

Discrete Optimisation

Exercise Session 11: Matching and Assignment

10th December 2015

Exercise 1 (bipartite matching). Find a match whose cardinality is maximum in the following bipartite graph.

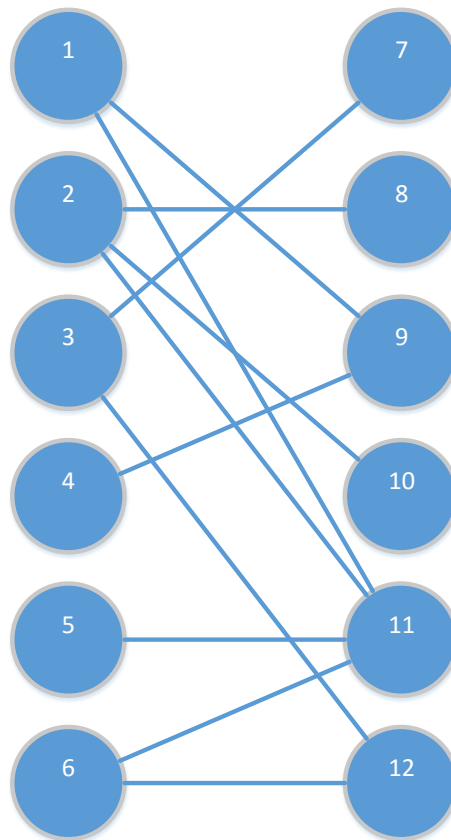


Figure 1: Bipartite graph.

Exercise 2 (weighted assignment). Compute the maximum weight assignment for the following weight matrix (the graph is complete).

$$\mathbf{c} = \begin{pmatrix} 6 & 2 & 3 & 4 & 1 \\ 9 & 2 & 7 & 6 & 0 \\ 8 & 2 & 1 & 4 & 9 \\ 2 & 1 & 3 & 4 & 4 \\ 1 & 6 & 2 & 9 & 1 \end{pmatrix}.$$