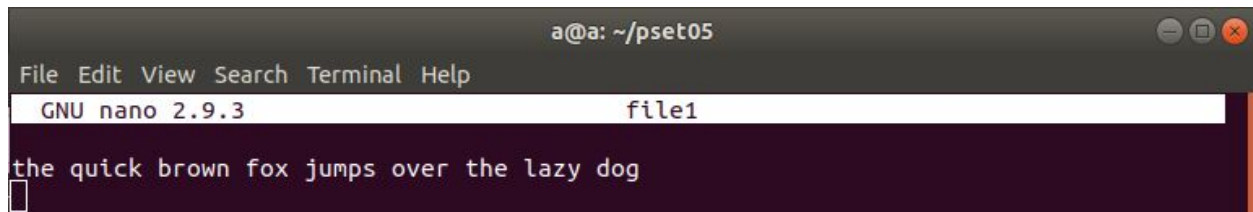


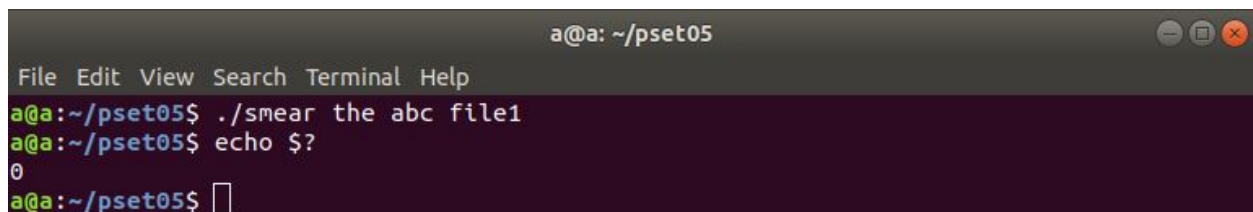
Problem 3 Sample Runs

I. Single file word replacement

A screenshot of a terminal window with the title 'a@a: ~/pset05'. The terminal shows the nano 2.9.3 editor interface with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar (GNU nano 2.9.3 file1). The text 'the quick brown fox jumps over the lazy dog' is displayed on a single line in the editor, with a cursor at the end of the line.

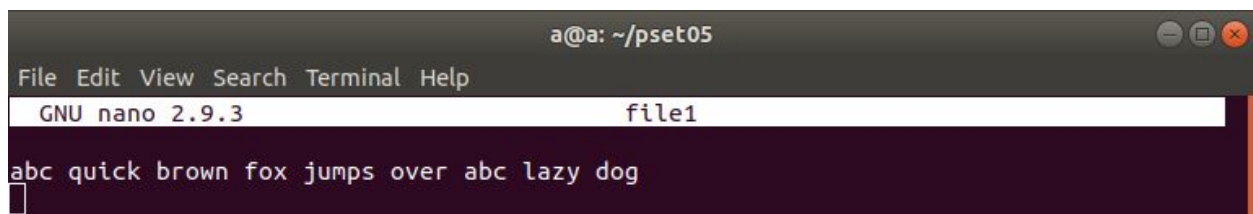
```
a@a: ~/pset05
File Edit View Search Terminal Help
GNU nano 2.9.3 file1
the quick brown fox jumps over the lazy dog
█
```

Figure 1: file1 before smear

A screenshot of a terminal window with the title 'a@a: ~/pset05'. It shows the execution of the 'smear' command. The prompt 'a@a:~/pset05\$' is followed by './smear the abc file1'. The next prompt 'a@a:~/pset05\$' is followed by 'echo \$?' and the output '0'. The final prompt 'a@a:~/pset05\$' is followed by a cursor.

```
a@a: ~/pset05
File Edit View Search Terminal Help
a@a:~/pset05$ ./smear the abc file1
a@a:~/pset05$ echo $?
0
a@a:~/pset05$ █
```

