

CPSC 351 — Tutorial Exercise #14

Additional Practice Problem

This problem will not be discussed during the tutorial, and solutions for this problem will not be made available. It can be used as a “practice” problem that can help you practice skills considered in the lecture presentation for Lectures #15–17, or in Tutorial Exercise #14.

1. Let $\Sigma = \{a, b, c\}$, and let $L_1, L_2 \subseteq \Sigma^*$ such that

$$L_2 = \{\omega \cdot a \mid \omega \in L_1\}.$$

Suppose that L_1 is undecidable. Give a **many-one reduction** to prove that L_2 is also undecidable.