Homework

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2. When being called, the insert function calls the find function. The find function involves the comparisons between Coord types and int tpes. However, this code does not have an overloading ‘=’ operator to compare these two types. Thus, compilation error will come.

3b. A two-parameter-listAll function is required because besides a parameter that is used to pass class into the function, we also need another parameter to memorize the class’s base class type (the path leading to this object). If only one parameter is used, for example, “Smallgon” rather than “Actor=>Alien=>Smallgon” will be printed out, and is incorrect.

4a. O(N^3): there are three nested for loops traversing from 0 to N.

4b. O(N^3): for the maximum case for i is N-1, so the three for loops will take N, N-1, and N steps, which still lead to approximately O(N^3).

5. O(N^2): inside the for loop, each item calls the get function, which searches through the whole linked list. Thus, it can be considered as two nested for loops from 0 to N.