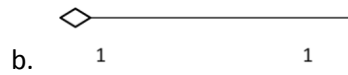CS 3450 – Test 1

Fall 2012

October 16, 2012

Name: _____

100 Points

1. (5 points) What is the difference between a Level 0 and a Level 1 diagram?

2. (15 Points) Explain when to use the following the arrows in class diagrams:

   a. ◆————————   1   1

   b. ◇————————   1   1

   c. ◁————————

3. (5 points) Draw an example of a start and stop state in an activity diagram

4. (5 points) Draw an example of a start and stop state in a data flow diagram

5. (30 Points) Draw use cases for each of the following activities:
    a. A bank customer withdrawing money from an ATM
    b. A person brushing their teeth

6. (30 Points) Draw a class diagram that fulfills the following criteria:
    a. A Jetliner is an Airplane
    b. A Jetliner consists of 2 wings, and 1 tail
    c. A Jetliner can have passengers
    d. A Jetliner can have cargo
    e. A Jetliner has the following properties/methods:
        i.   A private speed (double), altitude (integer), and flightNumber(string)
        ii. Public getSpeed, getAltitude, and getFlightNumber methods with their respective return types
        iii. A Private calculateSpeed method

7. (10 Points) Draw a Level 0 data flow diagram for YOUR Speedy Shop system