# Patient Diagnosis Report

1. Write a query to create a **patients** table with the date, patient ID, patient name, age, weight, gender, location, phone number, disease, doctor name, and doctor ID fields

   **SQL code:**
   ```
   CREATE TABLE lep_6.patients (
       date DATE NOT NULL,
       pid varchar(45) NOT NULL,
       p_name varchar(45) NOT NULL,
       age INT NOT NULL,
       weight INT NOT NULL,
       gender varchar(45) NOT NULL,
       location varchar(45) NOT NULL,
       phone_no INT NOT NULL,
       disease varchar(45) NOT NULL,
       doctor_name  varchar(45) NOT NULL,
       doctor_id INT NOT NULL,
       PRIMARY KEY(pid));
   ```

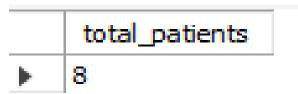2. Write a query to insert values into the **patients** table

   **SQL code:**
   ```
   INSERT INTO lep_6. patients
   (date,pid,p_name,age,weight,gender,location,phone_no,disease,doctor_name,doctor_id) VALUES ('2019-06-15','AP2021','Sarath','67','76','Male','chennai','5462829','Cardiac','Mohan','21');
   ```

3. Write a query to display the total number of patients in the table

**SQL code:**

```
SELECT COUNT(*) AS total_patients FROM lep_6.patients;
```
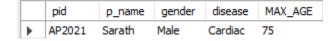
**Output:**

| total_patients |
|---|
| 8 |

4. Write a query to display the patient ID, patient name, gender, and disease of the oldest (age) patient

**SQL code:**

```
SELECT pid,p_name,gender,disease, MAX(AGE) AS MAX_AGE FROM lep_6.patients;
```
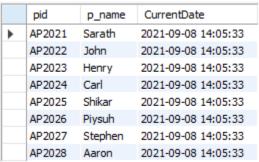
**Output:**

| pid | p_name | gender | disease | MAX_AGE |
|---|---|---|---|---|
| AP2021 | Sarath | Male | Cardiac | 75 |

5. Write a query to display patient id and patient name with the **current date**.

**SQL code:**

```
SELECT pid,p_name ,NOW() as CurrentDate FROM lep_6.patients;
```

**Output:**

| pid | p_name | CurrentDate |
|---|---|---|
| AP2021 | Sarath | 2021-09-08 14:05:33 |
| AP2022 | John | 2021-09-08 14:05:33 |
| AP2023 | Henry | 2021-09-08 14:05:33 |
| AP2024 | Carl | 2021-09-08 14:05:33 |
| AP2025 | Shikar | 2021-09-08 14:05:33 |
| AP2026 | Piysuh | 2021-09-08 14:05:33 |
| AP2027 | Stephen | 2021-09-08 14:05:33 |
| AP2028 | Aaron | 2021-09-08 14:05:33 |

6. Write a query to display the old patient name and new patient name in uppercase

**SQL code:**

SELECT doctor_name,UCASE(doctor_name) AS UpperCase_D_name FROM lep_6.patients;

**Output:**

| doctor_name | UpperCase_D_name |
| --- | --- |
| ▶ Mohan | MOHAN |
| Suraj | SURAJ |
| Mehta | MEHTA |
| Karthik | KARTHIK |
| Mohan | MOHAN |
| Suraj | SURAJ |
| Mehta | MEHTA |
| Karthik | KARTHIK |

7. Write a query to display the patients' names along with the total number of characters in their name

**SQL code:**

SELECT p_name,length(p_name) AS lengthofp_name FROM lep_6.patients;

**Output:**

| p_name | lengthofp_name |
| --- | --- |
| ▶ Sarath | 6 |
| John | 4 |
| Henry | 5 |
| Carl | 4 |
| Shikar | 6 |
| Piysuh | 6 |
| Stephen | 7 |
| Aaron | 5 |

8. Write a query to display the gender of the patient as M or F along with the patient's name

**SQL code:**

SELECT p_name,MID(gender,1,1) AS GENDER FROM lep_6.patients;

**Output:**

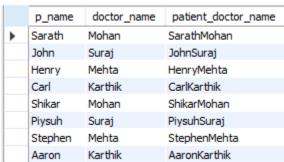| p_name | GENDER |
|--------|--------|
| Sarath | M |
| John | M |
| Henry | M |
| Carl | F |
| Shikar | M |
| Piysuh | M |
| Stephen | M |
| Aaron | M |

