

Report about time complexity of project:

In function "prims_algorithm", there are 3 inner loops (starting from line 201 and ending at line 285)

Since this part has the highest complexity, other parts does not have any impact on complexity

Instead of "SIZE", I will say "n"

1st loop (201th line): this loop runs n times, since i iterates until $i < n$

2nd loop (217th line): this loop first runs 1 times, then 2 times, then 3 times, and it's amount of running increases 1 times at each iteration of n

This creates a complexity of $O(n)$ -> since, if it would run until $j < n$, it's complexity would still be $O(n)$

3rd loop (221th line): this loop also runs n times, since it runs until $i < n$ is false

$$O(n * n * n) = O(n^3)$$