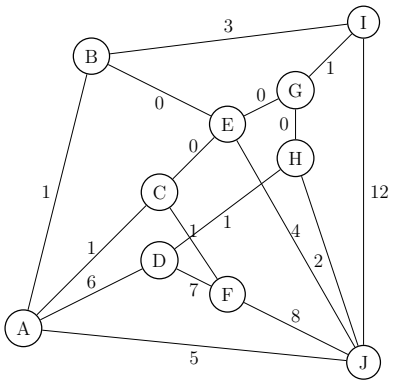
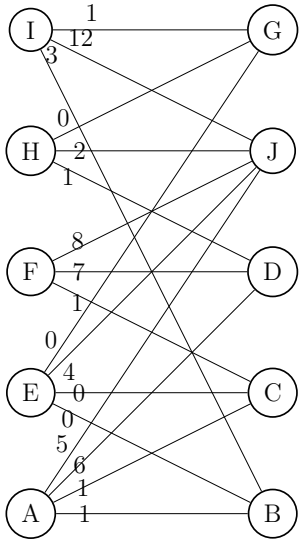
1. ***Problem 3.3: The Hungarian Method and counting of min-imum weight perfect matchings***



Original Graph



Bipartite-view

	B	C	D	J	G
A	1	1	6	5	–
E	0	0	–	4	0
F	–	1	7	8	–
H	–	–	1	2	0
I	3	–	–	12	1

Matrix representation

Algorithm:

$$
\begin{array}{cc|ccccc}
 & & B & C & D & J & G \\
 & A & 1 & 1 & 6 & 5 & - \\
* & E & \boxed{0} & 0 & - & 4 & 0 \\
 & F & - & 1 & 7 & 8 & - \\
* & H & - & - & 1 & 2 & \boxed{0} \\
 & I & 3 & - & - & 12 & 1
\end{array}
\xrightarrow{\Delta=0.5}
\begin{array}{cc|ccccc}
 & & B & C & D & J & G \\
 & A & 1 & 1 & 6 & 5 & - \\
* & E & \boxed{0} & 0 & - & 4 & 0 \\
 & F & - & 1 & 7 & 8 & - \\
* & H & - & - & 1 & 2 & \boxed{0} \\
 & I & 3 & - & - & 12 & 1
\end{array}
\tag{1}
$$