**Advanced Javascript CA1**

**Database Outline**

**1. Users Table**

* **user\_id** *(Primary Key, Auto Increment)*
* **username** *(Unique, String)*
* **password** *(String)*
* **email** *(Unique, String)*
* **role\_id** *(Foreign Key, references Roles.role\_id)*

**2. Roles Table**

* **role\_id** *(Primary Key, Auto Increment)*
* **role\_name** *(String, e.g., "Admin", "Veterinarian", "Staff")*

**3. Patients Table**

* **patient\_id** *(Primary Key, Auto Increment)*
* **name** *(String)*
* **species** *(String, e.g., "Dog", "Cat", etc.)*
* **breed** *(String)*
* **age** *(Integer)*
* **image** *(string)*
* **owner\_id** *(Foreign Key, references Users.user\_id)*

**4. Appointments Table**

* **appointment\_id** *(Primary Key, Auto Increment)*
* **patient\_id** *(Foreign Key, references Patients.patient\_id)*
* **vet\_id** *(Foreign Key, references Users.user\_id where role\_id = Veterinarian)*
* **appointment\_date** *(DateTime)*
* **status** *(String, e.g., "Scheduled", "Completed", "Cancelled")*
* **notes** *(Text)*

**5. Medications Table**

* **medication\_id** *(Primary Key, Auto Increment)*
* **name** *(String)*

**6. PatientMedications Table *(Many-to-Many Relationship)***

* **patient\_medication\_id** *(Primary Key, Auto Increment)*
* **patient\_id** *(Foreign Key, references Patients.patient\_id)*
* **medication\_id** *(Foreign Key, references Medications.medication\_id)*
* **dosage** *(String)*
* **frequency** *(String)*
* **start\_date** *(DateTime)*
* **end\_date** *(DateTime)*

**7. Billing Table**

* **billing\_id** *(Primary Key, Auto Increment)*
* **patient\_id** *(Foreign Key, references Patients.patient\_id)*
* **appointment\_id** *(Foreign Key, references Appointments.appointment\_id)*
* **amount** *(Decimal)*
* **payment\_status** *(String, e.g., "Paid", "Pending")*

**Relationships**

* **Users ↔ Roles**: Many-to-Many *(one role can have many users and one user can have many roles)*
* **Users ↔ Patients**: One-to-Many *(one user can own many patients)*
* **Patients ↔ Appointments**: One-to-Many *(one patient can have many appointments)*
* **Users ↔ Appointments**: One-to-Many *(one veterinarian can have many appointments)*
* **Patients ↔ Medications**: Many-to-Many *(one patient can have many medications, and one medication can be prescribed to many patients through PatientMedications)*
* **Patients ↔ Billing**: One-to-Many *(one patient can have multiple billing records)*