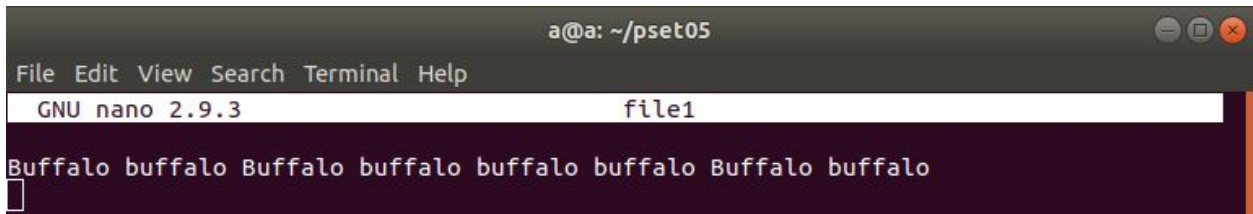
Figure 2: executing smear on file1

A screenshot of a terminal window with the title 'a@a: ~/pset05'. The terminal shows the nano 2.9.3 editor interface with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar (GNU nano 2.9.3 file1). The text 'abc quick brown fox jumps over abc lazy dog' is displayed on a single line in the editor, with a cursor at the end of the line.

```
a@a: ~/pset05
File Edit View Search Terminal Help
GNU nano 2.9.3 file1
abc quick brown fox jumps over abc lazy dog
█
```

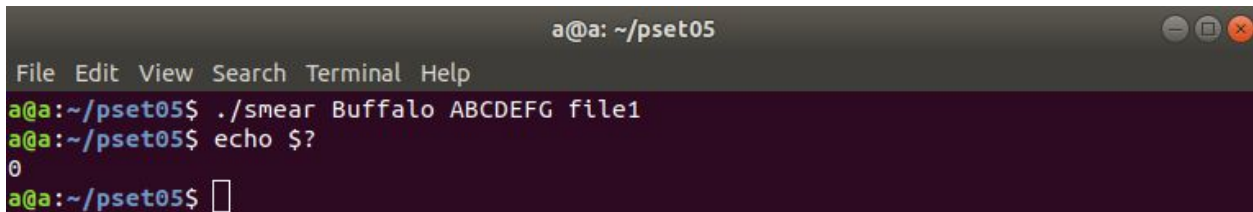
Figure 3: file1 after smear

II. Case-sensitivity



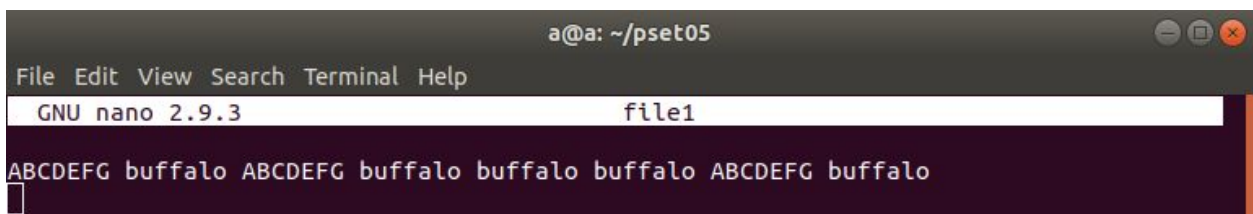
A screenshot of a terminal window with the title bar 'a@a: ~/pset05'. The window shows the GNU nano 2.9.3 editor editing a file named 'file1'. The content of the file is a single line: 'Buffalo buffalo Buffalo buffalo buffalo buffalo Buffalo buffalo'. The cursor is at the end of the line.

Figure 4: file1 before smear



A screenshot of a terminal window with the title bar 'a@a: ~/pset05'. It shows the execution of a script named 'smear'. The commands and their outputs are: './smear Buffalo ABCDEFG file1', 'a@a:~/pset05\$ echo \$?' followed by '0', and 'a@a:~/pset05\$' with a cursor.

