Universidad de los Andes

ISIS-1106 Lenguajes y máquinas
Project 3
Date: May 2, 2020

As we have seen in the previous projects, the project work for the course will consist of managing and operating a language to program a robot in a two-dimensional world. The robot is able to move in the world (by a matrix); the robot moves from cell to cell. Cells are indexed by rows and columns. The top left cell is indexed as (1,1). North is top; West is left. Additionally, the robot interacts (picks and puts down) with two different types of objects (chips and balloons).

Task 1. For this project we will use GOLD to perform a syntactical analysis of tokenized routines for the Robot.

In particular we will use a pushdown automata to parse the routines of the Robot language.

For this project, you will have determine whether a given robot program is correct. For this project you will have to reuse your solution for Project 2. First, you will have to take the given robot program and use the lexical analysis (your Project 2) to generate a string of tokens. This string of tokens will be used on a second (push down) automata for the syntactic analysis of the token string, and determine if this string effectively corresponds to a valid program.

Note that in this project you have to make sure that all variables used in the program have been defined before.