# CS 3030 Scripting Languages
## Lab 7: Perl Filter

## Introduction

Lab 7 is the first and simplest Perl script that filters data presented on STDIN, changing all occurrences of one string to another and outputting all input lines, changed and unchanged to STDOUT. FROMSTRING and TOSTRING can be PERL-compatible regular expressions.

## Requirements

Your Python script shall be named ~/cs3030/lab7/filter.pl and be marked executable.

> Usage: ./filter.pl 'FROMSTRING' 'TOSTRING'

- Your script should read only from STDIN and write only to STDOUT. Write error messages only to STDERR.
- Your script should support regular expressions and be capable of changing all occurrences of the FROMSTRING to TOSTRING. All lines are output, both changed and unchanged.
- Exit(0) if there are no errors. It is ok for nothing on the input to be changed as they are output.
- Issue a Usage message and exit(1) if there are not exactly two commandline parameters provided.

## Helpful Hints

- Use /usr/bin/perl on icarus.
- use "while (<STDIN>)" to read each line of input
- Use $_ to access each line read
- use "s///" (the substitution operator) to change all occurrences of FROMSTRING to TOSTRING on each line
- Use print to output all line on STDIN to STDOUT, whether or not the line was changed
- $ARGV[] contains the commandline arguments. $ARGV[0] is the first argument
- $#ARGV is the index of the last item in $ARGV

## Run cucumber to determine your grade

```
tar xvf /var/classes/cs3030/lab7/cuke.tar

./cucumber -s
```

## Files

For this lab you will have created folder lab7 and the following executable files:

```
filter.pl
```

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## Grading

Here is how you earn points for this assignment:

| FEATURES | POINTS |
|---|:---:|
| **Must-Have Features** | |
| Script is named correctly and found in its proper place on icarus | 5 |
| Script is executable | 5 |
| | |
| **Required Features** | |
| Script prints a "Usage:" statement and exits rc=1 if there are not exactly two commandline parameters | 5 |
| Script exits rc=0 on successful completion | 5 |
| Script reads from STDIN | 10 |
| Script writes to STDOUT unless error | 10 |
| Script writes error messages only to STDERR | 10 |
| Script properly translates the input to the output using a simple string replacement | 10 |
| Script supports regular expressions in FROMSTRING | 20 |
| Script supports regular expressions in  FROMSTRING and TOSTRING | 20 |
| | |
| **Grand Total** | 100 |