Integrative practice
Part 2
Computational mathematics

Professor: Gilberto Huesca Juárez

Name: _____

Student ID: _____

Read the assignment before start
In Canvas, write the names and student IDs of all the team members, and the group
This activity is in pairs
Make the proposed activities and at the end, if there are programs to deliver, upload the files packaged within a ZIP file.
The name of the main Java file must be Main.java.
The name of the ZIP file must be Exxxxproject1.zip where xxxxx is your student ID. For example, if your student ID is 123456 , the file name must be E123456project1.zip
The programs must be properly commented with JavaDoc.
LATE DELIVERY NOT APPLICABLE.
This activity counts as 10% of the final grade.

Ask which file to read

Make a Java program that reads from a file the elements that define a context-free grammar and apply the top-down parsing process for strings given by the user.

The grammar will be defined in a txt file. The file shall be defined as follows:

- The first line indicates the set of non-terminal symbols separated by commas, only one uppercase character.
- The second line indicates the set of terminal symbols separated by commas, only one lowercase character.
- The third line indicates the start symbol.
- The following lines indicate the productions of the grammar in the following format:

simboloNoTerminal - > chain terminals or non-terminal symbol

Lambda cannot appear as body of any production. The top-down parsing process will receive a string and an integer. The integer indicates the maximum depth of the parsing tree. If this depth is exceeded, you must stop the process indicating that no solution was found for the string.

The outcome of the process must be the parsing tree.

Do not worry about validating the values in the input file. Suppose that were built correctly.