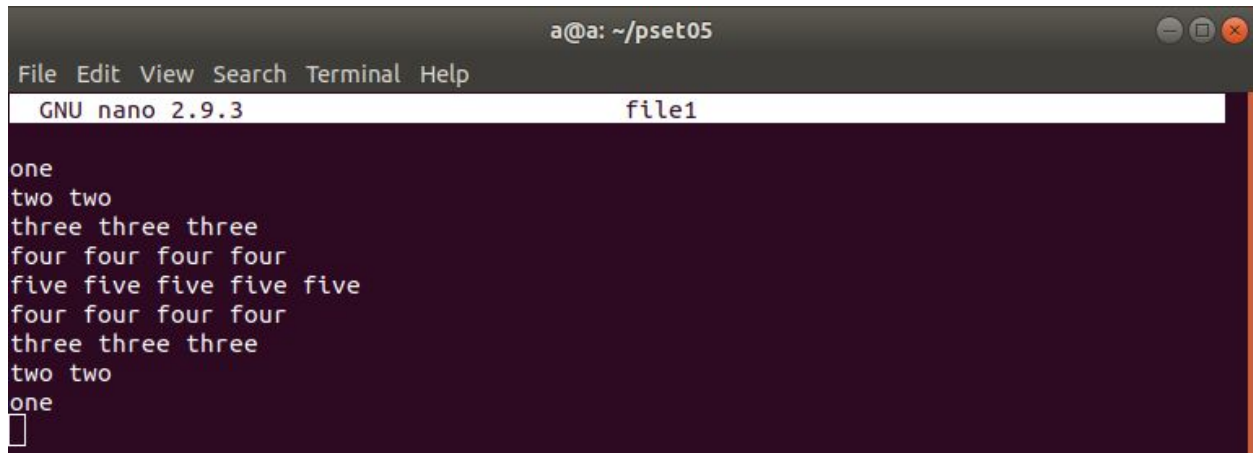
Figure 5: executing smear on file1



A screenshot of a terminal window with the title bar 'a@a: ~/pset05'. The window shows the GNU nano 2.9.3 editor editing 'file1'. The content of the file is now: 'ABCDEFGF buffalo ABCDEFG buffalo buffalo buffalo ABCDEFG buffalo'. The cursor is at the end of the line.

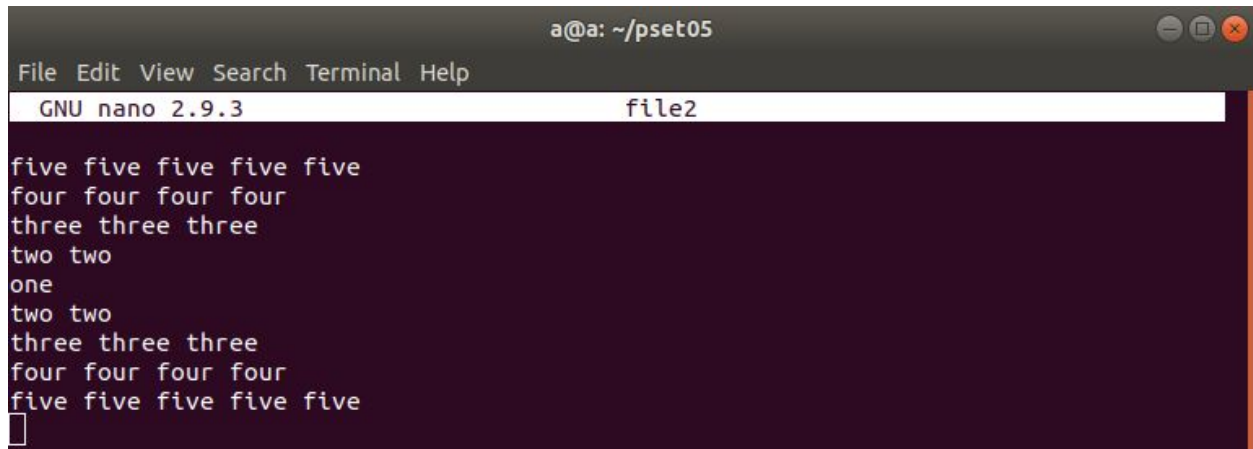
Figure 6: file1 after smear

III. Multi-file word replacement

A screenshot of a terminal window with the title 'a@a: ~/pset05'. The terminal shows the GNU nano 2.9.3 editor editing 'file1'. The content of the file is as follows:

