Calvin Liu

CS 32 Hwk 4

2. You cannot compare URLs when using the find function in insert because inside the class URL, there is not overloaded operator function.

3b. You would not be able to concatenate onto the string path so it would just print out the children that point to NULL (the end).

4a. O(N3) because you go through the first loop N times and then you have an inner loop going through N times as well, and inside those 2 loops, another loop going through the array N times.

4b. O(N3) because the first loop goes through the array N times, the inner loop goes i times (which is also N times) and the next inner loop goes through N times.

5a. O(N2) because the for loop gives you N, the get function is of O(logn) and the other functions are of constant time complexity since they are just assigning values or switching them.

5b. O(NlogN) because reserve is constant and the 2 for loops would give you Ns each but you are adding them. The sort function was told to be O(NlogN) and there is another for loop that would also give you O(N). Because they are not within each other though they are not multiplied but instead added. The worst case would then be NlogN. The best time complexity compared to part a would be O(NlogN) which is better than O(N2)