9. Write a query to combine the patient's name and doctor's name in a new column

**SQL code:**

SELECT p_name,doctor_name,CONCAT(p_name,doctor_name) AS patient_doctor_name FROM lep_6.patients;

**Output:**

| p_name | doctor_name | patient_doctor_name |
|--------|-------------|---------------------|
| Sarath | Mohan | SarathMohan |
| John | Suraj | JohnSuraj |
| Henry | Mehta | HenryMehta |
| Carl | Karthik | CarlKarthik |
| Shikar | Mohan | ShikarMohan |
| Piysuh | Suraj | PiysuhSuraj |
| Stephen | Mehta | StephenMehta |
| Aaron | Karthik | AaronKarthik |

10. Write a query to display the patients' age along with the logarithmic value (base 10) of their age

**SQL code:**

SELECT age,LOG10(age) as LOG_AGE FROM lep_6.patients;

**Output:**

| age | LOG_AGE |
|-----|---------|
| 67 | 1.8260748027008264 |
| 62 | 1.792391689498254 |
| 43 | 1.6334684555795864 |
| 56 | 1.7481880270062005 |
| 55 | 1.7403626894942439 |
| 47 | 1.6720978579357175 |
| 69 | 1.8388490907372552 |
| 75 | 1.8750612633917 |

11. Write a query to extract the year for a given date and place it in a separate column

**SQL code:**
SELECT *,YEAR(date) AS Year FROM lep_6.patients;

**Output:**

| date | pid | p_name | age | weight | gender | location | phone_no | disease | doctor_name | doctor_id | Year |
|------|-----|--------|-----|--------|--------|----------|----------|---------|-------------|-----------|------|
| 2019-06-15 | AP2021 | Sarath | 67 | 76 | Male | chennai | 5462829 | Cardiac | Mohan | 21 | 2019 |
| 2019-02-13 | AP2022 | John | 62 | 80 | Male | banglore | 1234731 | Cancer | Suraj | 22 | 2019 |
| 2018-01-08 | AP2023 | Henry | 43 | 65 | Male | Kerala | 9028320 | Liver | Mehta | 23 | 2018 |
| 2020-02-04 | AP2024 | Carl | 56 | 72 | Female | Mumbai | 9293829 | Asthma | Karthik | 24 | 2020 |
| 2017-09-15 | AP2025 | Shikar | 55 | 71 | Male | Delhi | 7821281 | Cardiac | Mohan | 21 | 2017 |
| 2018-07-22 | AP2026 | Piysuh | 47 | 59 | Male | Haryana | 8912819 | Cancer | Suraj | 22 | 2018 |
| 2017-03-25 | AP2027 | Stephen | 69 | 55 | Male | Gujarat | 8888211 | Liver | Mehta | 23 | 2017 |
| 2019-04-22 | AP2028 | Aaron | 75 | 53 | Male | Banglore | 9012192 | Asthma | Karthik | 24 | 2019 |

12. Write a query to check the patient's name and doctor's name are similar and display **NULL**, else return the patient's name

**SQL code:**
SELECT NULLIF(p_name,doctor_name) FROM lep_6.patients;

**Output:**

| NULLIF(p_name,doctor_name) |
|---|
| ▶ Sarath |
| John |
| Henry |
| Carl |
| Shikar |
| Piysuh |
| Stephen |
| Aaron |

13. Write a query to check if a patient's age is greater than 40 and display **Yes** if it is and **No** if it isn't

**SQL code:**

SELECT age,IF(age>40,'Yes','No') AS Agegreater40 FROM lep_6.patients;

**Output:**

| age | Agegreater40 |
|---|---|
| ▶ 67 | Yes |
| 62 | Yes |
| 43 | Yes |
| 56 | Yes |
| 55 | Yes |
| 47 | Yes |
| 69 | Yes |
| 75 | Yes |

14. Write a query to display duplicate entries in the doctor name column

**SQL code:**

SELECT doctor_name,COUNT(*) occurences FROM lep_6.patients GROUP BY doctor_name HAVING COUNT(*)>1;

**Output:**

| doctor_name | occurences |
|---|---|
| Mohan | 2 |
| Suraj | 2 |
| Mehta | 2 |
| Karthik | 2 |