `NroAlojamiento` int NOT NULL,  
 `Capacidad` int DEFAULT NULL,  
 `Categoria` varchar(20) DEFAULT NULL,  
 `NombreP` varchar(30) NOT NULL,  
 PRIMARY KEY (`NroAlojamiento`,`NombreP`),  
 KEY `alojamiento\_ibfk\_1` (`NombreP`),  
 CONSTRAINT `alojamiento\_ibfk\_1` FOREIGN KEY (`NombreP`) REFERENCES `parques` (`NombreP`) ON DELETE CASCADE ON UPDATE CASCADE  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `animales` (  
 `nom\_cientifico` varchar(15) NOT NULL,  
 `alimentacion` varchar(10) DEFAULT NULL,  
 `f\_inicio` date DEFAULT NULL,  
 `f\_fin` date DEFAULT NULL,  
 PRIMARY KEY (`nom\_cientifico`),  
 KEY `indice\_Animal` (`nom\_cientifico`),  
 CONSTRAINT `animales\_ibfk\_1` FOREIGN KEY (`nom\_cientifico`) REFERENCES `especies` (`nom\_cientifico`) ON UPDATE CASCADE  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `areas` (  
 `NombreA` varchar(50) NOT NULL,  
 `NombreP` varchar(50) NOT NULL,  
 `Extension` double DEFAULT NULL,  
 PRIMARY KEY (`NombreA`,`NombreP`),  
 KEY `NombreP` (`NombreP`),  
 CONSTRAINT `areas\_ibfk\_1` FOREIGN KEY (`NombreP`) REFERENCES `parques` (`NombreP`) ON DELETE CASCADE ON UPDATE CASCADE  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `come\_se\_alimenta\_aa` (  
 `nom\_cientifico\_come` varchar(15) NOT NULL,  
 `nom\_cientifico\_escomido` varchar(15) NOT NULL,  
 PRIMARY KEY (`nom\_cientifico\_come`,`nom\_cientifico\_escomido`),  
 KEY `se\_alimenta\_aa\_ibfk\_2` (`nom\_cientifico\_escomido`),  
 CONSTRAINT `se\_alimenta\_aa\_ibfk\_1` FOREIGN KEY (`nom\_cientifico\_come`) REFERENCES `animales` (`nom\_cientifico`) ON UPDATE CASCADE,  
 CONSTRAINT `se\_alimenta\_aa\_ibfk\_2` FOREIGN KEY (`nom\_cientifico\_escomido`) REFERENCES `animales` (`nom\_cientifico`) ON UPDATE CASCADE  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `comunidad` (  
 `Nombre\_CA` varchar(50) NOT NULL,  
 `org\_respon` varchar(50) DEFAULT NULL,  
 PRIMARY KEY (`Nombre\_CA`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `conservacion` (  
 `DNI` int NOT NULL,  
 `Especialidad` varchar(30) DEFAULT NULL,  
 `NombreA` varchar(50) NOT NULL,  
 `NombreP` varchar(50) NOT NULL,  
 PRIMARY KEY (`DNI`),  
 KEY `conservacion\_ibfk\_2` (`NombreA`),  
 KEY `conservacion\_ibfk\_3` (`NombreP`),  
 CONSTRAINT `conservacion\_ibfk\_2` FOREIGN KEY (`NombreA`) REFERENCES `areas` (`NombreA`) ON UPDATE CASCADE,  
 CONSTRAINT `de\_conservacion\_ibfk\_1` FOREIGN KEY (`DNI`) REFERENCES `personal` (`DNI`) ON UPDATE CASCADE,  
 CONSTRAINT `de\_conservacion\_ibfk\_3` FOREIGN KEY (`NombreP`) REFERENCES `parques` (`NombreP`) ON UPDATE CASCADE  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `disfruta` (  
 `DNI` int NOT NULL,  
 `Cod\_Excursion` int NOT NULL,  
