

Assignment - 4

Filter commands and Regular expressions

Filter commands

1. Create a file containing the following data. Use tabs to separate the fields.

1234	Juan	14.25
4321	George	21.11
6781	Anna	16.77
1451	Ben	21.77
2277	Tuan	18.77

2. Sort the file according to the first field
3. Swap fields 2 and 3 store it in another file.
4. Encrypt this file line by line(the last line becomes the first, the line before the last line becomes the second and so on) , store the result in another file
5. Copy the last line of the above file into another file.
6. Create the following file. (Need not type the headings)

ID	Hourly Rate	Hours Worked
1420	12.56	45
3456	14.56	22
2341	45.12	34
1122	23.56	28
1443	23.23	19
2351	67.90	56
8001	7.00	14

- (a). Print the number of workers
 - (b). Show the worker who is paid the highest hourly rate.
 - (c). Sort the file based on ID
7. Write a command to change all lowercase letters in a file to uppercase

Regular expression

1. Write regular expression for the following and demonstrate each with example contents in a file
 - a. Words containing vowels
 - b. Words containing consonants
2. Write regular expression for the following and demonstrate each with example contents in a file
 - a. Variable name starts with letter followed by any number of letter or digits
 - b. List all files in the default directory that others can read or write
3. Write a regular expression that matches the emails of the form `userid@domain.edu`, where `userid` starts with character followed by zero or more character | digit and the domain is one or more characters.
4. Write a command that selects lines from `file1` that have exactly 3 characters
5. Write a command that selects lines from `file1` that have at least 3 characters
6. Write a command that selects lines from `file1` that have 3 or fewer characters
7. Counting the number of blank lines
8. Write a command to retrieve lines that starts with capital letter
9. Write a command to list the lines containing words that begin with capital letter.
10. Write command to the list the lines that end with a period from the file
11. Write a command to print the lines that has the pattern "July" in all the files in a particular directory?
12. Write a command to print the lines that has the word "July" while ignoring the case.
13. Write a Unix command to display the lines in a file that do not contain the word "July"?
14. Are the following commands equivalent? Briefly explain

```
grep "[^a-z]" foo
grep -v "[a-z]" foo
```
15. Write a command to display all the lines in a given file that ends with " ; " or " ." character.