CPSC 121 Brian Taylor

Lab #8: Regular Expressions

Exercise 1

[01]+

Exercise 2

[01]\*0

Exercise 3

([01][01])+

Exercise 4

.\*((0110)|(1001)).\*

Exercise 5

(.\*(0110).\*(1001).\*)|(.\*(1001).\*(0110).\*)|(.\*(100110).\*)|(.\*(011001).\*)

Exercise 6

[A-Z][0-9][A-Z]\s[0-9][A-Z][0-9]

These are postal codes, such as:

V6R 2C9

H0H 0H0

Exercise 7

([0-9]|[A-F])+

These are hexadecimal numbers, such as:

4D3

FFA0

Exercise 8

(\(\d\d\d\)\s)?\d\d\d-\d\d\d\d

These are phone numbers, such as:

(604) 644-5833

(778) 834-6478

Exercise 9

pic(k|(k\s)|(k-))up truck

Exercise 10

(\w)\*\s?(\w)+\s(\w)+\s(\w)+.?

Exercise 11

cat\s(\w)\*\s?(\w)\*\s?hat

Exercise 12

(([0-1][0-9])|(2[0-3])):[0-5][0-9]

Exercise 13

[ACGT]\*ATG([ACGT][ACGT][ACGT])+((TAA)|(TAG)|(TGA))[ACGT]\*

Exercise 14

non-comma cases: (\$[1-9][0-9]+(\.[0-9][0-9])?)|(\$[0-9](\.[0-9][0-9])?)

Exercise 15

@ubc.ca incorrectly accepts address without local part

davet@cs.u incorrectly accepts address with single letter top-level domain

cb1@cs.ubc.ca incorrectly rejects address with digit in local part

my.name@ubc.ca incorrectly rejects address with period in local part

barry@af1.gov incorrectly rejects address with digit in host name

Exercise 16

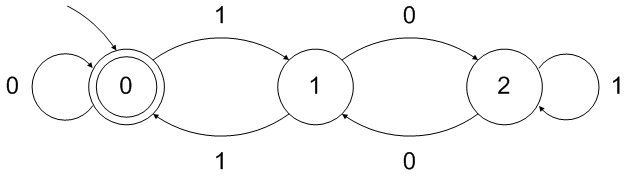
1\*(01\*01\*)\*

Exercise 17

0?(10)\*1?

Exercise 18

0\*(1(01\*0)\*10\*)\*0\*



Challenge: divisibility by 3 for a base ten number

[0369]\* in between every block

cases:

1 1 1 ([147][0369]\*[147][0369]\*[147])\*

1 2 ([147][0369]\*[258])\*

2 1 ([258][0369]\*[147])\*

2 2 2 ([258][0369]\*[258][0369]\*[258])\*

1 1 2 2 ([147][0369]\*[147][0369]\*[258][0369]\*[258])\*

1 2 1 2 ([147][0369]\*[258][0369]\*[147][0369]\*[258])\*

1 2 2 1 ([147][0369]\*[258][0369]\*[258][0369]\*[147])\*

2 1 1 2 ([258][0369]\*[147][0369]\*[147][0369]\*[258])\*

2 1 2 1 ([258][0369]\*[147][0369]\*[258][0369]\*[147])\*

2 2 1 1 ([258][0369]\*[258][0369]\*[147][0369]\*[147])\*

11211 ([147][0369]\*[147][0369]\*[258][0369]\*[147][0369]\*[147])\*

22122 ([258][0369]\*[258][0369]\*[147][0369]\*[258][0369]\*[258])\*

([0369]\*([147][0369]\*[147][0369]\*[147])\*[0369]\*([147][0369]\*[258])\*[0369]\*([258][0369]\*[147])\*[0369]\*([147][0369]\*[258])\*[0369]\*([258][0369]\*[258][0369]\*[258])\*[0369]\*([147][0369]\*[147][0369]\*[258][0369]\*[258])\*[0369]\*([258][0369]\*[258][0369]\*[147][0369]\*[147])\*([147][0369]\*[147][0369]\*[258][0369]\*[147][0369]\*[147])\*([258][0369]\*[258][0369]\*[147][0369]\*[258][0369]\*[258])\* [0369]\*)\*