 PRIMARY KEY (`Cod\_Excursion`,`DNI`),  
 KEY `participa\_ibfk\_1` (`Cod\_Excursion`),  
 KEY `participa\_ibfk\_2` (`DNI`),  
 CONSTRAINT `participa\_ibfk\_1` FOREIGN KEY (`Cod\_Excursion`) REFERENCES `excursiones` (`Cod\_Excursion`) ON UPDATE CASCADE,  
 CONSTRAINT `participa\_ibfk\_2` FOREIGN KEY (`DNI`) REFERENCES `visitantes` (`DNI`) ON UPDATE CASCADE  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `entrada` (  
 `NroEntrada` int NOT NULL,  
 `NombreP` varchar(30) NOT NULL,  
 `DNI` int NOT NULL,  
 `precio` double(5,2) DEFAULT NULL,  
 PRIMARY KEY (`NroEntrada`),  
 KEY `NomParqueEn` (`NombreP`),  
 KEY `indice\_4` (`NroEntrada`),  
 KEY `entrada\_ibfk\_1` (`DNI`),  
 CONSTRAINT `entrada\_ibfk\_1` FOREIGN KEY (`DNI`) REFERENCES `personal` (`DNI`) ON UPDATE CASCADE,  
 CONSTRAINT `NomParqueEn` FOREIGN KEY (`NombreP`) REFERENCES `parques` (`NombreP`) ON DELETE CASCADE ON UPDATE CASCADE  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `especie\_area` (  
 `id` int NOT NULL AUTO\_INCREMENT,  
 `area` varchar(50) DEFAULT NULL,  
 `nom\_cientifico` varchar(15) DEFAULT NULL,  
 PRIMARY KEY (`id`),  
 KEY `especie\_area\_ibfk\_1` (`nom\_cientifico`),  
 KEY `especie\_area\_ibfk\_2` (`area`),  
 CONSTRAINT `especie\_area\_ibfk\_1` FOREIGN KEY (`nom\_cientifico`) REFERENCES `especies` (`nom\_cientifico`) ON DELETE CASCADE ON UPDATE CASCADE,  
 CONSTRAINT `especie\_area\_ibfk\_2` FOREIGN KEY (`area`) REFERENCES `areas` (`NombreA`)  
) ENGINE=InnoDB AUTO\_INCREMENT=57 DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `especies` (  
 `nom\_cientifico` varchar(15) NOT NULL,  
 `nom\_vulgar` varchar(15) DEFAULT NULL,  
 `nro\_inventario` int DEFAULT NULL,  
 PRIMARY KEY (`nom\_cientifico`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `excursiones` (  
 `Cod\_Excursion` int NOT NULL AUTO\_INCREMENT,  
 `Fecha` date NOT NULL,  
 `Hora` time NOT NULL,  
 `Vehiculo` varchar(30) DEFAULT NULL,  
 PRIMARY KEY (`Cod\_Excursion`),  
 KEY `idx\_cod\_excursion` (`Cod\_Excursion`)  
) ENGINE=InnoDB AUTO\_INCREMENT=124201 DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `exempleados` (  
 `DNI` int NOT NULL,  
 `Nombre` varchar(30) DEFAULT NULL,  
 `sueldo` double DEFAULT NULL,  
 `NumSegSoc` int DEFAULT NULL,  
 `dirección` varchar(30) DEFAULT NULL,  
 `telefono\_fijo` int DEFAULT NULL,  
 `telefono\_móvil` int DEFAULT NULL,  
 `NombreP` varchar(50) DEFAULT NULL,  
 PRIMARY KEY (`DNI`),  
 KEY `personal\_ibfk\_1` (`NombreP`),  
 KEY `indice\_personal` (`DNI`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `gestion` (  
 `DNI` int NOT NULL,  
 `NroEntrada` int DEFAULT NULL,  
 PRIMARY KEY (`DNI`),  
