CpSc 3500 — Goddard

In-class Practice 12: Regular Grammars

1. Give a regular grammar for the language of all binary strings where the difference between the number of `0`s and `1`s is odd.

Language is all binary strings of odd length. So do
$S \to \texttt{0}T \mid \texttt{1}T \mid \texttt{0} \mid \texttt{1}$
$T \to \texttt{0}S \mid \texttt{1}S$

2. Can a regular grammar be ambiguous? Explain.

Yes. For example, if use class algorithm to convert NFA to regular grammar and NFA accepts some string in more than one way.