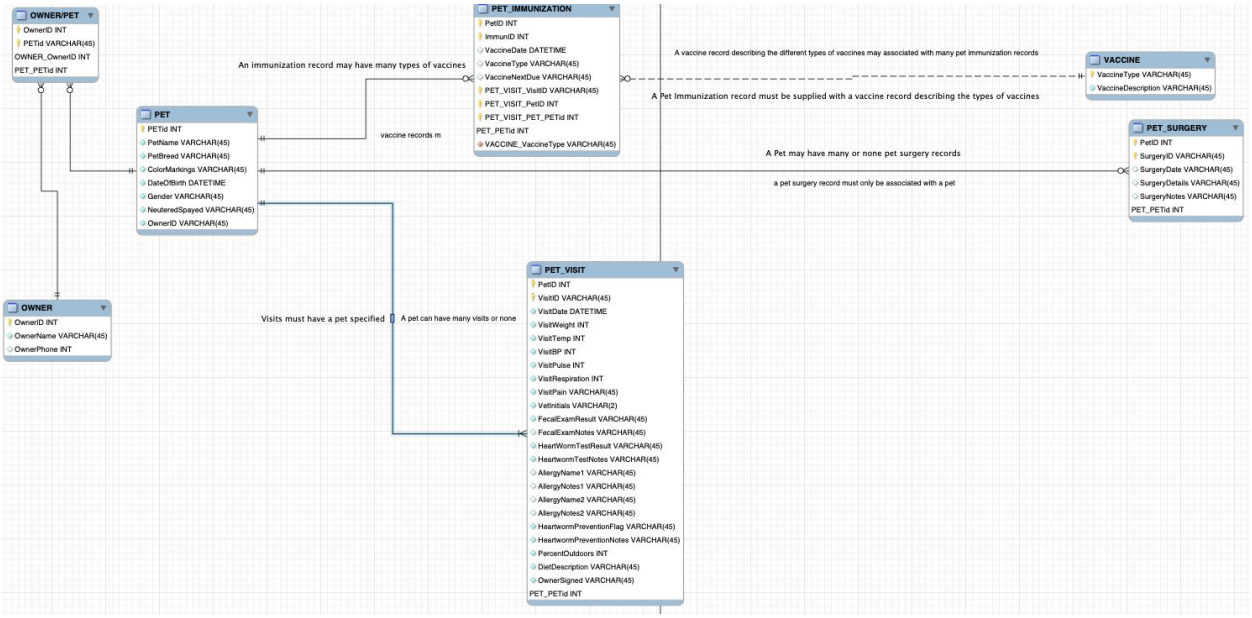
ERR Diagram (based upon solutions given from Alan Paradise)



DDL

```
-- MySQL Script generated by MySQL Workbench
-- Sun Feb 16 22:13:31 2020
-- Model: New Model    Version: 1.0
-- MySQL Workbench Forward Engineering

SET @OLD_UNIQUE_CHECKS=@@UNIQUE_CHECKS, UNIQUE_CHECKS=0;
SET @OLD_FOREIGN_KEY_CHECKS=@@FOREIGN_KEY_CHECKS,
FOREIGN_KEY_CHECKS=0;
SET @OLD_SQL_MODE=@@SQL_MODE,
SQL_MODE='ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO
_ZERO_DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION';

-- -----------------------------------------------------
-- Schema mydb
-- -----------------------------------------------------


-- -----------------------------------------------------
-- Schema mydb
-- -----------------------------------------------------
CREATE SCHEMA IF NOT EXISTS `mydb` DEFAULT CHARACTER SET utf8 ;
USE `mydb` ;

-- -----------------------------------------------------
-- Table `mydb`.`OWNER`
```

```
-- -----------------------------------------------------
DROP TABLE IF EXISTS `mydb`.`OWNER` ;

CREATE TABLE IF NOT EXISTS `mydb`.`OWNER` (
  `OwnerID` INT NOT NULL AUTO_INCREMENT,
  `OwnerName` VARCHAR(45) NOT NULL,
  `OwnerPhone` INT NULL,
  PRIMARY KEY (`OwnerID`))
ENGINE = InnoDB;


-- -----------------------------------------------------
-- Table `mydb`.`PET`
-- -----------------------------------------------------
DROP TABLE IF EXISTS `mydb`.`PET` ;

CREATE TABLE IF NOT EXISTS `mydb`.`PET` (
  `PETid` INT NOT NULL AUTO_INCREMENT,
  `PetName` VARCHAR(45) NOT NULL,
  `PetBreed` VARCHAR(45) NOT NULL,
  `ColorMarkings` VARCHAR(45) NOT NULL,
  `DateOfBirth` DATETIME NOT NULL,
  `Gender` VARCHAR(45) NOT NULL,
  `NeuteredSpayed` VARCHAR(45) NOT NULL,
  `OwnerID` VARCHAR(45) NOT NULL,
  PRIMARY KEY (`PETid`))
ENGINE = InnoDB;


-- -----------------------------------------------------
-- Table `mydb`.`PET_VISIT`
-- -----------------------------------------------------
DROP TABLE IF EXISTS `mydb`.`PET_VISIT` ;

CREATE TABLE IF NOT EXISTS `mydb`.`PET_VISIT` (
  `PetID` INT NOT NULL,
  `VisitID` VARCHAR(45) NOT NULL,
  `VisitDate` DATETIME NOT NULL,
  `VisitWeight` INT NOT NULL,
  `VisitTemp` INT NOT NULL,
  `VisitBP` INT NOT NULL,
  `VisitPulse` INT NOT NULL,
  `VisitRespiration` INT NOT NULL,
```

```
  `VisitPain` VARCHAR(45) NOT NULL,
  `VetInitials` VARCHAR(2) NOT NULL,
  `FecalExamResult` VARCHAR(45) NOT NULL,