 CONSTRAINT `gestion\_ibfk\_1` FOREIGN KEY (`DNI`) REFERENCES `personal` (`DNI`) ON UPDATE CASCADE  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `investigador` (  
 `DNI` int NOT NULL,  
 `titulacion` varchar(55) DEFAULT NULL,  
 PRIMARY KEY (`DNI`),  
 CONSTRAINT `investigador\_ibfk\_1` FOREIGN KEY (`DNI`) REFERENCES `personal` (`DNI`) ON UPDATE CASCADE  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `minerales` (  
 `nom\_cientifico` varchar(15) NOT NULL,  
 `tipo` varchar(15) DEFAULT NULL,  
 PRIMARY KEY (`nom\_cientifico`),  
 CONSTRAINT `minerales\_ibfk\_1` FOREIGN KEY (`nom\_cientifico`) REFERENCES `especies` (`nom\_cientifico`) ON UPDATE CASCADE  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `organiza` (  
 `NroAlojamiento` int NOT NULL,  
 `NombreP` varchar(30) NOT NULL,  
 `Cod\_Excursion` int NOT NULL,  
 PRIMARY KEY (`NroAlojamiento`,`NombreP`,`Cod\_Excursion`),  
 KEY `organiza\_ibfk\_2` (`NombreP`),  
 KEY `organiza\_ibfk\_3` (`Cod\_Excursion`),  
 CONSTRAINT `organiza\_ibfk\_1` FOREIGN KEY (`NroAlojamiento`) REFERENCES `alojamiento` (`NroAlojamiento`) ON UPDATE CASCADE,  
 CONSTRAINT `organiza\_ibfk\_2` FOREIGN KEY (`NombreP`) REFERENCES `alojamiento` (`NombreP`) ON UPDATE CASCADE,  
 CONSTRAINT `organiza\_ibfk\_3` FOREIGN KEY (`Cod\_Excursion`) REFERENCES `excursiones` (`Cod\_Excursion`) ON UPDATE CASCADE  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `parques` (  
 `NombreP` varchar(50) NOT NULL,  
 `Fecha\_declaracion` date DEFAULT NULL,  
 PRIMARY KEY (`NombreP`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `personal` (  
 `DNI` int NOT NULL,  
 `Nombre` varchar(30) DEFAULT NULL,  
 `sueldo` double DEFAULT NULL,  
 `NumSegSoc` int DEFAULT NULL,  
 `dirección` varchar(30) DEFAULT NULL,  
 `telefono\_fijo` int DEFAULT NULL,  
 `telefono\_móvil` int DEFAULT NULL,  
 `NombreP` varchar(50) DEFAULT NULL,  
 PRIMARY KEY (`DNI`),  
 KEY `personal\_ibfk\_1` (`NombreP`),  
 KEY `indice\_personal` (`DNI`),  
 CONSTRAINT `personal\_ibfk\_1` FOREIGN KEY (`NombreP`) REFERENCES `parques` (`NombreP`) ON UPDATE CASCADE  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `proyecto` (  
 `nombreProyecto` varchar(30) NOT NULL,  
 `presupuesto` double DEFAULT NULL,  
 `fechaInicio` date DEFAULT NULL,  
 `fechaFin` date DEFAULT NULL,  
 PRIMARY KEY (`nombreProyecto`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `realiza\_proy\_inv\_esp` (  
 `NombreProyecto` varchar(30) NOT NULL,  
 `DNI` int NOT NULL,  
 `nom\_cientifico` varchar(50) NOT NULL,  
 PRIMARY KEY (`DNI`,`NombreProyecto`,`nom\_cientifico`),  
 KEY `participa\_proy\_inv\_ibfk\_2` (`NombreProyecto`),  
 KEY `realiza\_ibfk\_3` (`nom\_cientifico`),  
 CONSTRAINT `realiza\_ibfk\_1` FOREIGN KEY (`DNI`) REFERENCES `personal` (`DNI`) ON UPDATE CASCADE,  
