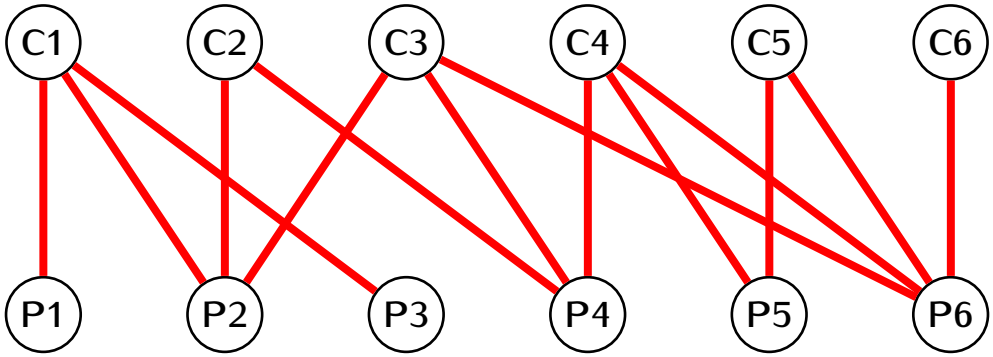
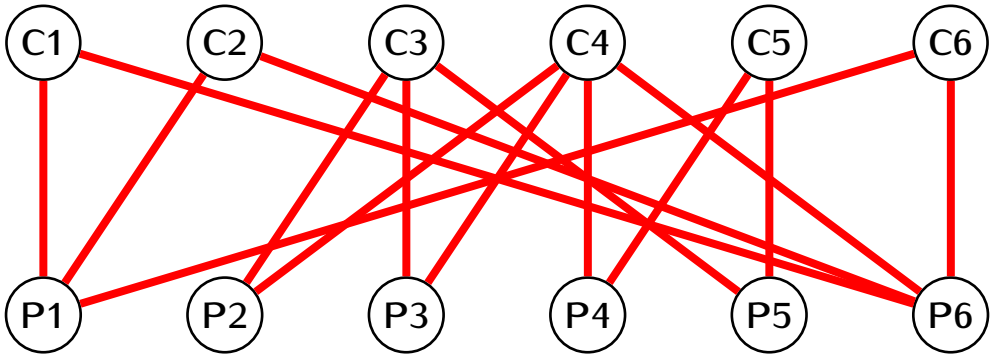
Example.



Example.



König's Theorem

Consider an assignment problem matching job candidates $C_1, \ldots, C_n$ with positions $P_1, \ldots, P_m$. Assume that there exists a number $k > 0$ such that

- for each position P_i there are at least k job candidates who applied for this position
- each job candidate C_j applied for at most k positions.

Then the assignment problem has a solution. That is, it is possible to match each position with a job candidate, in such way that every position is filled and no job candidate will have at most one position.

Proof.