  `FecalExamNotes` VARCHAR(45) NULL,
  `HeartWormTestResult` VARCHAR(45) NOT NULL,
  `HeartwormTestNotes` VARCHAR(45) NOT NULL,
  `AllergyName1` VARCHAR(45) NULL,
  `AllergyNotes1` VARCHAR(45) NULL,
  `AllergyName2` VARCHAR(45) NULL,
  `AllergyNotes2` VARCHAR(45) NULL,
  `HeartwormPreventionFlag` VARCHAR(45) NOT NULL,
  `HeartwormPreventionNotes` VARCHAR(45) NOT NULL,
  `PercentOutdoors` INT NOT NULL,
  `DietDescription` VARCHAR(45) NOT NULL,
  `OwnerSigned` VARCHAR(45) NOT NULL,
  `PET_PETid` INT NOT NULL,
  PRIMARY KEY (`VisitID`, `PetID`, `PET_PETid`),
  CONSTRAINT `fk_PET_VISIT_PET1`
    FOREIGN KEY (`PET_PETid`)
    REFERENCES `mydb`.`PET` (`PETid`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION)
ENGINE = InnoDB;

CREATE INDEX `fk_PET_VISIT_PET1_idx` ON `mydb`.`PET_VISIT` (`PET_PETid` ASC)
VISIBLE;



-- -----------------------------------------------------
-- Table `mydb`.`VACCINE`
-- -----------------------------------------------------
DROP TABLE IF EXISTS `mydb`.`VACCINE` ;

CREATE TABLE IF NOT EXISTS `mydb`.`VACCINE` (
  `VaccineType` VARCHAR(45) NOT NULL,
  `VaccineDescription` VARCHAR(45) NOT NULL,
  PRIMARY KEY (`VaccineType`))
ENGINE = InnoDB;



-- -----------------------------------------------------
-- Table `mydb`.`PET_IMMUNIZATION`
-- -----------------------------------------------------
```

```
DROP TABLE IF EXISTS `mydb`.`PET_IMMUNIZATION` ;

CREATE TABLE IF NOT EXISTS `mydb`.`PET_IMMUNIZATION` (
  `PetID` INT NOT NULL,
  `ImmunID` INT NOT NULL,
  `VaccineDate` DATETIME NULL,
  `VaccineType` VARCHAR(45) NULL,
  `VaccineNextDue` VARCHAR(45) NULL,
  `PET_VISIT_VisitID` VARCHAR(45) NOT NULL,
  `PET_VISIT_PetID` INT NOT NULL,
  `PET_VISIT_PET_PETid` INT NOT NULL,
  `PET_PETid` INT NOT NULL,
  `VACCINE_VaccineType` VARCHAR(45) NOT NULL,
  PRIMARY KEY (`PetID`, `ImmunID`, `PET_VISIT_VisitID`, `PET_VISIT_PetID`,
`PET_VISIT_PET_PETid`, `PET_PETid`),
  CONSTRAINT `fk_PET_IMMUNIZATION_PET1`
    FOREIGN KEY (`PET_PETid`)
    REFERENCES `mydb`.`PET` (`PETid`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION,
  CONSTRAINT `fk_PET_IMMUNIZATION_VACCINE1`
    FOREIGN KEY (`VACCINE_VaccineType`)
    REFERENCES `mydb`.`VACCINE` (`VaccineType`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION)
ENGINE = InnoDB;

CREATE INDEX `fk_PET_IMMUNIZATION_PET1_idx` ON `mydb`.`PET_IMMUNIZATION`
(`PET_PETid` ASC) VISIBLE;