 CONSTRAINT `realiza\_ibfk\_2` FOREIGN KEY (`NombreProyecto`) REFERENCES `proyecto` (`nombreProyecto`) ON UPDATE CASCADE,  
 CONSTRAINT `realiza\_ibfk\_3` FOREIGN KEY (`nom\_cientifico`) REFERENCES `especies` (`nom\_cientifico`) ON UPDATE CASCADE  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `registra` (  
 `NroEntrada` int NOT NULL,  
 `NombreP` varchar(50) NOT NULL,  
 `DNI` int NOT NULL,  
 `fecha\_registro` datetime DEFAULT CURRENT\_TIMESTAMP,  
 PRIMARY KEY (`NroEntrada`,`NombreP`,`DNI`),  
 KEY `registra\_ibfk\_2` (`DNI`),  
 KEY `NroEntradaReg` (`NroEntrada`),  
 KEY `NombreParReg` (`NombreP`),  
 CONSTRAINT `NombreParReg` FOREIGN KEY (`NombreP`) REFERENCES `entrada` (`NombreP`) ON DELETE RESTRICT ON UPDATE CASCADE,  
 CONSTRAINT `NroEntradaReg` FOREIGN KEY (`NroEntrada`) REFERENCES `entrada` (`NroEntrada`) ON DELETE RESTRICT ON UPDATE CASCADE,  
 CONSTRAINT `registra\_ibfk\_2` FOREIGN KEY (`DNI`) REFERENCES `visitantes` (`DNI`) ON UPDATE CASCADE  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `reside\_area\_esp` (  
 `NombreA` varchar(50) NOT NULL,  
 `cantIndividuos` int DEFAULT NULL,  
 `nom\_cientifico` varchar(55) NOT NULL,  
 PRIMARY KEY (`NombreA`,`nom\_cientifico`),  
 KEY `nom\_cientifico` (`nom\_cientifico`),  
 CONSTRAINT `reside\_area\_esp\_ibfk\_1` FOREIGN KEY (`nom\_cientifico`) REFERENCES `especies` (`nom\_cientifico`),  
 CONSTRAINT `reside\_area\_esp\_ibfk\_2` FOREIGN KEY (`NombreA`) REFERENCES `areas` (`NombreA`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `resultado\_audit\_maxentdia` (  
 `NombreP` varchar(50) NOT NULL,  
 `fecha\_registro` varchar(15) DEFAULT NULL,  
 `cantidad` int DEFAULT NULL,  
 PRIMARY KEY (`NombreP`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `se\_alimenta\_av` (  
 `nom\_cientifico\_come` varchar(15) NOT NULL,  
 `nom\_cientifico\_escomido` varchar(15) NOT NULL,  
 PRIMARY KEY (`nom\_cientifico\_come`,`nom\_cientifico\_escomido`),  
 KEY `se\_alimenta\_av\_ibfk\_2` (`nom\_cientifico\_escomido`),  
 CONSTRAINT `se\_alimenta\_av\_ibfk\_1` FOREIGN KEY (`nom\_cientifico\_come`) REFERENCES `animales` (`nom\_cientifico`) ON UPDATE CASCADE,  
 CONSTRAINT `se\_alimenta\_av\_ibfk\_2` FOREIGN KEY (`nom\_cientifico\_escomido`) REFERENCES `vegetales` (`nom\_cientifico`) ON UPDATE CASCADE  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `tiene\_comunidad\_parques` (  
 `Nombre\_CA` varchar(50) NOT NULL,  
 `NombreP` varchar(50) NOT NULL,  
 PRIMARY KEY (`Nombre\_CA`,`NombreP`),  
 KEY `comunidad\_parques\_ibfk\_2` (`NombreP`),  
 CONSTRAINT `comunidad\_parques\_ibfk\_1` FOREIGN KEY (`Nombre\_CA`) REFERENCES `comunidad` (`Nombre\_CA`) ON UPDATE CASCADE,  
