Name: Kerolos Youssef Ghobrial

LAB 2: Perl

1-

```perl
#! /usr/bin/perl

print reverse <>;
print "\n";
```

```
[localhost.localdomain] ahesham:/home/ahesham/Desktop/perl$ ./Q1
kero
iti
iti
kero
```

2-

```perl
#! /usr/bin/perl

print "What file you need to read its content ? ";
$filename = <STDIN>;
chomp ($filename);
open(THATFILE, "$filename") || die "cannot open $filename: $!";
while (<THATFILE>) {
    print "$filename: $_";
}
```

```
[localhost.localdomain] ahesham:/home/ahesham/Desktop/perl$ ./Q2
What file you need to read its content ? Q1
Q1: #! /usr/bin/perl
Q1:
Q1: print reverse <>;
Q1: print "\n";
```

3-

```perl
#! /usr/bin/perl


while (<>) {
chomp;
print "$_ is readable\n" if -r;
print "$_ is writable\n" if -w;
print "$_ is executable\n" if -x;
print "$_ doesn't exist\n" unless -e;
}
```

```
[localhost.localdomain] ahesham:/home/ahesham/Desktop/perl$ ./Q3
Q5
Q5 is readable
Q5 is writable
Q5 is executable
Q4
Q4 is readable
Q4 is writable
Q4 is executable
Qeleven
Qeleven doesn't exist
```

4-

```perl
#!/usr/bin/perl

print "Enter the directory path \n";
$path = <STDIN>;

chomp $path;
chdir($path) or warn "can't chdir to $path $!";

@a = glob($path . '/*');
print "the list of path is: \n @a \n";

@a = sort(@a);
print "the list of path ordered alphabetically is: \n";

foreach (@a)
{
  print;
  print "\n";
}
```

```
[localhost.localdomain] ahesham:/home/ahesham/Desktop/perl$ ./Q4
Enter the directory path
/home/
the list of path is:
 /home//ahesham /home//mohamed /home//PDKs /home//standard_cell_libraries /home/
/synopsys
the list of path ordered alphabetically is:
/home//PDKs
/home//ahesham
/home//mohamed
/home//standard_cell_libraries
/home//synopsys
```

5-

```perl
#!/usr/bin/perl
print "Enter the directory path \n";
$path = <STDIN>;

chomp $path;
chdir($path) or warn "can't chdir to $path $!";

@a = glob($path . '/*');
print "the list of path is: \n @a \n";

unlink(rm,rm1);

@a = glob($path . '/*');
print "after removing, the list of path is: \n @a \n";
```

```
[localhost.localdomain] ahesham:/home/ahesham/Desktop/perl$ ./Q5
Enter the directory path
/home/ahesham/Desktop/perl
the list of path is:
 /home/ahesham/Desktop/perl/Q1 /home/ahesham/Desktop/perl/Q1.pl~ /home/ahesham/D
esktop/perl/Q1~ /home/ahesham/Desktop/perl/Q4 /home/ahesham/Desktop/perl/Q4~ /ho
me/ahesham/Desktop/perl/Q5 /home/ahesham/Desktop/perl/Q5~ /home/ahesham/Desktop/
perl/rm /home/ahesham/Desktop/perl/rm1
after removing, the list of path is:
 /home/ahesham/Desktop/perl/Q1 /home/ahesham/Desktop/perl/Q1.pl~ /home/ahesham/D
esktop/perl/Q1~ /home/ahesham/Desktop/perl/Q4 /home/ahesham/Desktop/perl/Q4~ /ho
me/ahesham/Desktop/perl/Q5 /home/ahesham/Desktop/perl/Q5~
```

6-

```perl
#!/usr/bin/perl

print "Enter the directory path \n";
$path = <STDIN>;

$oldname = "Question6";
$newname = "Q6";

chomp $path;
chdir($path) or warn "can't chdir to $path $!";

@a = glob($path . '/*');
print "the list of path is: \n @a \n";

rename $oldname, $newname;

@a = glob($path . '/*');
print "after renaming, the list of path is: \n @a \n";
```

```
[localhost.localdomain] ahesham:/home/ahesham/Desktop/perl/Q6$ ./Question6
Enter the directory path
/home/ahesham/Desktop/perl/Q6
the list of path is:
 /home/ahesham/Desktop/perl/Q6/Question6 /home/ahesham/Desktop/perl/Q6/Question6~
after renaming, the list of path is:
 /home/ahesham/Desktop/perl/Q6/Q6 /home/ahesham/Desktop/perl/Q6/Question6~
```

