Anna Dubé

00091750

adube@my.athens.edu

Assignment 4: Perl

## Question 1: Word Frequency Counter

```
#!/usr/bin/perl

#File: DubeAssign04_1.pl
#Author: adube@my.athens.edu
#Purpose: word frequency counter

use 5.010;
use strict;
use warnings;

my $string_text = "Now is the time for all good men to come to the aid of the country";
my @array_text= split / /, $string_text;

my %count;
foreach my $word(@array_text){
	$count{$word}++;
}

foreach my $word (sort keys %count){
	print $word, " ", $count{$word}, "\n";
}
```


## Question 2: Calendar

```
#!/usr/bin/perl

#File: DubeAssign04_2.pl
#Author: adube@my.athens.edu
#Purpose: Calendar

use 5.010;
use strict;
use warnings;
use English '-no_match_vars';

my $num = $#ARGV + 1;
if($num != 2){
        usage();
}

my $month = $ARGV[0];
my $day = $ARGV[1];
```

```
my @months = qw(Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec);
my @monthDays = qw(31 28 31 30 31 30 31 31 30 31 30 31);
my @weekDays = qw(Sun Mon Tue Wed Thu Fri Sat);
my $numOfDays = 0;
my $count = 0;

if( grep(/^$month$/, @months) ){
	#found
} else {usage();}
if( grep(/^$day$/, @weekDays) ){
	#found
} else {usage();}

foreach my $m(@months){
	if($m eq $month){
		$numOfDays = $monthDays[$count];
	}
	$count++;
}

$OUTPUT_FIELD_SEPARATOR = ' ';
print @weekDays;
print "\n";

my $num4 = 0;
my $count2 = 0;
my $wdc = 0;

for (my $i = 0; $i < 40; $i++){
```

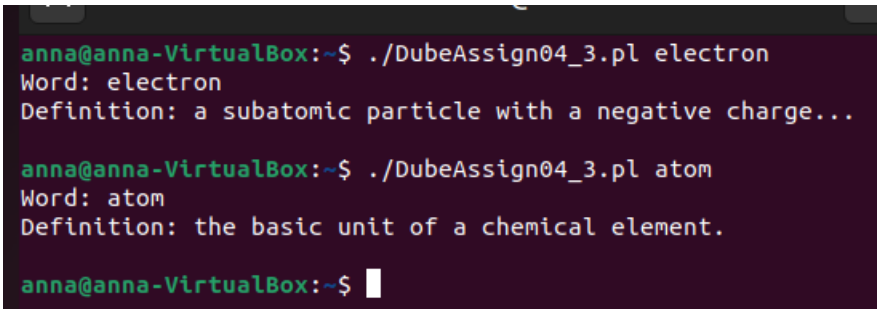
```
	if(($count2 == 0) && ($day ne $weekDays[$i])){
		print "    ";
	} else {
		$num4 = $count2 + 1;
		if($num4 < 10){
			print " $num4 ";
		} else {
			print "$num4 ";
		}
		print " ";

		$count2++;
	}
	if($i % 7 == 0){$wdc = 0;}
	if($weekDays[$wdc] eq "Sat"){
		print "\n";
	}
	$wdc++;
	last if($count2 == $numOfDays);
}
print "\n\n";

sub usage {
	print "usage: $0 month day of week\n";
	print "example: $0 Mar Tue\n";
	exit;
}
```

```
anna@anna-VirtualBox:~$ ./DubeAssign04_2.pl Oct Wed
Sun Mon Tue Wed Thu Fri Sat
                1   2   3   4
 5   6   7   8   9  10  11
12  13  14  15  16  17  18
19  20  21  22  23  24  25
26  27  28  29  30  31

anna@anna-VirtualBox:~$ ./DubeAssign04_2.pl Feb Fri
Sun Mon Tue Wed Thu Fri Sat
                    1   2
 3   4   5   6   7   8   9
10  11  12  13  14  15  16
17  18  19  20  21  22  23
24  25  26  27  28

anna@anna-VirtualBox:~$
```

## Question 3: Search a dictionary

```
#!/usr/bin/perl


#File: DubeAssign04_3.pl

#Author: adube@my.athens.edu

#Purpose: Search a dictionary


use 5.010;

use strict;

use warnings;

use English '-no_match_vars';


my $num = $#ARGV + 1;

if($num != 1){

        print "usage: $0 word\n";

        exit;

}
```

```
my $word = $ARGV[0];



open (my $dictionaryF, "dictionary.txt");
while (my $line = <$dictionaryF>) {
	my @row = split (/ /, $line, 2);
	if ($row[0] eq $word){
		print "Word: $row[0]\nDefinition: $row[1]\n";
	}
}
close $dictionaryF;
```

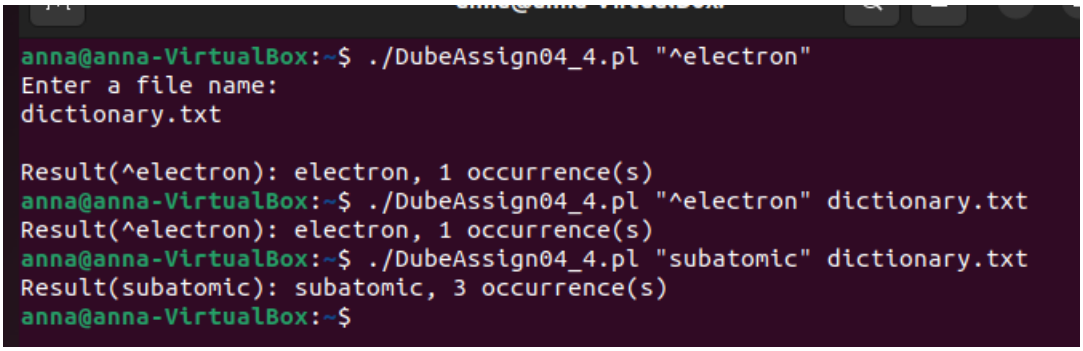



## Question 4: Regular expression tester

```
#!/usr/bin/perl
#
#File: DubeAssign04_4.pl
#Author: Anna Dube
#Purpose: regular expression tester
#
use 5.010;
use strict;
use warnings;
```

```
my $fileName;
my $num = $#ARGV + 1;
if($num < 1 || $num > 2){
	print "usage: $0 expression [file]\n";
	exit;
}
my $input_regexp = $ARGV[0];

if($num == 2){
	if(! -f $ARGV[1] && ! -r $ARGV[1]){
		print "Second argument must be a file.\n";
		print "usage: $0 expression file\n";
		exit;
	}
	$fileName = $ARGV[1];
} else {
	print "Enter a file name:\n";
	$fileName = <STDIN>;
	chomp $fileName;
	if(! -f $fileName && ! -r $fileName){
		print "This is not a file.\n";
		exit;
	}
	print "\n";
}

open (my $fh, $fileName) or die $!;
my $holdVal = "";
my $counter = 0;
```

```
my $found = 0;


while (my $line = <$fh>) {
	#regular expressions
	if ($line =~ m/($input_regexp)/){
		$holdVal = $1;
		$found = 1;
		$counter++;
	}
}
if($found){
	print "Result($input_regexp): $holdVal, $counter occurrence(s)\n";
}
close $fh;
```




Sources:

https://www.geeksforgeeks.org/perl-count-the-frequency-of-words-in-text/

https://alvinalexander.com/blog/post/perl/free-perl-program-read-apache-access-log-file/