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## Advanced Algorithms

WS 2017/18

Homework 5

13.11.2017

### Exercise 1:

Give a formal proof for the correctness of the solution of the string matching problem which uses a suffix tree for the considered text string.

### Exercise 2:

Construct an example where the node  $s(v)$  has an outgoing edge with the first symbol of its marking is  $g \in \Sigma$  but the node  $v$  has not such an edge.

### Exercise 3:

Prove Lemma 2.2 of the lecture.

### Exercise 4:

Develop an linear time algorithm which, given a suffix tree for the string  $x\#$ , constructs a suffix tree for  $x$ .