

## Audie's party

### Instructions

1. Implement the necessary code to solve the problem.

(a) Make sure that you apply **greedy** algorithms to your solution. ✓

(b) Do not forget to write clean code and follow best practices. ✓

2. Write a brief explanation of why you have chosen the greedy algorithm to solve the problem.

I have chosen greedy algorithm for selecting always first the heavier weight sub-graph in local choices, this way I found local solutions that later help me to answer all requirements from the assignment and satisfying the global solution of the problem. ✓

(a) If you use a new algorithm, include the correctness proof; otherwise, you only need to mention the algorithm's name.

I used the Deep First Search algorithm to make operations in the weighted graph. ✓

3. Identify the time complexity of your solution.

$O(n^2)$  ✓