

THE RELATIONAL DATABASE SCHEMA

```
CREATE DATABASE IF NOT EXISTS health_records;
```

```
USE health_records;
```

```
CREATE TABLE IF NOT EXISTS cancer_patients_table(  
  patient_id INT PRIMARY KEY AUTO_INCREMENT,  
  adm_date DATE NOT NULL,  
  gender VARCHAR(60),  
  age INT(120),  
  disease VARCHAR(50)  
);
```

```
DELIMITER //
```

```
DROP FUNCTION IF EXISTS GetRandomDate;
```

```
CREATE FUNCTION GetRandomDate(firstDate DATE,nextDate DATE)
```

```
RETURNS DATE
```

```
READS SQL DATA
```

```
DETERMINISTIC
```

```
BEGIN
```

```
  DECLARE randomDays INT;
```

```
  SET randomDays = FLOOR(RAND() * (DATEDIFF(firstDate, nextDate) + 1));
```

```
  RETURN DATE_ADD(firstDate, INTERVAL randomDays DAY);
```

```
END;
```

DELIMITER;

DELIMITER //

DROP PROCEDURE IF EXISTS InsertData;

CREATE PROCEDURE InsertData()

BEGIN

 DECLARE counter INT DEFAULT 1;

 WHILE counter <= 100 DO

 INSERT INTO cancer_patients_table (adm_date, gender, age, disease)

 VALUES (GetRandomDate(DATE_SUB(CURDATE(), INTERVAL 3 YEAR), CURDATE()),

 CASE WHEN counter % 3 = 0 THEN 'male'

 ELSE 'female' END,

 FLOOR(15 + RAND() * 100),

 CASE WHEN counter % 4 = 0 THEN 'skin cancer'

 WHEN counter % 4 = 1 THEN 'lung cancer'

 WHEN counter % 4 = 2 THEN 'throat cancer'

 ELSE 'Other' END);

 SET counter = counter + 1;

 END WHILE;

END; //

DELIMITER //

CALL InsertData();

Query examples

```
SELECT * FROM cancer_patients_table;
```

```
SELECT *  
FROM cancer_patients_table WHERE gender='female';
```

```
SELECT *  
FROM cancer_patients_table WHERE gender='male';
```

```
SELECT disease, age  
FROM cancer_patients_table WHERE disease='lung cancer';
```

```
SELECT patient_id, age, adm_date, gender  
FROM cancer_patients_table WHERE gender='female';
```