5. Compulsory problem set: Context-free grammars

« 5.3 Grammar for a language Course overview 5.5 Grammar for a language »

Exercise description My submissions **3 / 50**

Grammar for a language

Consider the language $L = \{w \in \{a,b\}^* \mid w \text{ is of the form } uvu^R, \text{ where } u \text{ and } v \text{ are any strings in } \{a,b\}^*\}$.

Give a context-free grammar that generates the language.

Enter the grammar in the space below, one production on each line. Use this syntax:

- production: variable -> string1 | string2 ... | stringn
- variables: capital letters A,B,...,Z
- terminals: lower case letters a,b,...,z and numbers 0,1,...,9
- empty string: _ (the underscore symbol)
- start symbol: the first variable in the grammar

For instance, the grammar

```
A -> aAa | B
B -> bB | _
```

generates the language $\{a^n b^k a^n \mid n \geq 0 \text{ and } k \geq 0\}$.

Your solution:

Submit!

« 5.3 Grammar for a language Course overview 5.5 Grammar for a language »

Earned points

1 / 1

Exercise info

Exercise category
Compulsory exercises

Your submissions
3 / 50

Points required to pass
1

Deadline
Sat, 31 Dec 2022 23:59:00 +0200

Total number of submitters
155

Previous activity
◄ 4. Compulsory problem set: Regular expressions

Next activity
6. Voluntary problem set: Some small brain teasers ►