# DIA-HCMS

# SYNOPSIS

Millions of people around the world live with diabetes. Beyond managing the condition itself, it's crucial to get diabetes under control because of the risk for serious complications, ranging from kidney failure and nerve damage to heart disease and stroke.

However, Diabetes can be managed by following just a few simple healthy-living strategies:

- Monitoring your blood sugar
- taking any prescribed medications
- eating a smart diabetes diet
- exercising regularly – every day.

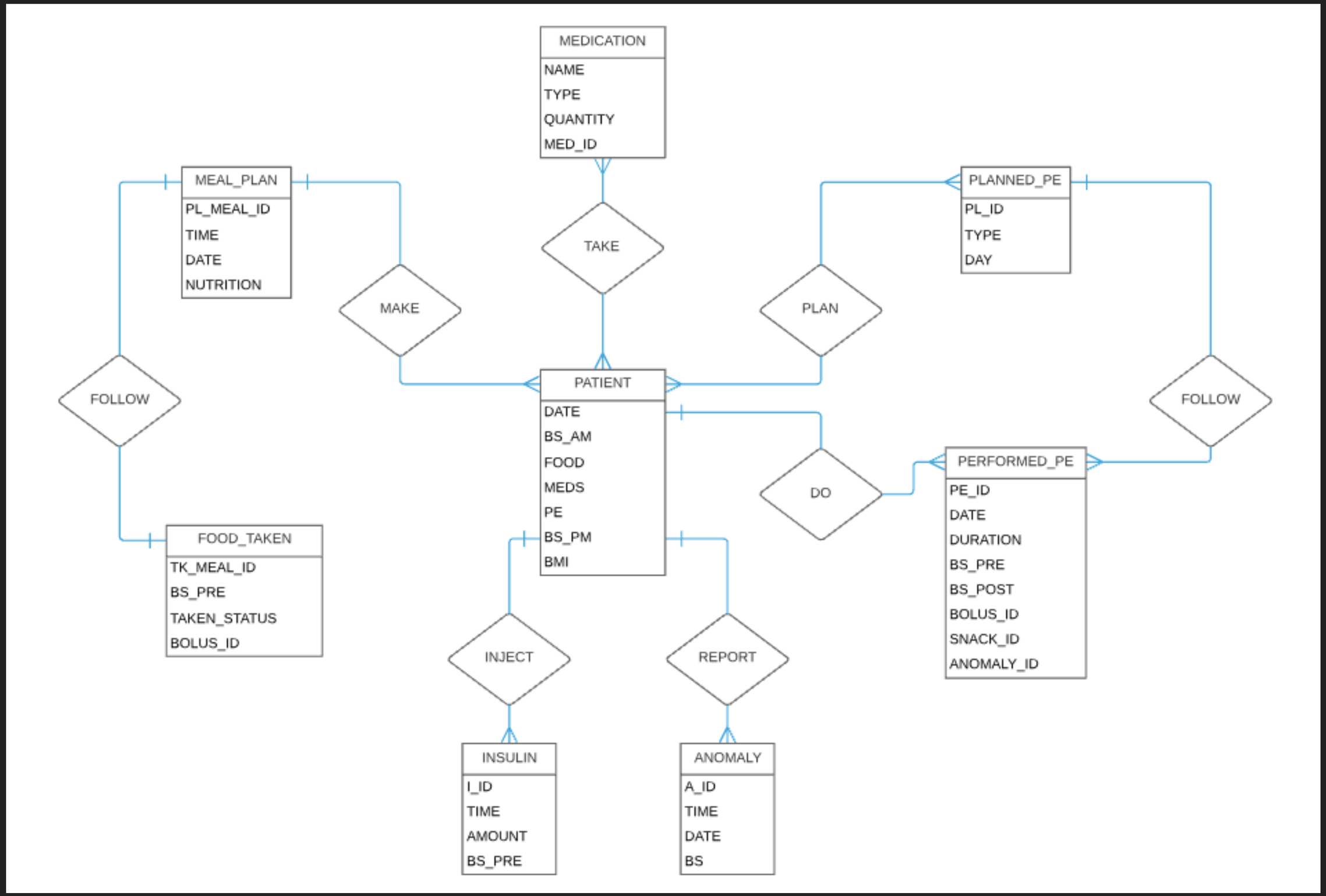
Adhering to strict routines everday can be difficult in the midst of tight schedules and daily activities. The **DiaHCMS** application can be used to ease the process of managing diabetes in the patient's everyday life.

