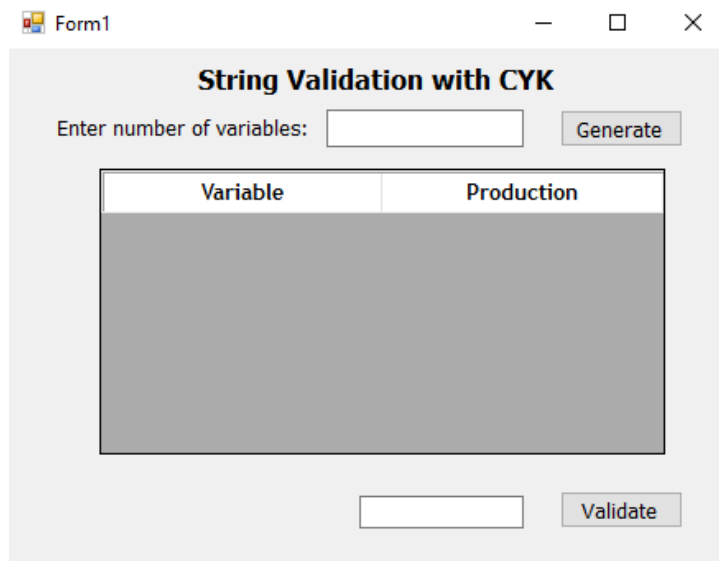


## CFG-Verifier

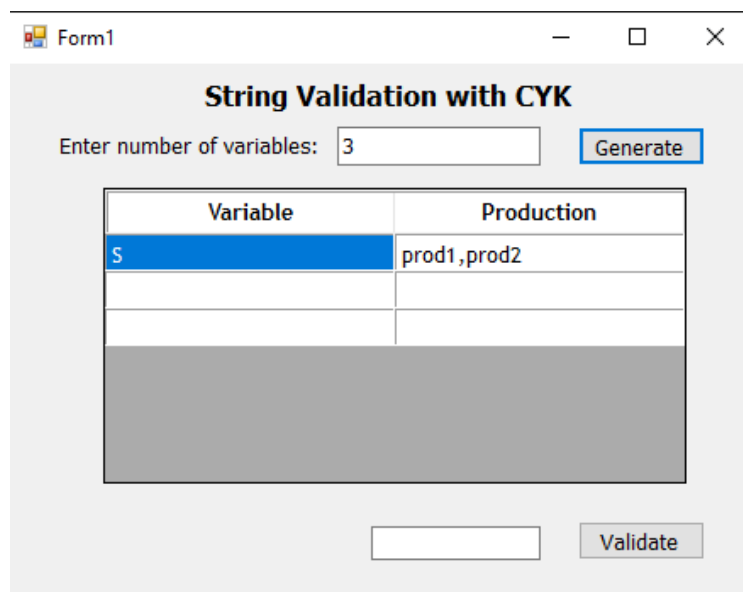
### Step by step guide:

1. Run the provided .exe file
2. The program is very simple, once you have executed the program the main window is displayed. In this window you can find all the necessary controls to create your own CFG and validate any text string.



The screenshot shows a Windows application window titled "Form1" with the title bar containing standard minimize, maximize, and close buttons. The main content area is titled "String Validation with CYK". Below the title, there is a label "Enter number of variables:" followed by an empty text input field and a "Generate" button. Below this is a table with two columns: "Variable" and "Production". The table is currently empty, showing only the header row. At the bottom of the window, there is another empty text input field and a "Validate" button.

3. Input the desired number of variables that your CFG is made of and click the "Generate" button.



The screenshot shows the same application window after the "Generate" button has been clicked. The "Enter number of variables:" input field now contains the number "3", and the "Generate" button is highlighted with a blue border. The table below now has three rows. The first row is highlighted in blue and contains the variable "S" in the "Variable" column and "prod1,prod2" in the "Production" column. The second and third rows are empty, showing only the header row. The "Validate" button at the bottom remains unchanged.

Variable	Production
S	prod1,prod2

4. The table will load the necessary rows for you to create the CFG. Each row is divided into two columns, in the Variable column you must enter an unique

symbol representing the variable and in the Production column you must enter the production rules of the given variable separated by commas.

**Note:** To represent an empty production you can use the “#” character.

**Note 2:** The entered CFG must be in [Chomsky Normal Form](#)(CNF).

5. Once you have entered your grammar in CNF, you can enter a text string in the text box ubicated in the bottom of the window and click the “Validate” button.

String Validation with CYK

Enter number of variables: 3 Generate

Variable	Production
S	AB,#
A	a
B	b

ab Validate

6. A pop-up will appear indicating if the text string is generated or not by the CFG.

String Validation with CYK

Enter number of variables: 3 Generate

Variable	Production
S	AB,#
A	a
B	b

Result

i The chain is generated.

Aceptar Validate