7-

```perl
#!/usr/bin/perl

($oldArgu, $newArgu) = @ARGV;                    # name the files
if (-d $newArgu)                                 # new name is a directory, need to patch it up
    {
            ($basename = $oldArgu) =~ s#.*/##s;    # get basename of $old file
            $newArgu .= "/$basename";              # append basename of $old file to new filename
}
link($oldArgu,$newArgu) || die "Cannot link $oldArgu to $newArgu: $!";  # to make hardlink
```

```
[localhost.localdomain] ahesham:/home/ahesham/Desktop/perl$ ./Q7 Quest4 Quest4_1

[localhost.localdomain] ahesham:/home/ahesham/Desktop/perl$ ls -l
total 116
-rwxrwxr-x. 1 ahesham ahesham    49 Nov  7 18:08 Q1
-rw-rw-r--. 1 ahesham ahesham    67 Nov  7 18:08 Q1~
-rwxrwxr-x. 1 ahesham ahesham   497 Nov  7 18:02 Q11
-rw-rw-r--. 1 ahesham ahesham   462 Nov  7 18:02 Q11~
-rw-rw-r--. 1 ahesham ahesham    40 Nov  7 08:28 Q1.pl~
-rwxrwxr-x. 1 ahesham ahesham   229 Nov  7 18:10 Q2
-rw-rw-r--. 1 ahesham ahesham   442 Nov  7 18:09 Q2~
-rwxrwxr-x. 1 ahesham ahesham   181 Nov  7 18:55 Q3
-rw-rw-r--. 1 ahesham ahesham   186 Nov  7 18:53 Q3~
-rwxrwxr-x. 1 ahesham ahesham   311 Nov  7 10:20 Q4
-rw-rw-r--. 1 ahesham ahesham   255 Nov  7 10:07 Q4~
-rwxrwxr-x. 1 ahesham ahesham   296 Nov  7 11:20 Q5
-rw-rw-r--. 1 ahesham ahesham   296 Nov  7 11:20 Q5~
-rw-rw-r--. 1 ahesham ahesham    17 Nov  7 11:14 Q6~
-rw-rw-r--. 1 ahesham ahesham 29158 Nov  7 11:34 Q6.png
-rwxrwxr-x. 1 ahesham ahesham   423 Nov  7 19:28 Q7
-rw-rw-r--. 1 ahesham ahesham   421 Nov  7 19:25 Q7~
-rwxrwxr-x. 1 ahesham ahesham   562 Nov  7 18:26 Qten
-rw-rw-r--. 1 ahesham ahesham   565 Nov  7 18:26 Qten~
-rw-rw-r--. 2 ahesham ahesham    11 Nov  7 19:22 Quest4
-rw-rw-r--. 1 ahesham ahesham     0 Nov  7 19:22 Quest4~
-rw-rw-r--. 2 ahesham ahesham    11 Nov  7 19:22 Quest4_1
-rwxrwxr-x. 1 ahesham ahesham   350 Nov  7 11:22 Question6
```

```perl
#! /usr/bin/perl

if ($ARGV[0] eq "-s")  # create a softlink wants a symlink, so search for "-s"
        {
                $symlink++;    # icremet the value, remember that the variable value now is 1

                #The @ARGV array is then shifted, removing the -s flag
                shift(@ARGV);  # toss the -s flag,
        }

($oldArgu, $newArgu) = @ARGV;  # name the files

if (-d $newArgu) {
    # new name is a directory, need to patch it up
    ($basename = $oldArgu) =~ s#.*/##s; # get basename of $old file
    $newArgu .= "/$basename";           # and append it to new name
}

if ($symlink) {
    # wants a symlink to be created
    symlink($oldArgu,$newArgu) || die "Cannot symlink $oldArgu to $newArgu: $!";
} else {
    # wants a hard link to be created
    link($oldArgu,$newArgu) || die "Cannot link $oldArgu to $newArgu: $!";
}
```

```
[localhost.localdomain] ahesham:/home/ahesham/Desktop/perl$ ./Q8 -s Quest_4 Quest4_2
[localhost.localdomain] ahesham:/home/ahesham/Desktop/perl$ ls -l
total 120
-rwxrwxr-x. 1 ahesham ahesham    49 Nov  7 18:08 Q1
-rw-rw-r--. 1 ahesham ahesham    67 Nov  7 18:08 Q1~
-rwxrwxr-x. 1 ahesham ahesham   497 Nov  7 18:02 Q11
-rw-rw-r--. 1 ahesham ahesham   462 Nov  7 18:02 Q11~
-rw-rw-r--. 1 ahesham ahesham    40 Nov  7 08:28 Q1.pl~
-rwxrwxr-x. 1 ahesham ahesham   229 Nov  7 18:10 Q2
-rw-rw-r--. 1 ahesham ahesham   442 Nov  7 18:09 Q2~
-rwxrwxr-x. 1 ahesham ahesham   181 Nov  7 18:55 Q3
-rw-rw-r--. 1 ahesham ahesham   186 Nov  7 18:53 Q3~
-rwxrwxr-x. 1 ahesham ahesham   311 Nov  7 10:20 Q4
-rw-rw-r--. 1 ahesham ahesham   255 Nov  7 10:07 Q4~
-rwxrwxr-x. 1 ahesham ahesham   296 Nov  7 11:20 Q5
-rw-rw-r--. 1 ahesham ahesham   296 Nov  7 11:20 Q5~
-rw-rw-r--. 1 ahesham ahesham    17 Nov  7 11:14 Q6~
-rw-rw-r--. 1 ahesham ahesham 29158 Nov  7 11:34 Q6.png
-rwxrwxr-x. 1 ahesham ahesham   423 Nov  7 19:28 Q7
-rw-rw-r--. 1 ahesham ahesham   421 Nov  7 19:25 Q7~
-rwxrwxr-x. 1 ahesham ahesham   946 Nov  7 19:32 Q8
-rw-rw-r--. 1 ahesham ahesham     0 Nov  7 19:31 Q8~
-rwxrwxr-x. 1 ahesham ahesham   562 Nov  7 18:26 Qten
-rw-rw-r--. 1 ahesham ahesham   565 Nov  7 18:26 Qten~
-rw-rw-r--. 2 ahesham ahesham    11 Nov  7 19:22 Quest4
-rw-rw-r--. 1 ahesham ahesham     0 Nov  7 19:22 Quest4~
-rw-rw-r--. 2 ahesham ahesham    11 Nov  7 19:22 Quest4_1
lrwxrwxrwx. 1 ahesham ahesham     7 Nov  7 19:34 Quest4_2 -> Quest_4
-rwxrwxr-x. 1 ahesham ahesham   350 Nov  7 11:22 Question6
```

