Universidad de los Andes

ISIS-1106 Lenguajes y máquinas
Project 2
Fecha: April 9, 2023

The purpose of this project is to use GOLD to define finite state transducers to code and decode input strings. You should hand in the .gold file with your solution containing both the coder and decoder.

Task 1. Build a coder that reads strings of the form $\omega_1 \& \ldots \& \omega_n$ where each ω_i is a string of 3 symbols from $(a..c)$.

The transducer should output: $\rho_1 \& \ldots \& \rho_n$

Where:

- $\rho_i = *$ if $i > 1$ and $\omega_i = \omega_{i-1}$
- ρ_i is the reverse of ω_i otherwise

Task 2. Build a decoder to decode strings coded by the coder. The decoder should read coded strings, verify that the string was coded correctly and decode the string.

We include a coder-decoder base gold project containing the main instructions to build the automaton and the interaction to input strings from console. You may use it as a starting point for your project.

This is an example for the coder

```
input string:  abc&bac&bac&bba&bbb&bbb&bbb&cca
output string: cba&cab&*&abb&bbb&*&*&acc
```