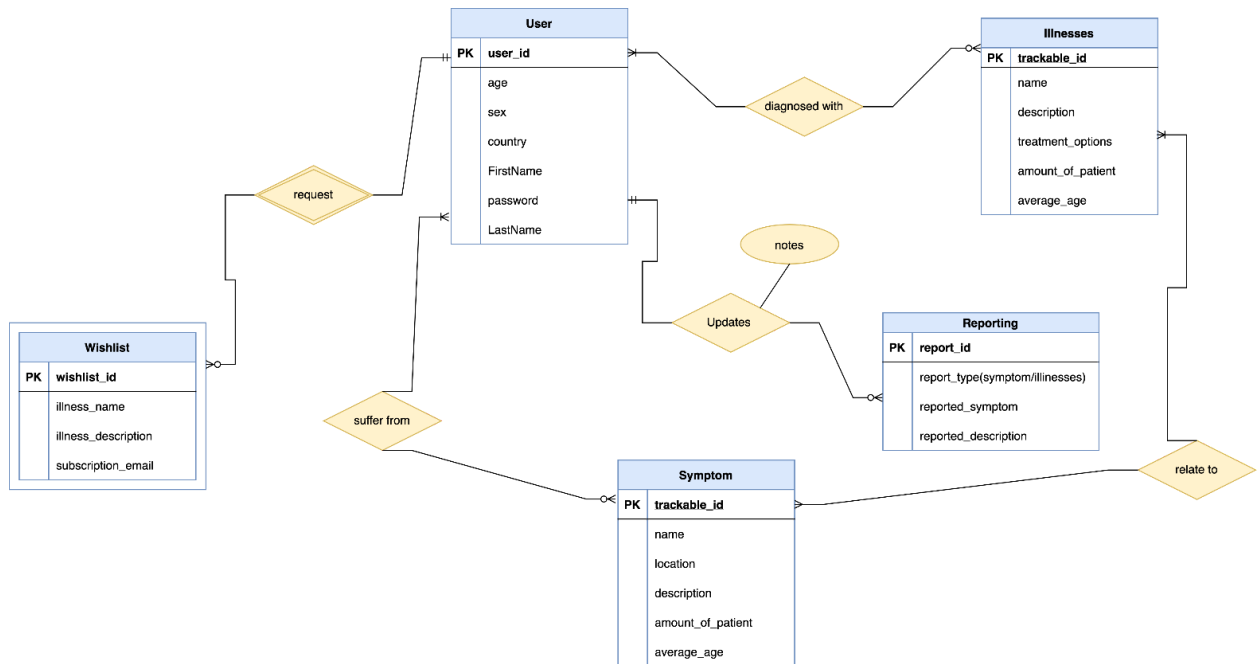# Team 092 (SHRM) - Conceptual and Logical Database Design

1. Application ER diagram

Assumptions:

1. An illness may have multiple symptoms.

2. A specific symptom may be shared by many kinds of illnesses.

3. A user may be diagnosed with 0 to many types of illnesses.

4. A specific illness has at least one user diagnosed with it (since our database is gathered from user feedback).

5. A user may suffer from 0 to many types of symptoms.

6. A specific symptom has at least one user suffering from it (since our database is gathered from user feedback).

7. A user can have zero to several wishes and each wish belongs to one user. The subscription_email row records who asks for what information, the website holder will send notification to the user when the requested update is made.

8. We assume that a single wish can only be requested by one user.

9. A user can make updates to zero to multiple reports/feedbacks.

10. We assume that a report can only be updated by one user.

2. Logical design (relational schema)

```sql
CREATE TABLE USER(
user_id INT,
sex  VARCHAR(255),
country  VARCHAR(255),
FirstName   VARCHAR(255),
LastName   VARCHAR(255),
password   VARCHAR(255),
age INT,
PRIMARY KEY(user_id)
);

CREATE TABLE ILLNESES(
trackable_id INT,
name   VARCHAR(255),
description   VARCHAR(255),
treatment_options   VARCHAR(255),
amount_of_patient INT,
average_age INT,
PRIMARY KEY(trackable_id)
);

CREATE TABLE SYMPTOMS(
trackable_id INT,
amount_of_patient INT,
average_age INT,
name  VARCHAR(255),
location  VARCHAR(255),
description  VARCHAR(255),
PRIMARY KEY(trackable_id)
);

CREATE TABLE REPORTING(
report_id INT,
report_type VARCHAR(255),
reported_symptom VARCHAR(255),
reported_description VARCHAR(255),
PRIMARY KEY(report_id)
);

CREATE TABLE WISHLIST(
wishlist_id INT,
illness_name VARCHAR(255),
illness_description VARCHAR(255),
user_id INT,
subscription_email VARCHAR(255),
PRIMARY KEY(wishlist_id),
FOREIGN KEY(user_id) REFERENCES USER(user_id)
);

CREATE TABLE relate_to(
illness_name VARCHAR(255),
symptom_name  VARCHAR(255),
PRIMARY KEY(illness_name, symptom_name),
FOREIGN KEY(illness_name) REFERENCES ILLNESES(name),
FOREIGN KEY(symptom_name) REFERENCES SYMPTOMS(name)
);

CREATE TABLE diagnosed_with(
illness_name VARCHAR(255),
user_id  int,
PRIMARY KEY(illness_name, user_id),
FOREIGN KEY(illness_name) REFERENCES ILLNESES(name),
FOREIGN KEY(user_id) REFERENCES USER(user_id)
);

CREATE TABLE suffer_from(
user_id  int,
symptom_name  VARCHAR(255),
PRIMARY KEY(user_id, symptom_name),
FOREIGN KEY(user_id) REFERENCES USER(user_id),
FOREIGN KEY(symptom_name) REFERENCES SYMPTOMS(name)
);
```