# Database Management Systems Project

## Due: Friday 31st March 2023 at 5pm via Moodle

**Deliverables**

1. ReadMe.txt
2. Relational Schema (Diagram) – Could use Designer in PhpMyAdmin
3. ***Your*** Scripts
    a. **SQL** - Build and populate database, NOT auto generated SQL file.
    *b.* **SQL** – To include joins, multiple joins, etc. **NOT *Select * From Staff;***
    *c.* **PHP** – Front end to access **REMOTE** database
4. Video to demonstrate each of the above scripts in action
5. Zip the above files into a file called '***YourName'DBProject.zip***

Requirements:

Relational Schema: As wide a range of database features as possible should be used to demonstrate your knowledge of Databases

a. **Tables**:
    i. Character Set & Collation that best reflects dataset.
    ii. Relationships between tables could be 1:1, 1:M or Many to Many via Foreign Keys
    iii. Appropriate Referential Integrity constraints
    iv. Cascading effects
b. **Field Attributes**:
    i. Range - Choose a datatype that best reflects the dataset
    ii. Default value, where appropriate.
    iii. Value - SET or ENUM for data entry, where appropriate.
    iv. Auto Increment – Choose your own initial and step size
    v. BLOBs
    vi. Encrypted data where appropriate

**Marking Scheme**

| | | |
|---|---|---|
| a) | Cloud Access | (10%) |
| b) | Database Schema | (45%) |
| c) | Queries to interrogate the database (Min 5 queries) | (35%) |
| d) | Local scripts to access **remote** database | (10%) |

Marks are assigned under the following categories:

1. Functionality
2. Complexity
3. Originality
4. Completeness

# Database Management Systems Project

## Narrative

Mr. Joe O'Donnell runs a very busy veterinary practice in Glenina Heights, Galway. Joe is joined in the practice by two other vets, three veterinary nurses and a receptionist. Most of the animals treated are domestic pets but the practice also deals with large farm animals, cows, sheep, horses.

The receptionist Roisin arranges appointments, either on-line, by post, phoning or dropping in. She arranges a suitable appointment by referring to the appointment's diary. When arranging an appointment, Roisin notes the symptoms that necessitates a vet visit, e.g. vaccination, allergies, running eyes, limp, etc.

After the consultation, the vet will update the animal records with a diagnosis for that specific appointment and any medication or follow up required. Customers pay for veterinary services several ways, online (credit card, revolut), by post (cheque) or by dropping in (cash, cheque, credit card, revolut). Occasionally, patients arrange to make several small payments for a large bill.

Every morning, the Roisin checks the appointment diary and makes a list of all appointments for that day. She also prepares bills looking up the Treatment Fees guidelines book. The bills, itemising all unpaid treatments and late cancellations, are emailed to patients.

Suggested Tables and fields

1. Appointment (Date time, location, vet, symptoms, diagnosis, medication, etc)
2. Animal (Name, breed, gender, picture, address, weight, etc)
3. Billing (Name, appDate, CC, Cash, Revolut, Cheque, Full/Partial, etc)
4. Medication (Name, datasheet, Price, Cause, etc)
5. Staff (Name, address, picture, bio, salary, IBAN, etc)
6. PetOwners (Name, address, picture, CCdetails, pet/s, etc)
7. Food (Cat, Dog, Supplier, Size, Price, QuantityinStock, etc)

## Suggested Queries

1. Display the pictures of all dogs that Joe has appointments with this morning and who have allergies.
2. Display the pictures, name, ownername, etc of all cats that Joe has seen in the last 6 months who had itchy ears and was prescribed NetIQ.
3. Display Mary Kelly's itemised monthly bill for her dog and two cats.
4. Display the name and Eircode of all horse owners who have outstanding bills of more than €200 for more than a month.
5. Display Joe's weekly income for all in-house visits for cats and dogs but not horses or cows.

**This project is worth 30% of the overall marks for the DBMS Module.**

**Please note this is a DATABASE project**

**NOT a front end to a database project**

**Marks will be deducted for late submissions**