The application interacts with the patient my giving reminders about meal timings, medication,etc. , and also by taking the description of any anomalies in the patient's health or routine as input.

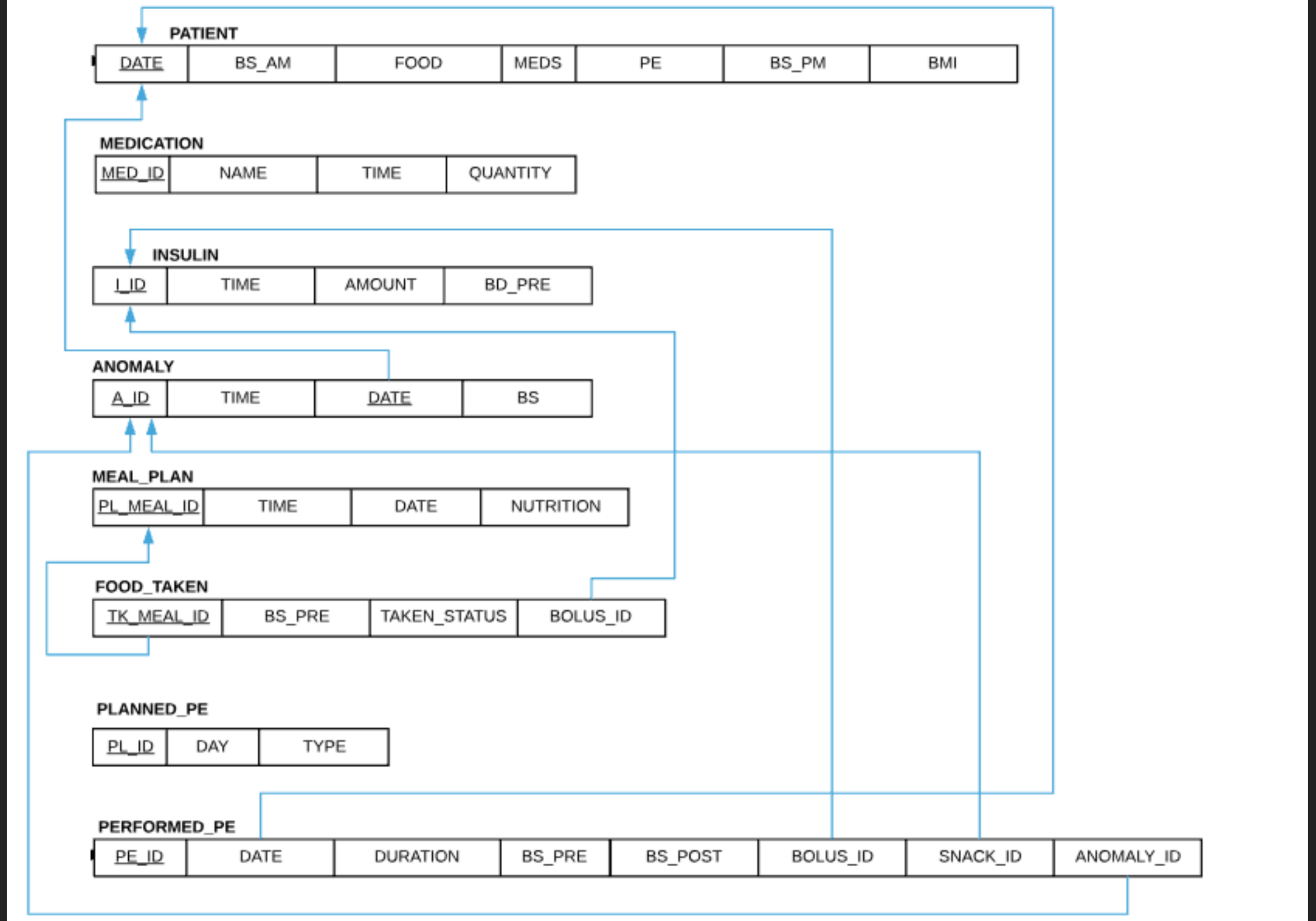
Using the MySQL relational database in the backend, the patient's everyday activities and anomalies are stored, along with meal plans, Insulin dosages, and several other routine activities.

The entries in the database are then used to generate a monthly report, that can be used by the doctor to assess the variation in the patient's condition. This can further aid in providing suggestions for adapting to and controlling the condition.

