

TASK 3

a. Task: Search and replace text in a file - Use the `sed` command to search for and replace specific text in a text file. Demonstrate the use of regular expressions.

e.g., Replace all "Lorem" with "Venis" in `copycommand.txt` file.

```
venis@venis-VirtualBox: ~/DevOps
venis@venis-VirtualBox:~/DevOps$ cat copycommand.txt

The standard Lorem Ipsum passage, used since the 1500s
"Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum."
Section 1.10.32 of "de Finibus Bonorum et Malorum", written by Cicero in 45 BC

venis@venis-VirtualBox:~/DevOps$ sed 's/Lorem/Venis/' copycommand.txt

The standard Venis Ipsum passage, used since the 1500s
"Venis ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum."
Section 1.10.32 of "de Finibus Bonorum et Malorum", written by Cicero in 45 BC

venis@venis-VirtualBox:~/DevOps$
```

Following example demonstrating the use of regular expression in `sed` example: replace all the word that contains 'is' with 'Replaced'

```
sed 's/[a-zA-Z]*is*[a-zA-Z]*/Replaced/g' smallfile.txt
```

```
venis@venis-VirtualBox:~/DevOps$ cat copycommand.txt

The standard Lorem Ipsum passage, used since the 1500s
"Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum."
Section 1.10.32 of "de Finibus Bonorum et Malorum", written by Cicero in 45 BC

venis@venis-VirtualBox:~/DevOps$ sed 's/[a-zA-Z]*si[a-zA-Z]*/Venis/g' copycommand.txt

The standard Lorem Ipsum passage, used Venis the 1500s
"Lorem ipsum dolor Venis amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris Venis ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur Venis occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum."
Section 1.10.32 of "de Finibus Bonorum et Malorum", written by Cicero in 45 BC

venis@venis-VirtualBox:~/DevOps$
```

b. Task: Extract and manipulate data from a CSV file - Use awk to extract and manipulate data from a CSV file. Show how to perform operations like summing columns or filtering data based on criteria.

Filter by different conditions

```
venis@venis-VirtualBox:~/DevOps$ awk -F',' ' $3>=800000 && $3<=900000' machine-readable-business-employment-data-sep-2023-quarter.csv
BDCQ.SEB1X1A,2011.06,861368,,F,Number,0,Business Data Collection - BDC,Sex by employment variable,Filled jobs,Male,Actual,,
BDCQ.SEB1X1A,2011.09,858181,,F,Number,0,Business Data Collection - BDC,Sex by employment variable,Filled jobs,Male,Actual,,
BDCQ.SEB1X1A,2011.12,873957,,F,Number,0,Business Data Collection - BDC,Sex by employment variable,Filled jobs,Male,Actual,,
BDCQ.SEB1X1A,2012.03,873443,,F,Number,0,Business Data Collection - BDC,Sex by employment variable,Filled jobs,Male,Actual,,
BDCQ.SEB1X1A,2012.06,878354,,F,Number,0,Business Data Collection - BDC,Sex by employment variable,Filled jobs,Male,Actual,,
BDCQ.SEB1X1A,2012.09,866769,,F,Number,0,Business Data Collection - BDC,Sex by employment variable,Filled jobs,Male,Actual,,
BDCQ.SEB1X1A,2012.12,885214,,F,Number,0,Business Data Collection - BDC,Sex by employment variable,Filled jobs,Male,Actual,,
BDCQ.SEB1X1A,2013.03,889853,,F,Number,0,Business Data Collection - BDC,Sex by employment variable,Filled jobs,Male,Actual,,
BDCQ.SEB1X1A,2013.06,895586,,F,Number,0,Business Data Collection - BDC,Sex by employment variable,Filled jobs,Male,Actual,,
BDCQ.SEB1X1A,2013.09,886749,,F,Number,0,Business Data Collection - BDC,Sex by employment variable,Filled jobs,Male,Actual,,
BDCQ.SEB1X2A,2011.06,865507,,F,Number,0,Business Data Collection - BDC,Sex by employment variable,Filled jobs,Female,Actual,,
BDCQ.SEB1X2A,2011.09,866932,,F,Number,0,Business Data Collection - BDC,Sex by employment variable,Filled jobs,Female,Actual,,
BDCQ.SEB1X2A,2011.12,881069,,F,Number,0,Business Data Collection - BDC,Sex by employment variable,Filled jobs,Female,Actual,,
BDCQ.SEB1X2A,2012.03,855472,,F,Number,0,Business Data Collection - BDC,Sex by employment variable,Filled jobs,Female,Actual,,
BDCQ.SEB1X2A,2012.06,878971,,F,Number,0,Business Data Collection - BDC,Sex by employment variable,Filled jobs,Female,Actual,,
BDCQ.SEB1X2A,2012.09,870937,,F,Number,0,Business Data Collection - BDC,Sex by employment variable,Filled jobs,Female,Actual,,
BDCQ.SEB1X2A,2012.12,883946,,F,Number,0,Business Data Collection - BDC,Sex by employment variable,Filled jobs,Female,Actual,,
BDCQ.SEB1X2A,2013.03,867438,,F,Number,0,Business Data Collection - BDC,Sex by employment variable,Filled jobs,Female,Actual,,
BDCQ.SEB1X2A,2013.06,892765,,F,Number,0,Business Data Collection - BDC,Sex by employment variable,Filled jobs,Female,Actual,,
```

Print all the name that starts with 'V'

```
Awk -F ',' ' $2 ~ /^V/' filename.csv
```

