CS250 Lab 16 – Undecidable Problems

Objectives: In this lab you will learn how to

- use a reduction to show a problem is undecidable

Assignment 1:
Show that the following problem is undecidable: Given a TM M and input w, determine if M revisits the starting cell on the tape during the computation.

Assignment 2:
Show that the following problem is undecidable: Given a TM M and input w, determine if M uses a finite amount of tape during the computation.

Assignment 3:
Show that the following problem is undecidable: Given a TM M determine if $L(M)$ contains any strings of even length.

Submit your files in goucherLearn for grading.