

Assignment 01  
December 14, 2022

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Consider the grammar  $G$  given below where  $\{a,b\}$  is the set of terminals  $\{S\}$  is the set of non-terminals and  $S$  is the start symbol.

$S \rightarrow aSa$   
 $S \rightarrow bSb$   
 $S \rightarrow aa$   
 $S \rightarrow bb$

Which of the following strings are in  $L(G)$ ? Justify your answers.

- aacaa
- aSa
- aba
- abba