

Q1)

I created a copy of the digraph that is a reverse of the original, then I check if the node is a child of the parent node iterating through all nodes. If not found, I use the reversed graph to check again for the children (going up in the original graph), also iterating through the nodes.

Q2)

I keep getting a weird error "Bad version number in .class file" (I am trying to run it from my home over putty, and I cannot run the tests) I ran some tests at the lab before, my code worked with the tests I made.

Q3) I did not implement this part

Q4) I think the complexity is $50N^3$ because there are 50 iterations of 3 for loops of N times where N is the number of edges.

Q5) I could not test this part from my home I am having the same error in question 2.

Q6) I think the complexity for task 3 is $4N^2$ where N is the number of edges.