 CONSTRAINT `comunidad\_parques\_ibfk\_2` FOREIGN KEY (`NombreP`) REFERENCES `parques` (`NombreP`) ON UPDATE CASCADE  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `vegetales` (  
 `nom\_cientifico` varchar(15) NOT NULL,  
 `Floracion` tinyint(1) DEFAULT NULL,  
 `f\_inicio` date DEFAULT NULL,  
 `f\_fin` date DEFAULT NULL,  
 PRIMARY KEY (`nom\_cientifico`),  
 CONSTRAINT `vegetales\_ibfk\_1` FOREIGN KEY (`nom\_cientifico`) REFERENCES `especies` (`nom\_cientifico`) ON UPDATE CASCADE  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `venta` (  
 `DNI` int NOT NULL,  
 `NombreP` varchar(50) NOT NULL,  
 `NombreA` varchar(50) NOT NULL,  
 `NroEntrada` int NOT NULL,  
 `fecha\_pago` timestamp NULL DEFAULT CURRENT\_TIMESTAMP ON UPDATE CURRENT\_TIMESTAMP,  
 PRIMARY KEY (`DNI`,`NroEntrada`,`NombreP`),  
 KEY `NroEntrada` (`NroEntrada`),  
 KEY `NombreP` (`NombreP`),  
 KEY `NombreA` (`NombreA`),  
 CONSTRAINT `venta\_ibfk\_1` FOREIGN KEY (`DNI`) REFERENCES `visitantes` (`DNI`),  
 CONSTRAINT `venta\_ibfk\_2` FOREIGN KEY (`NroEntrada`) REFERENCES `entrada` (`NroEntrada`),  
 CONSTRAINT `venta\_ibfk\_3` FOREIGN KEY (`NombreP`) REFERENCES `parques` (`NombreP`),  
 CONSTRAINT `venta\_ibfk\_4` FOREIGN KEY (`NombreA`) REFERENCES `areas` (`NombreA`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `vigilancia` (  
 `DNI` int NOT NULL,  
 `NombreA` varchar(50) NOT NULL,  
 `NombreP` varchar(50) NOT NULL,  
 `matricula` varchar(55) DEFAULT NULL,  
 `tipo` varchar(55) DEFAULT NULL,  
 PRIMARY KEY (`DNI`),  
 KEY `de\_vigilancia\_ibfk\_2` (`NombreA`),  
 KEY `de\_vigilancia\_ibfk\_3` (`NombreP`),  
 CONSTRAINT `de\_vigilancia\_ibfk\_1` FOREIGN KEY (`DNI`) REFERENCES `personal` (`DNI`) ON UPDATE CASCADE,  
 CONSTRAINT `de\_vigilancia\_ibfk\_2` FOREIGN KEY (`NombreA`) REFERENCES `areas` (`NombreA`) ON UPDATE CASCADE,  
 CONSTRAINT `de\_vigilancia\_ibfk\_3` FOREIGN KEY (`NombreP`) REFERENCES `areas` (`NombreP`) ON UPDATE CASCADE  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `visitantejson` (  
 `doc` json DEFAULT NULL,  
 `id` int NOT NULL AUTO\_INCREMENT,  
 PRIMARY KEY (`id`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `visitantes` (  
 `DNI` int NOT NULL,  
 `Nombre` varchar(30) DEFAULT NULL,  
 `Domicilio` varchar(30) DEFAULT NULL,  
 `Profesion` varchar(30) DEFAULT NULL,  
 PRIMARY KEY (`DNI`),  
 KEY `indice\_visitantes` (`DNI`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;

CREATE TABLE `visitantesjson` (  
 `doc` json DEFAULT NULL,  
 `\_id` int GENERATED ALWAYS AS (json\_unquote(json\_extract(`doc`,\_utf8mb4'$.dni'))) STORED NOT NULL,  
 `\_json\_schema` json GENERATED ALWAYS AS (\_utf8mb4'{"type":"object"}') VIRTUAL,  
 PRIMARY KEY (`\_id`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;