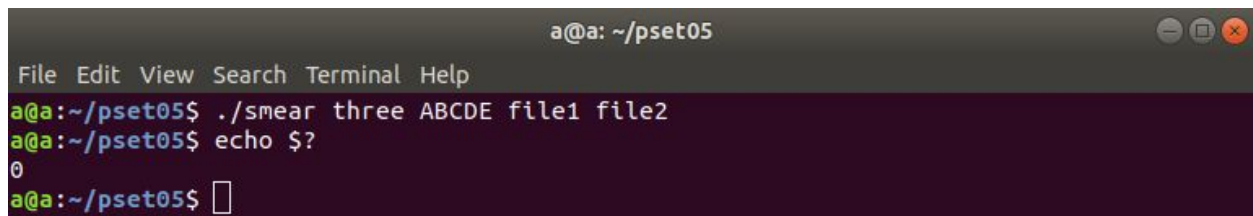
```
one
two two
three three three
four four four four
five five five five five
four four four four
three three three
two two
one
```

Figure 7: file1 before smear

A screenshot of a terminal window with the title 'a@a: ~/pset05'. The terminal shows the GNU nano 2.9.3 editor editing 'file2'. The content of the file is as follows:

```
five five five five five
four four four four
three three three
two two
one
two two
three three three
four four four four
five five five five five
```

Figure 8: file2 before smear

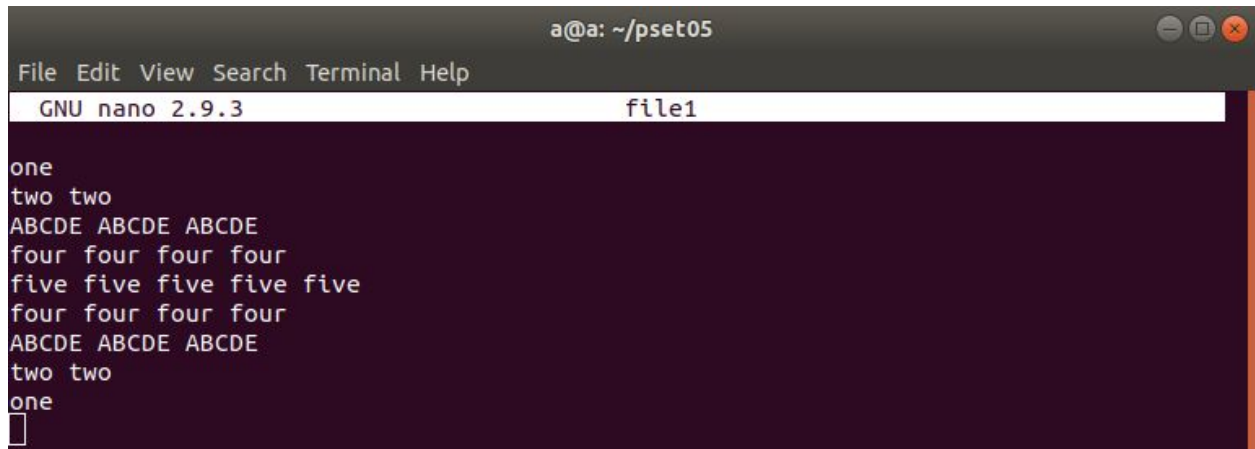
A screenshot of a terminal window with the title 'a@a: ~/pset05'. The terminal shows the following commands and output:

```
a@a:~/pset05$ ./smear three ABCDE file1 file2
a@a:~/pset05$ echo $?
0
a@a:~/pset05$
```

Figure 9: executing smear on file1 and file2

(cont.)

