

Name: \_\_\_\_\_

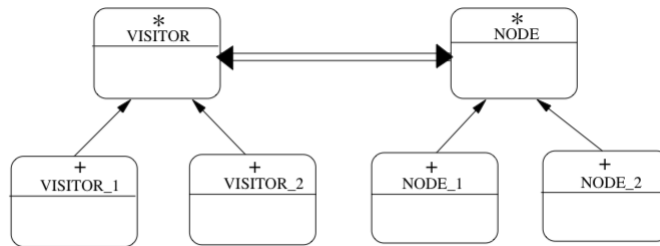
Student#: \_\_\_\_\_

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.

**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.

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**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.