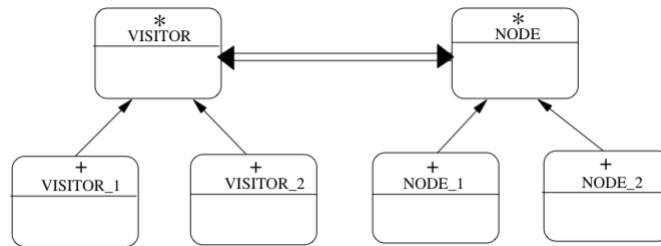CSE3311 Summer 2013
Quiz 5

Name: _____

Student#: _____

CSE Account: _____

Points: _____ /9

Show all work clearly and in order, and underline your final answers. Use Eiffel notation when necessary, sketch all relevant graphs and write down all relevant mathematics. You have 30 minutes to take this 9 points (3%) quiz.

The following is a simplified BON diagram for the Visitor pattern.

1. (_____/3 points) *Describe the features required in each deferred class, and a typical effective class in each hierarchy, to support the pattern.*

Answer:

in VISITOR class we have to provide `visit` method for each NODE which will be implemented by each concrete visitor. At the same time NODE should provide *accept(v:VISITOR)* method and each node should implement it.

2. (_____/3 points) *Suppose a class NODE_C is added as a subclass of NODE. List and describe the required changes to all of the classes affected by the addition.*

Answer:

If new node is added then a visit method has to added to each visitor class

3. (_____/3 points) *Consider Exceptions in Eiffel. Explain in few sentences how exceptions should be used and how the contracts are evaluated in case of an exception.*

Answer:

Exceptions should be used to handle situation in which we have no control on the execution e.g., broken link to the server, file not found etc. They are exceptions not a part of the normal flow of the program.
In Eiffel exceptions are handled by `rescue` clause that in addition can have `retry` key word.
In rescue section we perform a clean-up restoring a class invariant and optionally, preparing for a retry which allow for a re-start of the function.
When an exception appears then the precondition is True and the post condition is a class invariant.