

SQL Query Assignment: ToDo App

Schema Design

```
CREATE TABLE users (  
  id INT,  
  name VARCHAR(100),  
  email VARCHAR(100)  
);  
  
CREATE TABLE categories (  
  id INT,  
  name VARCHAR(50)  
);  
  
CREATE TABLE todos (  
  id INT,  
  user_id INT,  
  category_id INT,  
  title VARCHAR(255),  
  description TEXT,  
  status VARCHAR(20), -- e.g., 'pending', 'completed'  
  due_date DATE  
);
```

Sample Data

```
-- Users  
INSERT INTO users VALUES (1, 'Alice Johnson', 'alice@example.com');  
INSERT INTO users VALUES (2, 'Bob Smith', 'bob@example.com');  
INSERT INTO users VALUES (3, 'Charlie John', 'charlie@example.com');  
  
-- Categories  
INSERT INTO categories VALUES (1, 'Work');  
INSERT INTO categories VALUES (2, 'Personal');  
INSERT INTO categories VALUES (3, 'Health');  
  
-- Todos  
INSERT INTO todos VALUES (1, 1, 1, 'Submit Report', 'Submit by Friday', 'pending',  
  '2025-07-12');  
INSERT INTO todos VALUES (2, 1, 2, 'Buy Groceries', 'Milk, Eggs, Bread', 'completed',  
  '2025-07-05');  
INSERT INTO todos VALUES (3, 2, 1, 'Team Meeting', 'Project sync up', 'pending',  
  '2025-07-10');  
INSERT INTO todos VALUES (4, 2, 3, 'Morning Jog', 'Run 5km', 'completed',  
  '2025-07-09');
```

```
INSERT INTO todos VALUES (5, 2, 2, 'Plan Vacation', 'Choose destination', 'completed',  
'2025-07-14');  
INSERT INTO todos VALUES (6, 3, 1, 'Fix Bug', 'Resolve login error', 'pending',  
'2025-07-11');  
INSERT INTO todos VALUES (7, 3, 2, 'Read Book', 'Finish 3 chapters', 'completed',  
'2025-07-08');
```

Questions

1. List all todos that are due after today and are still pending.
2. Find users who have the word "john" anywhere in their name (case insensitive).
3. Show how many todos each user has.
4. Find users who have created more than 2 todos.
5. Get the earliest and latest due date for each user.
6. List each todo along with the user's name.
7. List each todo with its category name and user name.
8. Find users who have at least one todo in the 'Personal' category.
9. Find categories that have more than 2 todos.
10. List users who have only completed todos (no pending tasks).