CREATE INDEX `fk_PET_IMMUNIZATION_VACCINE1_idx` ON
`mydb`.`PET_IMMUNIZATION` (`VACCINE_VaccineType` ASC) VISIBLE;


-- -----------------------------------------------------
-- Table `mydb`.`PET_SURGERY`
-- -----------------------------------------------------
DROP TABLE IF EXISTS `mydb`.`PET_SURGERY` ;

CREATE TABLE IF NOT EXISTS `mydb`.`PET_SURGERY` (
  `PetID` INT NOT NULL,
  `SurgeryID` VARCHAR(45) NOT NULL,
  `SurgeryDate` VARCHAR(45) NULL,
```

```
  `SurgeryDetails` VARCHAR(45) NULL,
  `SurgeryNotes` VARCHAR(45) NULL,
  `PET_PETid` INT NOT NULL,
  PRIMARY KEY (`SurgeryID`, `PetID`, `PET_PETid`),
  CONSTRAINT `fk_PET_SURGERY_PET1`
    FOREIGN KEY (`PET_PETid`)
    REFERENCES `mydb`.`PET` (`PETid`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION)
ENGINE = InnoDB;

CREATE INDEX `fk_PET_SURGERY_PET1_idx` ON `mydb`.`PET_SURGERY` (`PET_PETid`
ASC) VISIBLE;



-- -----------------------------------------------------
-- Table `mydb`.`OWNER/PET`
-- -----------------------------------------------------
DROP TABLE IF EXISTS `mydb`.`OWNER/PET` ;

CREATE TABLE IF NOT EXISTS `mydb`.`OWNER/PET` (
  `OwnerID` INT NOT NULL,
  `PETid` VARCHAR(45) NOT NULL,
  `OWNER_OwnerID` INT NOT NULL,
  `PET_PETid` INT NOT NULL,
  PRIMARY KEY (`OwnerID`, `PETid`, `OWNER_OwnerID`, `PET_PETid`),
  CONSTRAINT `fk_OWNER/PET_OWNER1`
    FOREIGN KEY (`OWNER_OwnerID`)
    REFERENCES `mydb`.`OWNER` (`OwnerID`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION,
  CONSTRAINT `fk_OWNER/PET_PET1`
    FOREIGN KEY (`PET_PETid`)
    REFERENCES `mydb`.`PET` (`PETid`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION)
ENGINE = InnoDB;

CREATE INDEX `fk_OWNER/PET_OWNER1_idx` ON `mydb`.`OWNER/PET`
(`OWNER_OwnerID` ASC) VISIBLE;

CREATE INDEX `fk_OWNER/PET_PET1_idx` ON `mydb`.`OWNER/PET` (`PET_PETid` ASC)
VISIBLE;
```

```
SET SQL_MODE=@OLD_SQL_MODE;
SET FOREIGN_KEY_CHECKS=@OLD_FOREIGN_KEY_CHECKS;
SET UNIQUE_CHECKS=@OLD_UNIQUE_CHECKS;
```

Assumptions:

- I resolved a many to many relationship between the owner table and the pet table because I assumed that a owner can have many pets and a pet can have many owners (like a mom and dad)
- Another assumption was that vaccines are optional to have so vaccination information can be associated with immunization records, but immunization records must be associated with the table describing different vaccines.
- A pet must have at least one visit