Advanced Problem Solving and Search
Tutorial 3

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For the ASP exercises, either use the browser version of clingo `https://potassco.org/clingo/run/`, or download clingo (*recommended*) from `https://potassco.org/`.

Exercise 3.1
Given the programs P_i, determine the stable models of P_i by applying the *Gelfond-Lifschitz-Reduct*.

$$P_1 = \{a \leftarrow not\ b, c.$$
$$b \leftarrow not\ a.$$
$$c \leftarrow not\ b.\}$$

$$P_2 = \{a \leftarrow not\ b.$$
$$b \leftarrow not\ c.$$
$$c \leftarrow not\ a.\}$$

$$P_1 = \{a \leftarrow a.$$
$$b \leftarrow c, d.$$
$$c \leftarrow not\ d.$$
$$d \leftarrow not\ c, a.\}$$

Exercise 3.2
Given a graph $G = (V, E)$, a matching is a set of edges $M \subseteq E$, such that every node is the endpoint of exactly one edge. Give an ASP Encoding for the Graph Matching Problem.