

Kompiler Assignment 1

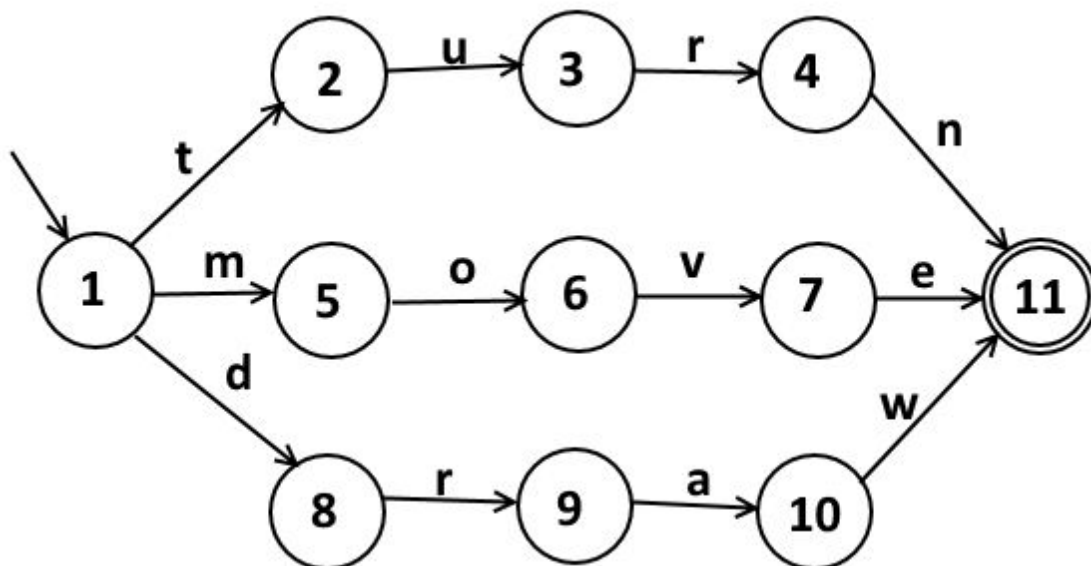
Student: Edvard S. Pettersen - edvardsp

Task 1

1. All strings containing 1 or less one's in them, as they would never transition further than state 1 or 2 (depending on 1 or none one's in them).
2. $digit = [0-9]$
 $number = digit(.digit^+)?$
 $complex = [+ -]?number([+ -]number^i)?$
3. Yes, because regexes are built recursively out of smaller regexes, using the rules described in the dragon. So you could say that the notation for regexes itself a regular language.

Task 2

1. Shown in the figure below.



2. Implemented in the *scanner.c* file, and a given triangle.test and its corresponding output is given as *triangle.pdf*.