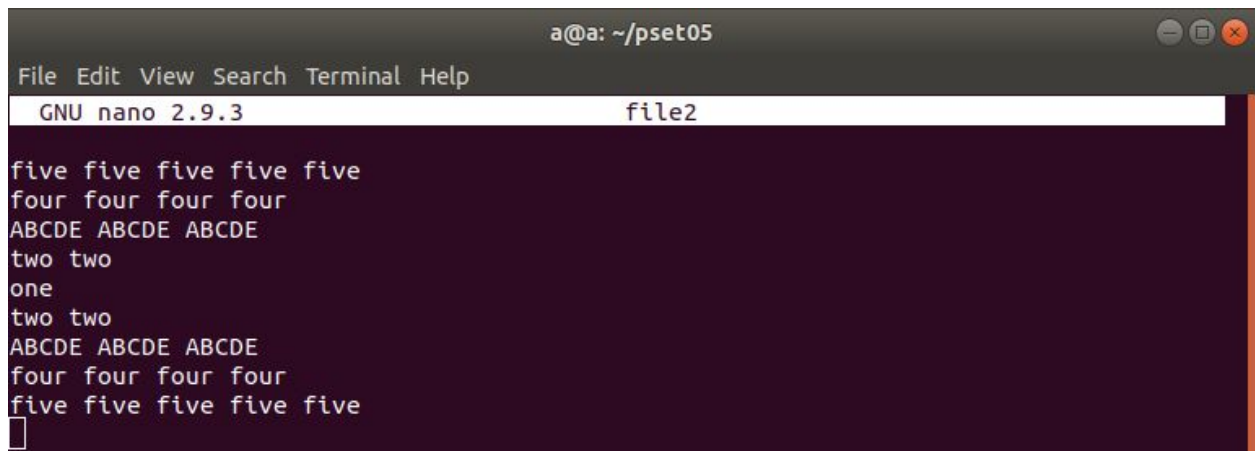
Multi-file word replacement (cont.)



A terminal window titled 'a@a: ~/pset05' showing the GNU nano 2.9.3 editor editing 'file1'. The file contains the following text:

```
one
two two
ABCDE ABCDE ABCDE
four four four four
five five five five five
four four four four
ABCDE ABCDE ABCDE
two two
one
```

Figure 10: file1 after smear

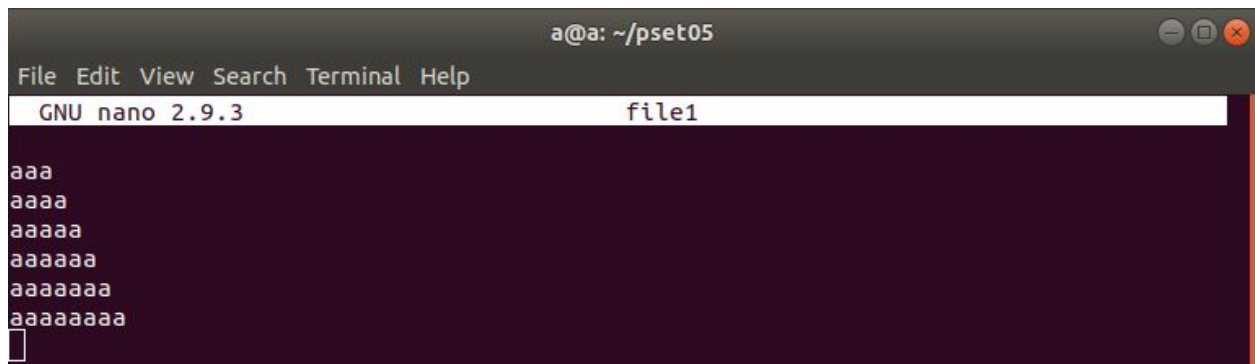


A terminal window titled 'a@a: ~/pset05' showing the GNU nano 2.9.3 editor editing 'file2'. The file contains the following text:

```
five five five five five
four four four four
ABCDE ABCDE ABCDE
two two
one
two two
ABCDE ABCDE ABCDE
four four four four
five five five five five
```

