# Week 7 - Sed Assignment

# **Graded Assignment**

## **Problem 1**

Which of the following commands will print the count of lines in the input file file1? The expected output is only a number indicating the count of lines.[MSQ]

```
(1) awk 'END{print NR}' file1
```

(2) awk '{print NR}' file1

(3) sed '\$=' file1

(4) sed -n '\$=' file1

### **Answer**

(1) and (4)

### **Problem 2**

Match the following sed action characters to their use.[MCQ]

| Action | Use                           |
|--------|-------------------------------|
| 1. d   | A. Delete the pattern space.  |
| 2. c   | B. Insert above current line. |
| 3. a   | C. Insert below current line. |
| 4. i   | D. Replace current line.      |

(a) 1-A, 2-D, 3-C, 4-B

(b) 1-A, 2-D, 3-B, 4-C

(c) 1-D, 2-A, 3-B, 4-C

(d) 1-D, 2-A, 3-C, 4-B

#### **Answer**

(a)

## **Problem 3**

Which of the following sed commands will give the same output as the command cat file1 | head -5 | tail -2? Consider that file1 contains exactly 10 lines of text.[MSQ]

```
(a) sed -n -e '4p' -e '5p' file1
(b) sed -n '4,5p' file1
(c) sed -n -e '4,5p' file1
(d) sed -n -e '4~5' file1
(e) sed '1,3d; 6,$d' file1
(f) None of the above
```

(a), (b), (c) and (e)

### **Problem 4**

Which of the following sed commands will give the same output as the command cat file1 | head -5 | tail -2 irrespective of the number of lines in the file file1.[MSQ]

```
(a) sed -n -e '4p' -e '5p' file1
(b) sed -n '4,5p' file1
(c) sed -n -e '4,5p' file1
(d) sed -n -e '4~5' file1
(e) sed '1,3d; 6,$d' file1
(f) None of the above
```

### **Answer**

(f)

### **Problem 5**

Which of the following sed commands can be used to delete the lines containing the word ram (case incensitive) in a file input.txt? The command should just print the desired output, and not replace the contents of the original file. [MSQ]

```
(a) sed -e '/ram/d'
(b) sed -e '/ram/Id'
(c) sed -e 's/FROM//i' input.txt
(d) sed -e 's/FROM//I' input.txt
(e) sed -e '/ram/id'
```

### **Answer**

(b)

### **Problem 6**

Which of the following sed commands can be used to delete all the occurences of the word ram (case incensitive) in a file input.txt? The command should just print the desired output, and not replace the contents of the original file. [MSQ]

```
(C) sed -e 's/FROM//i' input.txt
(d) sed -e 's/FROM//I' input.txt
(C) sed -e 's/FROM//ig' input.txt
(d) sed -e 's/FROM//Ig' input.txt
(e) sed -e 's/FROM//g' input.txt
```

(c) and (d)

### **Problem 7**

Consider a file twister.txt as below with contents as below.

```
$ cat twister.txt

How much wood would a woodchuck chuck if a woodchuck could chuck wood?

He would chuck, he would, as much as he could, and chuck as much wood

As a woodchuck would if a woodchuck could chuck wood
```

Given below some commands and outputs, match the command to their output.

```
    sed '1,2 s/wood/WOOD/' twister.txt
    sed 's/wood/WOOD/g' twister.txt
    sed '2,3 s/wood/WOOD/2' twister.txt
    sed 's/wood/WOOD/3g' twister.txt
```

#### Output A

How much WOOD would a WOODchuck chuck if a WOODchuck could chuck WOOD?

He would chuck, he would, as much as he could, and chuck as much WOOD

As a WOODchuck would if a WOODchuck could chuck WOOD

#### Output B

How much wood would a woodchuck chuck if a woodchuck could chuck wood? He would chuck, he would, as much as he could, and chuck as much wood As a woodchuck would if a WOODchuck could chuck wood

#### Output C

How much WOOD would a woodchuck chuck if a woodchuck could chuck wood? He would chuck, he would, as much as he could, and chuck as much WOOD As a woodchuck would if a woodchuck could chuck wood

#### Output D

How much wood would a woodchuck chuck if a WOODchuck could chuck WOOD? He would chuck, he would, as much as he could, and chuck as much wood As a woodchuck would if a woodchuck could chuck WOOD

- (a) 1-B, 2-A, 3-C, 4-C
- (b) 1-C, 2-A, 3-B, 4-D
- (c) 1-B, 2-D, 3-C, 4-A
- (d) 1-D, 2-C, 3-A, 4-B

