Let's assume `example.txt` contains the following sample lines with user names, VM details, and OS versions:

user1 vm1 Ubuntu 20.04

user2 vm2 CentOS 7

user3 vm3 Debian 10

user4 vm4 Fedora 33

user5 vm5 RHEL 8

# Generating a 5-Line Example File

First, create the `example.txt` file with the content mentioned above:

cat <<EOF > example.txt

user1 vm1 Ubuntu 20.04

user2 vm2 CentOS 7

user3 vm3 Debian 10

user4 vm4 Fedora 33

user5 vm5 RHEL 8

EOF

#Example 1: Replace Text

Objective: Replace all occurrences of "Ubuntu" with "Ubuntu 22.04".

# Replace all occurrences of 'Ubuntu' with 'Ubuntu 22.04' in the file 'example.txt'

sed 's/Ubuntu/Ubuntu 22.04/g' example.txt

To edit the file in place, use the `-i` option:

# Replace all occurrences of 'Ubuntu' with 'Ubuntu 22.04' in the file 'example.txt' and save changes

sed -i 's/Ubuntu/Ubuntu 22.04/g' example.txt

# Example 2: Delete Lines Matching a Pattern

\*Objective:Delete lines that contain "CentOS".

# Delete lines containing the word 'CentOS' from the file 'example.txt'

sed '/CentOS/d' example.txt

To edit the file in place, use the `-i` option:

# Delete lines containing the word 'CentOS' from the file 'example.txt' and save changes

sed -i '/CentOS/d' example.txt

# Example 3: Insert Text at a Specific Line

\*\*Objective:\*Insert a line of text after the 3rd line.

# Insert 'user6 vm6 Arch Linux' after the 3rd line in the file 'example.txt'

sed '3a\user6 vm6 Arch Linux' example.txt