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CS 5800

**Test Cases/Programs**

The program will accept strings with the following operations: Kleene star, union, concatenation, and groups. With grouping, the program will not attempt to capture and print a substring. This program will also only allow for alphanumeric characters, so the inclusion of escape characters such as ‘\n’ or the separation in treatment of operational characters such as Kleene star ‘\*’ will not be supported in this program.

Bellow lies a series of fairly basic regular expression strings in which the program will be tested against: a\*, a+, ab, [ab]+, (a|b)+, and (ab)+.

In addition to these basic tests of the functionality, the program will be tested against some of the homework problems. This will be tested on “a\*b+a+(ba\*b+a+)\*”, which is a solution to Chapter 5’s question 1. This will also be tested on a\*b\*c\*, in which the DFA equivalent has been computed already in numerous exams and homework questions.

**References**

Thomas A. Sudkamp. 2005. Languages and Machines: An Introduction to the Theory of Computer Science (3rd Edition). Addison-Wesley Longman Publishing Co., Inc., Boston, MA, USA.