

## Assignment 2 (Vi editor Continued)

**Note :** In the problems always try to use minimum cursor movements and minimum vi commands.

1. In this problem, you will learn to make design patterns using text (in text file).

Consider a text file (shown below) having a matrix of size 4x9, where the elements are single character, like #. This matrix of # typed at the center of the text file.

```
#####  
#####  
#####  
#####
```

Now you need to make a design of a triangle (as shown below). The triangle is constructed as follows. First  $n$  rows have  $n$  # each; for example, 1<sup>st</sup> row has 1 #, 2<sup>nd</sup> has 2 # and so forth. After the  $n^{\text{th}}$  row, the number of #s decreases by one in each row and the last row has a single #. This triangle is left aligned.

```
#  
##  
###  
####  
#####  
#####  
#####  
####  
###  
##  
#
```

Starting from the matrix of #'s reach the triangle using vi commands. Credit will be based on how intelligently you use the vi commands.

2. Encryption is a technique where, texts are modified so that they cannot be interpreted without a key. Here is a extremely simple example which is not practical; here we aim at learning vi and not cryptography !!!!

**Original File:** "The seminar will be conducted during weekdays. It is notified to all staff members to present the documents within time."

**Encrypted File:** "weekdays during conducted be will seminar The. time within documents the present to members staff all to notified is It."

Perform this simple encryption (word shifting) in vi.

3. Consider two files 'fgb' and 'ugb'. Let the file 'ugb' has information regarding some set of oftenly used commands/queries of a programming language for reference purpose. *The commands are in predefined format as : <command name: desc>. Example, remove\_design-all: removes all design from database*

*Suppose currently you are in 'fgb' file and you want to search the 'ugb' file for some command. A laymen way of doing it requires you to go to 'ugb' from 'fgb' and the browse through the entire file. Perform the searching quickly using vi commands.*

4. Indentation is a good practice for readability of programs. Assume that you have written some code in C in a file 'code.txt' without having indentation. Now, indent this code without having each line to be displaced separately. How will you do so using vi editor functionality of moving complete block together.

For example, if you have 5 lines of code in between an "if-then" condition, move right all the 5 lines together to position such that they are properly aligned/indented.

#### **Before indentation**

```
if
Line1
Line2
Line3
Line4
Line4
Then
```

### **After Indentation**

**if**

Line1

Line2

Line3

Line4

Line4

**Then**

5. Simple or traditional vi does not allow coloring of texts for easy differentiation of words; for example in c code it will be better in keywords and variables are in different color. Vim is improved vi with syntax color highlighting facility. Install vim, write a c code and perform syntax highlighting.