# ER – DIAGRAM


MEDICATION
NAME
TYPE
QUANTITY
MED_ID
MEAL_PLAN
PL_MEAL_ID
TIME
DATE
NUTRITION
TAKE
MAKE
PLAN
PLANNED_PE
PL_ID
TYPE
DAY
FOLLOW
PATIENT
DATE
BS_AM
FOOD
MEDS
PE
BS_PM
BMI
FOLLOW
DO
PERFORMED_PE
PE_ID
DATE
DURATION
BS_PRE
BS_POST
BOLUS_ID
SNACK_ID
ANOMALY_ID
FOOD_TAKEN
TK_MEAL_ID
BS_PRE
TAKEN_STATUS
BOLUS_ID
INJECT
REPORT
INSULIN
I_ID
TIME
AMOUNT
BS_PRE
ANOMALY
A_ID
TIME
DATE
BS

# SCHEMA DIAGRAM



```
mysql> desc PATIENT;
+-------+-----------+------+-----+---------+-------+
| Field | Type      | Null | Key | Default | Extra |
+-------+-----------+------+-----+---------+-------+
| DATE  | date      | NO   | PRI | NULL    |       |
| BS_AM | float     | NO   |     | NULL    |       |
| FOOD  | varchar(1)| NO   |     | NULL    |       |
| MEDS  | varchar(1)| NO   |     | NULL    |       |
| PE    | varchar(1)| NO   |     | NULL    |       |
| BS_PM | float     | NO   |     | NULL    |       |
| BMI   | float     | YES  |     | NULL    |       |
+-------+-----------+------+-----+---------+-------+
7 rows in set (0.01 sec)
```

```
mysql> desc MEDICATION;
+----------+-------------+------+-----+---------+-------+
| Field    | Type        | Null | Key | Default | Extra |
+----------+-------------+------+-----+---------+-------+
| NAME     | varchar(20) | NO   |     | NULL    |       |
| TIME     | time        | NO   |     | NULL    |       |
| QUANTITY | varchar(10) | NO   |     | NULL    |       |
| MED_ID   | varchar(10) | NO   | PRI | NULL    |       |
+----------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

