

CSCI 340 — Homework 11

Professor Killian

Due: April 28, 2019 @ 11:59PM

1. [4pts each] VERYEQUAL is the language ($\Sigma = \{a b c\}$) as all strings that have as many total a 's as total b 's as total c 's
 - Draw a TM that accepts VERYEQUAL
 - Draw a PM that accepts VERYEQUAL
 - Draw a 3PDA that accepts VERYEQUAL
 - Draw a 2PDA that accepts VERYEQUAL
2. [4pts] Draw a 2PDA that accepts EVEN-EVEN and keeps at most two letters in its STACKs
3. [4pts each] Show that each of the following languages is recursive by finding a TM that accepts them and crashes on strings in their complement
 - EVEN-EVEN
 - EQUAL
4. [4pts each] Decode the following words from CWL into their corresponding TMs and determine which are in ALAN and which are in MATHISON
 - *abaabbbab*
 - *abaaabaabbbaabaababbbb*
 - *abaaabaabaaabaababbab*