2.6 Write an SQL statement that returns the names (not the Ids) of all students who received an A in CS305 in the fall of 2000.

2.7 State whether or not each of the following statements could be an integrity constraint of a checking account database for a banking application. Give reasons for your answers.

a. The value stored in the `balance` column of an account is greater than or equal to $0.
b. The value stored in the `balance` column of an account is greater than it was last week at this time.
c. The value stored in the `balance` column of an account is `$128.32`.
d. The value stored in the `balance` column of an account is a decimal number with two digits following the decimal point.
e. The `social_security_number` column of an account is defined and contains a nine-digit number.
f. The value stored in the `check_credit_in_use` column of an account is less than or equal to the value stored in the `total_approved_check_credit` column. (These columns have their obvious meanings.)

2.8 State five integrity constraints, other than those given in the text, for the database in the Student Registration System.

2.9 Give an example in the Student Registration System where the database satisfies the integrity constraints IC0–IC3 but its state does not reflect the state of the real world.

2.10 State five (possible) integrity constraints for the database in an airline reservation system.

2.11 A reservation transaction in an airline reservation system makes a reservation on a flight, reserves a seat on the plane, issues a ticket, and debits the appropriate credit card account. Assume that one of the integrity constraints of the reservation database is that the number of reservations on each flight does not exceed the number of seats on the plane. (Of course, many airlines purposely over-book and so do not use this integrity constraint.) Explain how transactions running on this system might violate

a. Atomicity
b. Consistency
c. Isolation
d. Durability

2.12 Describe informally in what ways the following events differ from or are similar to transactions with respect to atomicity and durability.

a. A telephone call from a pay phone (Consider line busy, no answer, and wrong number situations. When does this transaction "commit?")
b. A wedding ceremony (Suppose that the groom refuses to say "I do." When does this transaction "commit?")
c. The purchase of a house (Suppose that, after a purchase agreement is signed, the buyer is unable to obtain a mortgage. Suppose that the buyer backs out during the closing. Suppose that two years later the buyer does not make the mortgage payments and the bank forecloses.)
d. A baseball game (Suppose that it rains.)