Lab 06: iCount

iCount counts the number of characters, whitespace-separated words, newlines in each given file.

Synopsis:

`iCount [OPTION]... [FILE]...`

iCount prints one line of counts for each file, it prints the file name following the counts. If more than one FILE is given, iCount prints a final line containing the cumulative counts, with the file name total. The counts are printed in this order: newlines, words, characters.

Each count is printed right-justified in a field with at least one space between fields so that the numbers and file names normally line up nicely in columns. The width of the count fields varies depending on the inputs, so you should not depend on a particular field width.

By default, iCount prints three counts: the newline, words, and byte counts. Options can specify that only certain counts be printed.

The program accepts the following options:

```
        -c          Prints the characters count
        -w          Prints the word counts
        -l          Prints the newline counts
        -h          Prints help
```

Options do not undo others previously given, so
```
        iCount -c -w
```

prints both the byte counts and the word counts.
Example of execution:

```
root@Luna:/15F_CST8234/07# man cp > cp.txt
root@Luna:/15F_CST8234/07# man mv > mv.txt

root@Luna:/15F_CST8234/07# iCount cp.txt mv.txt
 161  621 5452 cp.txt
 101  356 3117 mv.txt
 262  977 8569 total

root@Luna:/15F_CST8234/07# iCount -l cp.txt
161 cp.txt

root@Luna:/15F_CST8234/A03# iCount -lc cp.txt
161 5452 cp.txt
```
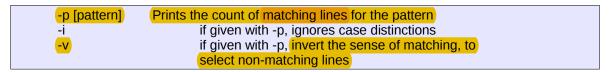
An exit status of zero indicates success, and a nonzero value indicates failure. If the program do not receive the correct options, it should display a usage message and finish.

EXTRA: (50%)

Your `iCount` program should additionally receive the following options:

-p [pattern]	Prints the count of matching lines for the pattern
-i	if given with -p, ignores case distinctions
-v	if given with -p, invert the sense of matching, to select non-matching lines

Example of execution:

```
root@Luna:/15F_CST8234/07# iCount -p cp cp.txt
 9 cp.txt

root@Luna:/15F_CST8234/07# iCount -ip cp cp.txt
 11 cp.txt

root@Luna:/15F_CST8234/07# iCount -vp cp cp.txt
 152 cp.txt
```