9-

```perl
#! /usr/bin/perl

foreach $f (<*>) {
    print "$f -> $where\n" if defined($where = readlink($f));
}
```

```
[localhost.localdomain] ahesham:/home/ahesham/Desktop/perl$ ./Q9
Quest4_2 -> Quest_4
```

10-

```perl
#!/usr/bin/perl

sub numtostr{
(@nums) = @_;

foreach $_(@nums) {
if($_==1)
{
$str = "one";
print "$str\n";
}
elsif ($_ == 2)
{
$str = "two";
print "$str\n";
}
elsif ($_ == 3)
{
$str = "three";
print "$str\n";
}
elsif ($_ == 4)
{
$str = "four";
print "$str\n";
}
elsif ($_ == 5)
{
$str = "five";
print "$str\n";
}
elsif ($_ == 6)
{
$str = "six";
print "$str\n";
}
elsif ($_ == 7)
{
$str = "seven";
print "$str\n";
}
elsif ($_ == 8)
{
$str = "eight";
print "$str\n";
}
elsif ($_ == 9)
{
$str = "nine";
print "$str\n";
}
else
{
print "$_\n";
}}
}
numtostr(5,11,6,0);
```

```
[localhost.localdomain] ahesham:/home/ahesham/Desktop/perl$ ./Qten
five
11
six
0
```

11-

```perl
#!/usr/bin/perl
my %numbers ;
@numbers{ 1 .. 9} = qw(one two three four five six seven eight nine);
sub addnums{
$num1 = $_[0];
$num2 = $_[1];
$sum;
$sum = $num1 + $num2;
if(($num1 >= 1 && $num1 <= 9 ) && ($num2 >= 1 &&  $num2 <= 9 ) && ($sum >= 1 &&  $sum <= 9 )){
$fword = ucfirst($numbers{$num1});
print "$fword plus $numbers{$num2} equals $numbers{$sum} \n";
}
else
{
$fword = ucfirst($numbers{$num1});
print "$fword plus $numbers{$num2} equals $sum \n";
}

}

addnums(3,9);
addnums(3,4);
```

```
[localhost.localdomain] ahesham:/home/ahesham/Desktop/perl$ ./Q11
Three plus nine equals 12
Three plus four equals seven
```