Theoretical Time Complexity:

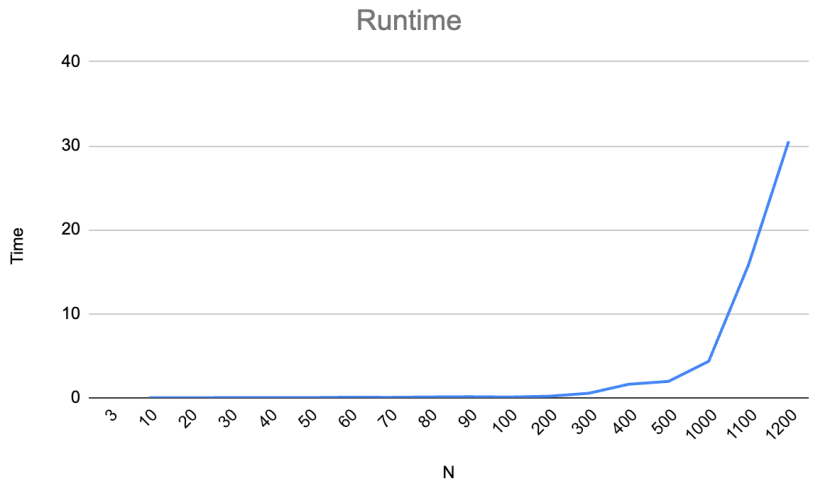
The main() function has 1 while loop nested in a for loop. So the worst case time complexity of the main function is O(n^2).

The floyd() function has 2 nested for loops nested in another for loop so the worst case time complexity of the floyd function is O(n^3).

The path() function has no loops so the worst case time complexity is O(k) where k is a constant.

So the overall theoretical time complexity is O(n^2 + n^3 + k) = O(n^3).

Practical Time Complexity Graph:



N	Time
3	0.000084
10	0.000867
20	0.00431
30	0.006764
40	0.012117
50	0.057273
60	0.042086
70	0.081964
80	0.113065
90	0.074264
100	0.171642
200	0.522807
300	1.598501
400	1.942716
500	4.328636
1000	15.875777
1100	30.528657