Sample files to practice SED command

 Here are some sample files with data that you can use to practice the sed commands:

**1. Configuration File (postgresql.conf)**

# PostgreSQL configuration file

max\_connections = 100

shared\_buffers = 128MB

effective\_cache\_size = 4GB

maintenance\_work\_mem = 64MB

**2. Multiple Configuration Files (config1.conf, config2.conf)**

**config1.conf**

server {

listen 80;

server\_name api.oldendpoint.com;

location / {

proxy\_pass http://api.oldendpoint.com;

}

}

**config2.conf**

server {

listen 443 ssl;

server\_name api.oldendpoint.com;

location / {

proxy\_pass https://api.oldendpoint.com;

}

}

**3. Log File (access.log)**

192.168.1.1 - - [08/Mar/2025:09:00:00 +0530] "GET /index.html HTTP/1.1" 200 1024

192.168.1.2 - - [08/Mar/2025:09:01:00 +0530] "POST /login HTTP/1.1" 302 512

192.168.1.3 - - [08/Mar/2025:09:02:00 +0530] "GET /dashboard HTTP/1.1" 200 2048

**4. Deployment Script (deploy.sh)**

#!/bin/bash

# Deployment script

VERSION=1.0.0

echo "Deploying version $VERSION"

# Deployment steps...

**5. Data File (data.txt)**

John Doe 123 Main St

Jane Smith 456 Oak St

Alice Johnson 789 Pine St

**6. Nginx Configuration File (nginx.conf)**

http {

include /etc/nginx/mime.types;

default\_type application/octet-stream;

# Other configurations...

}

 The sed (stream editor) command is a powerful tool for text processing in Linux. Here are some real-world scenarios where DevOps engineers might use sed:

Here are some common sed command options and explanations to help you understand the examples better:

**1. Basic Syntax**

sed [options] 'script' inputfile

* **[options]**: Command-line options.
* **'script'**: The sed script containing the commands to be executed.
* **inputfile**: The file to be processed.

**2. Common Options**

* **-i**: Edit files in place (i.e., modify the original file).
* **-e**: Allows multiple sed scripts to be executed.
* **-n**: Suppresses automatic printing of pattern space. Useful with the p command.
* **-f**: Reads the sed script from a file.

**3. Addressing**

* **/pattern/**: Specifies lines matching the pattern.
* **n**: Specifies the nth line.
* **$**: Specifies the last line.

**4. Commands**

* **s/pattern/replacement/flags**: Substitutes the pattern with the replacement.
  + **g**: Global replacement (replaces all occurrences).
  + **p**: Prints the line if a substitution was made.
  + **i**: Case-insensitive matching.
* **d**: Deletes lines matching the pattern.
* **p**: Prints lines matching the pattern.
* **a\text**: Appends text after the matched line.
* **i\text**: Inserts text before the matched line.
* **c\text**: Replaces the matched line with the text.

**5. Examples Explained**

**Modifying Configuration Files**

sed -i 's/^max\_connections = .\*/max\_connections = 200/' postgresql.conf

* **-i**: Edits the file in place.
* **s/^max\_connections = .\*/max\_connections = 200/**: Substitutes the line starting with max\_connections = with max\_connections = 200.

**Batch Updating Files**

find /path/to/configs -type f -name "\*.conf" -exec sed -i 's/api\.oldendpoint\.com/api.newendpoint.com/g' {} +

* **find**: Finds files matching the criteria.
* **-exec sed -i 's/api\.oldendpoint\.com/api.newendpoint.com/g' {} +**: Executes the sed command on each found file, replacing api.oldendpoint.com with api.newendpoint.com.

**Extracting Information from Logs**

sed -n 's/.\*\(\([0-9]\{1,3\}\.\)\{3\}[0-9]\{1,3\}\).\*/\1/p' access.log

* **-n**: Suppresses automatic printing.
* **s/.\*\(\([0-9]\{1,3\}\.\)\{3\}[0-9]\{1,3\}\).\*/\1/p**: Extracts and prints IP addresses.

**Automating Deployment Scripts**

sed -i 's/^VERSION=.\*/VERSION=2.0.1/' deploy.sh

* **-i**: Edits the file in place.
* **s/^VERSION=.\*/VERSION=2.0.1/**: Substitutes the line starting with VERSION= with VERSION=2.0.1.

**Cleaning Up Data Files**

sed -i 's/[ \t]\*$//' data.txt

* **-i**: Edits the file in place.
* **s/[ \t]\*$//**: Removes trailing whitespace.

**Inserting Text**

sed -i '/http {/a include /etc/nginx/custom.conf;' nginx.conf

* **-i**: Edits the file in place.
* **/http {/a include /etc/nginx/custom.conf;**: Appends the line include /etc/nginx/custom.conf; after the line containing http {.