Figure 11: file2 after smear

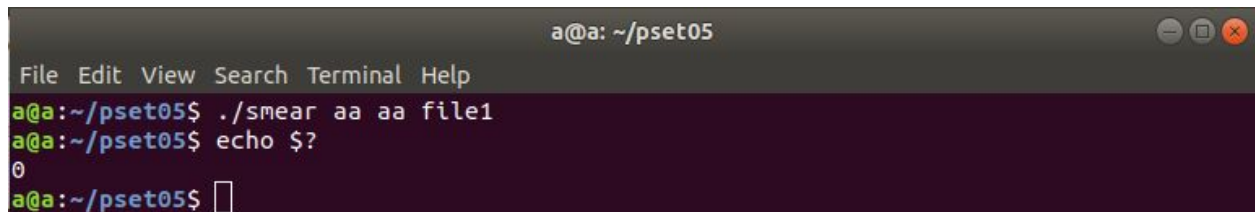
IV. Word replacement (substrings)

A screenshot of a terminal window with the nano text editor open. The window title is 'a@a: ~/pset05'. The menu bar shows 'File Edit View Search Terminal Help'. The status bar at the bottom indicates 'GNU nano 2.9.3' and 'file1'. The editor content consists of seven lines of 'a's: 'aaa', 'aaaa', 'aaaaa', 'aaaaaa', 'aaaaaaa', 'aaaaaaaa', and 'aaaaaaaaa'. The cursor is at the end of the last line.

```
a@a: ~/pset05
File Edit View Search Terminal Help
GNU nano 2.9.3 file1
aaa
aaaa
aaaaa
aaaaaa
aaaaaaa
aaaaaaaa
aaaaaaaaa

```

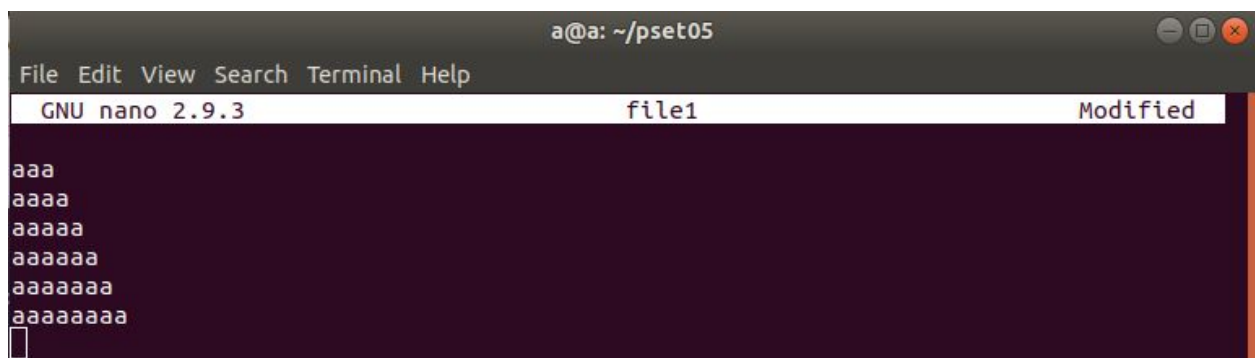
Figure 12: file1 before smear

A screenshot of a terminal window with the prompt 'a@a: ~/pset05'. The user has entered the command './smear aa aa file1'. The prompt changes to 'a@a:~/pset05\$' and the user enters 'echo \$?'. The prompt changes to 'a@a:~/pset05\$' and the user enters '0'. The prompt changes to 'a@a:~/pset05\$' and the user enters a space character.

```
a@a: ~/pset05
File Edit View Search Terminal Help
a@a:~/pset05$ ./smear aa aa file1
a@a:~/pset05$ echo $?
0
a@a:~/pset05$ 

```

Figure 13: executing smear on file1

A screenshot of a terminal window with the nano text editor open. The window title is 'a@a: ~/pset05'. The menu bar shows 'File Edit View Search Terminal Help'. The status bar at the bottom indicates 'GNU nano 2.9.3', 'file1', and 'Modified'. The editor content is identical to Figure 12, with seven lines of 'a's. The cursor is at the end of the last line.

```
a@a: ~/pset05
File Edit View Search Terminal Help
GNU nano 2.9.3 file1 Modified
aaa
aaaa
aaaaa
aaaaaa
aaaaaaa
aaaaaaaa
aaaaaaaaa

```

Figure 14: file1 after smear