### **Answer**

(b)

### **Problem 8**

```
sed '$s/\(.*\)wood/\1WOOD/g' twister.txt
```

The above command will print the file twister.txt after:

- (1) Replacing all occurrences of "wood" with "WOOD" in every line of the file.
- (2) Replacing all occurances of "wood" with "WOOD" in last line of the file.
- (3) Replacing last occurance of "wood" with "WOOD" in every line of the file.
- (4) Replacing last occurance of "wood" with "WOOD" in last line of the file.
- (5) Replacing first occurance of "wood" with "WOOD" in every line of the file.
- (6) Replacing first occurance of "wood" with "WOOD" in last line of the file.

#### **Answer**

(4)

# **Problem 9**

What is the expected outuput of the following command

```
echo "hello world" | sed -e "s/\b\(.\)/\U\1/g"
```

- (1) HELLO WORLD
- (2) u 1
- (3) helloworld
- (4) Hello World

(4) Hello World

### **Problem 10**

What will the following command do?

```
sed '/[bB]reak$/a #####' file1
```

- (a) Inserts five hashes on a new line before every line that ends with the word "break", the matching will be case incesitive.
- (b) Inserts five hashes on a new line after every line that ends with the word "break", the matching will be case incesitive.
- (c) Inserts five hashes on a new line before every line that ends with the word "break" or "Break".
- (d) Inserts five hashes on a new line after every line that ends with the word "break" or "Break".

### **Answer**

(c)

# **Practice Questions**

### **Problem 1**

Which of the following commands will replace the word "teach" (but not change anything in the word "teaching") with the word "reach"?

```
(1) echo "teaching you how to teach" | sed -e "s/^teach$/reach/"
(2) echo "teaching you how to teach" | sed -e "s/$teach^/reach/"
(3) echo "teaching you how to teach" | sed -e "s/\bteach\b/reach/"
(4) echo "teaching you how to teach" | sed -e "s/teach\b/reach/"
```

### **Answer**

```
(3) echo "teaching you how to teach" | sed -e "s/\bteach\b/reach/"
(4) echo "teaching you how to teach" | sed -e "s/teach\b/reach/"
```

# **Problem 2**

Match the following sed option with their use

| Option | Use  |
|--------|--|
| 1n     | (a) Use extended regular expressions in the script.                        |
| 2r     | (b) To run/execute sed script stored in a file.                            |
| 3f     | (c) Add the scripts to the commands to be executed.                        |
| 4e     | (d) Run in quiet mode, i.e. suppress automatic printing of lines in input. |

```
(a) 1-a, 2-c, 3-d, 4-b
```

- (c) 1-a, 2-d, 3-c, 4-b
- (d) 1-d, 2-a, 3-b, 4-c

(d)

## **Problem 3**

The file 'dates.txt' has a list of dates in MM/DD/YYYY format. Which of the following commands can be used to convert it to YYYY-MM-DD format?

```
(1) sed s/([0-9]{2}))/([0-9]{2}))/([0-9]{4}))/3-1-2/' dates.txt
```

```
(2) sed s/([0-9]{2})/([0-9]{2})/([0-9]{4})/3-1-2/ dates.txt
```

```
(3) sed 's/([0-9]{2}))/([0-9]{2}))/([0-9]{4}))/4-2-2/' dates.txt
```

```
(4) sed \s([0-9]\{2}\))/([0-9]\{2}\))/([0-9]\{4}\))/(3-1-2/' dates.txt)
```

#### **Answer**

```
(4) sed 's/([0-9]{2}))/([0-9]{2}))/([0-9]{4}))/(3-1-2/' dates.txt)
```

# **Problem 4**

Which of the following are the buffers maintained in sed? [MSQ]

- (a) Input space
- (b) Output space
- (c) Pattern space
- (d) Auxiliary hold space

<sup>(</sup>b) 1-d, 2-c, 3-b, 4-a

(c) and (d)

# **Problem 5**

The varible var contains a string. Which of the following commands is/are equivalent to the command echo \${var^^}} ?[MSQ]

```
(1) echo $var | sed 's/\(.*\)/\U&/g'
(2) echo $var | sed 's/\(.*\)/\L&/g'
(3) echo $var | sed 's/\(.*\)/\U\1/g'
(4) echo $var | sed 's/\(.*\)/\L\1/g'
```

### **Answer**

(1) and (3)