```
mysql> desc INSULIN;
+--------+-------------+------+-----+---------+-------+
| Field  | Type        | Null | Key | Default | Extra |
+--------+-------------+------+-----+---------+-------+
| I_ID   | varchar(10) | NO   | PRI | NULL    |       |
| TIME   | time        | NO   |     | NULL    |       |
| AMOUNT | float       | NO   |     | NULL    |       |
| BS_PRE | float       | YES  |     | NULL    |       |
+--------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

```
mysql> desc ANOMALY;
+-------+-------------+------+-----+---------+-------+
| Field | Type        | Null | Key | Default | Extra |
+-------+-------------+------+-----+---------+-------+
| A_ID  | varchar(10) | NO   | PRI | NULL    |       |
| TIME  | time        | NO   |     | NULL    |       |
| DATE  | date        | NO   | MUL | NULL    |       |
| BS    | float       | YES  |     | NULL    |       |
+-------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

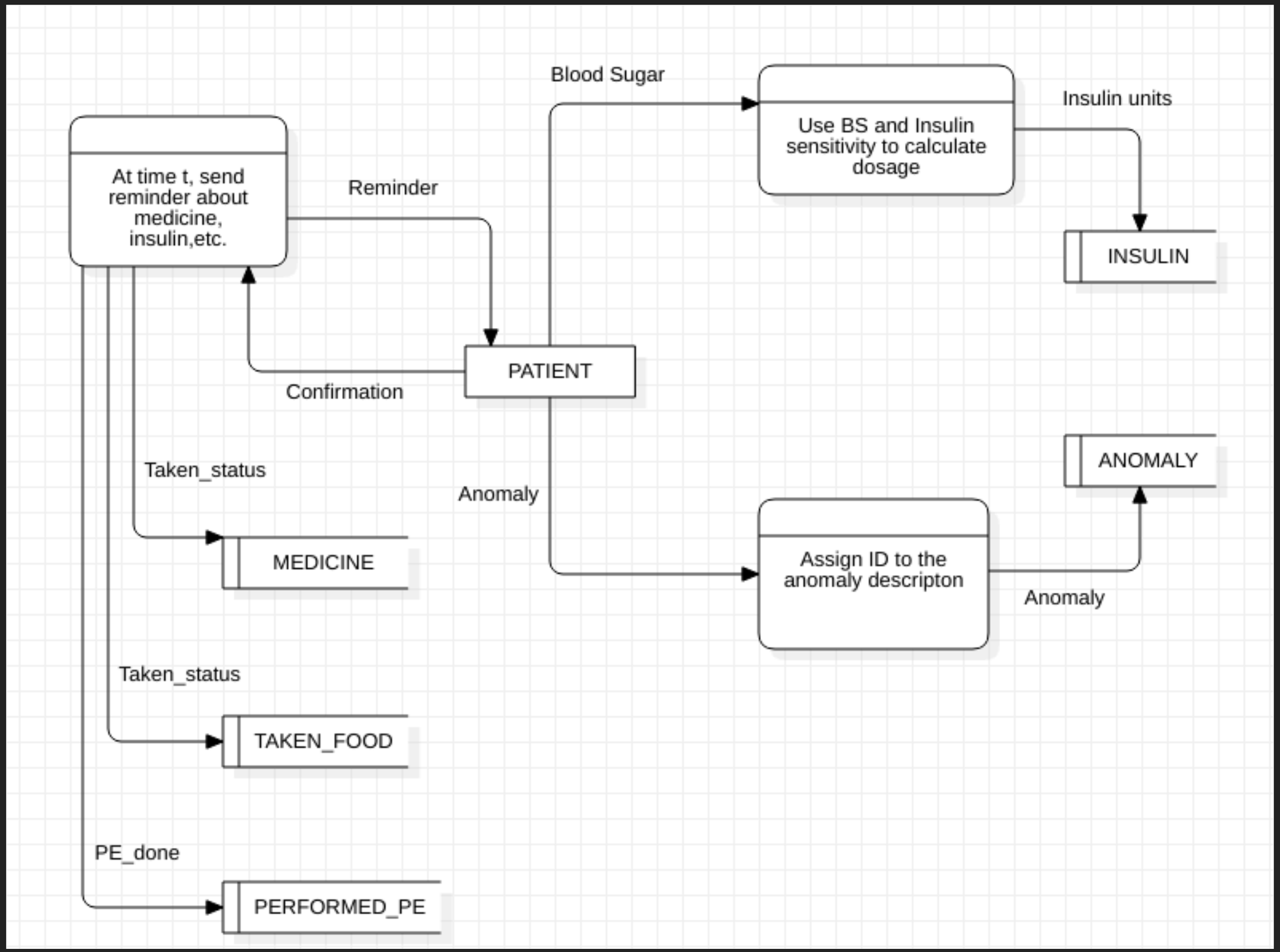
```
mysql> desc MEAL_PLAN;
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| PL_MEAL_ID | varchar(10) | NO   | PRI | NULL    |       |
| TIME      | time        | NO   |     | NULL    |       |
| DATE      | date        | NO   |     | NULL    |       |
| NUTRITION | float       | NO   |     | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

```
mysql> desc FOOD_TAKEN;
+-------------+-------------+------+-----+---------+-------+
| Field       | Type        | Null | Key | Default | Extra |
+-------------+-------------+------+-----+---------+-------+
| TK_MEAL_ID  | varchar(10) | NO   | MUL | NULL    |       |
| BS_PRE      | float       | NO   |     | NULL    |       |
| TAKEN_STATUS | varchar(1) | NO   |     | NULL    |       |
| BOLUS_ID    | varchar(10) | NO   | MUL | NULL    |       |
+-------------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

```
mysql> desc PLANNED_PE;
+-------+-------------+------+-----+---------+-------+
| Field | Type        | Null | Key | Default | Extra |
+-------+-------------+------+-----+---------+-------+
| PL_ID | varchar(10) | NO   | PRI | NULL    |       |
| TYPE  | varchar(20) | NO   |     | NULL    |       |
| DAY   | varchar(10) | NO   |     | NULL    |       |
+-------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)
```

```
mysql> desc PERFORMED_PE;
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| PE_ID     | varchar(10) | NO   | PRI | NULL    |       |
| DATE      | date        | NO   | MUL | NULL    |       |
| DURATION  | int(11)     | NO   |     | NULL    |       |
| BS_PRE    | float       | NO   |     | NULL    |       |
| BS_POST   | float       | NO   |     | NULL    |       |
| BOLUS_ID  | varchar(10) | NO   | MUL | NULL    |       |
| SNACK_ID  | varchar(10) | NO   | MUL | NULL    |       |
| ANOMALY_ID | varchar(10) | YES  | MUL | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
8 rows in set (0.01 sec)
```

# DATA FLOW DIAGRAM



# THANK YOU