1. User activity

1.1 Add new users

INSERT INTO user (user\_name, role\_id, password) VALUES (?, ‘user’, ?)

1.2 Alter user’s passwords

UPDATE user SET password = ? WHERE user\_name = ?

1.3 Alter user’s role

UPDATE user SET role\_id = ? WHERE user\_name = ?

1.4 Query for password and role for certain username for login verification

Select \* From user Where user\_name = ?

1.5 Query for all user and role information

SELECT user\_name, user.role\_id AS role\_id, role\_name FROM user,role WHERE user.role\_id = role.role\_id

2. Add new Drug

2.1

INSERT INTO drug (generic\_name,brand\_name,dosage\_form,manufacturer,expiration,upperbound,lowerbound) VALUES (?, ?, ?, ?, ?, ?, ?)

2.2 Query for the latest added drug (biggest ID)

SELECT \* FROM drug WHERE drug\_id = (SELECT max(drug\_id) FROM drug)

3. Check in/out

3.1 Check in

SELECT \* FROM drug\_warehouse WHERE drug\_id = ? AND warehouse\_id = ?

IF NO RESULT RETUREND, INSERT:

INSERT INTO drug\_warehouse (drug\_id,warehouse\_id,quantity) VALUES (?, ?, ?)

ELSE, UPDATE:

Update drug\_warehouse SET quantity = quantity + ? WHERE drug\_id = ? AND warehouse\_id = ?

3.2 Check out

SELECT \* FROM drug\_warehouse WHERE drug\_id = ? AND warehouse\_id = ?

IF QUANTITY RETUREND is below the requested checking out quantity, not excecuted,

ELSE, UPDATE:

Update drug\_warehouse SET quantity = quantity - ? WHERE drug\_id = ? AND warehouse\_id = ?

3.3 Checking history

INSERT INTO checking\_history (drug\_id,warehouse\_id,user\_name,quantity,checking\_date, if\_checked\_in) VALUES (?, ?, ?, ?, ?, true)

INSERT INTO checking\_history (drug\_id,warehouse\_id,user\_name,quantity,checking\_date, if\_checked\_in) VALUES (?, ?, ?, ?, ?, false)

3.4 Query for the latest checking activity (biggest ID)

SELECT \* FROM checking\_history WHERE checking\_id = (SELECT max(checking\_id) FROM checking\_history)

4. Queries

4.1 Query for warehouse information

select \* from warehouse

4.2 Query for drug with partial generic name or partial manufacturer information

SELECT \* FROM drug WHERE generic\_name LIKE %?% AND manufacturer LIKE %?%

4.3 Query for inventory (%% instead of explicit ID for all drugs or all warehouses)

SELECT drug.drug\_id, generic\_name, warehouse\_id, quantity

FROM drug, drug\_warehouse

WHERE drug.drug\_id = drug\_warehouse.drug\_id AND drug.drug\_id LIKE ? AND warehouse\_id LIKE ?

4.4 QUERY for checking history in a certain period

SELECT \* FROM checking\_history WHERE checking\_date BETWEEN ? AND ?

4.5 QUERY for expired drugs

SELECT drug.drug\_id AS drug\_id, generic\_name, expiration, warehouse\_id, quantity FROM drug, drug\_warehouse WHERE drug.drug\_id = drug\_warehouse.drug\_id AND expiration <= CURDATE()

4.6 QUERY for drugs whose quantity is beyond the upper bound or below the lower bound

SELECT drug.drug\_id AS drug\_id, min(generic\_name) AS generic\_name, sum(quantity) AS total\_quantity, min(lowerbound) AS lowerbound, min(upperbound) AS upperbound

FROM drug, drug\_warehouse

WHERE drug.drug\_id = drug\_warehouse.drug\_id

GROUP BY drug.drug\_id

HAVING total\_quantity < lowerbound OR total\_quantity > upperbound