

ASSIGNMENT

Due Date : 10.01.2022

Context Free Grammar

Your assignment is to solve the parsing problem that check whether a given string belongs to the language given by any Context Free Grammar G_1 . **Generate the parse tree for any input string** on given Context Free Grammar G_1 (should be read from CFG.txt file) by the user. Input string should be given by the user.

You should show **parse tree** and **derivation** of string in grammar G_1 on the screen. Your implementation also should give that whether input string **belongs** to the language G_1 .

You can implement your solution in C# or **java**.

Report include:

- **Description** ?
- **Pseudeu** code
- **Parsing tree** (represent **step by step** for **one sample string**)
- **Derivation** (represent **step by step** for **one sample string**)
- **Screenshots of the program** for any input string(step by step)

In upload folder(**studentnumber1_studentnumber2**):

- Program code
- Report

Note: Assignment will be done as a group of 2 people.

CFG.txt (# is used for ϵ)

$E \rightarrow E+T \mid T$
 $T \rightarrow F \mid T * F$
 $F \rightarrow (E) \mid a$