COP 4610L: Applications in the Enterprise Fall 2005

Midterm Exam Review

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Topics Covered On Midterm Exam

- **GUIs** – Lecture notes – Part 1 and Part 2. (Material also appears in Chapter 2 of textbook.

- **Threads** – Lecture notes – Part 1 and Part 2.

- **Java Networking** – Lecture notes – Part 1, Part 2, and Part 3.

- **SQL** – Lecture notes – Part 1 and Part 2. Be most familiar with basic DDL commands of CREATE TABLE and DML commands of INSERT, and SELECT. For SELECT be most familiar with join operations and sub-queries.

Structure of the Exam

- The exam will consist mostly of fill in the blank and multiple choice questions. Anticipate between 25-30 questions of this type.

- There will be 3-4 short answer/description questions.

- There will be no questions where you will be required to write code on the exam. However, there might be a question where I give you some code and you explain what it does.

Sample Questions

1. The logic for an `action` takes the form of a _____ method that the event mechanism invokes in response to the user activating an interface component (e.g., clicking a `JButton`).

2. The drag and drop subsystem invokes method _____ of interface `DropTargetListener` when the user drops an object on a `DropTarget`.

3. The simplest form of a `select` query is:

Sample Questions (cont.)

4. Given the two relation schemas: R(A, B, C) and S(A, C, D). Form an SQL query that will return a result set T(R.A, R.B, S.D) where every tuple in the result set the A value in R is less than the A value in S and the C value in R is equal to the C value in S.

5. If multiple threads are waiting on some condition variable and signal() is invoked the _____ thread is the one which is moved to the runnable state.

Example Questions - SOLUTIONS

1. The logic for an `action` takes the form of an actionPerformed method that the event mechanism invokes in response to the user activating an interface component (e.g., clicking a `JButton`).

2. The drag and drop subsystem invokes method drop of interface `DropTargetListener` when the user drops an object on a `DropTarget`.

3. The simplest form of a `select` query is:

    `select * from tablename`

4. Given the two relation schemas: R(A, B, C) and S(A, C, D). Form an SQL query that will return a result set T(R.A, R.B, S.D) where every tuple in the result set the A value in R is less than the A value in S and the C value in R is equal to the C value in S.

```
select (R.A, R.B, S.D)

from R crossjoin S

where R.A < S.A and R.C = S.C;
```

5. If multiple threads are waiting on some condition variable and signal() is invoked the longest waiting thread is the one which is moved to the runnable state.