

Shell Scripting

Hands-on Assignment:

Question 1

(5 points)

Write a shell script to change the values in a file(i.e sig.conf) according to the input passed to the script. The script should ask for all four inputs from the user & also validate the input.

Below are the details of input. In full bracket options are given, you have to restrict the user pass single value for each input from the provided options in the full bracket.

Input:-

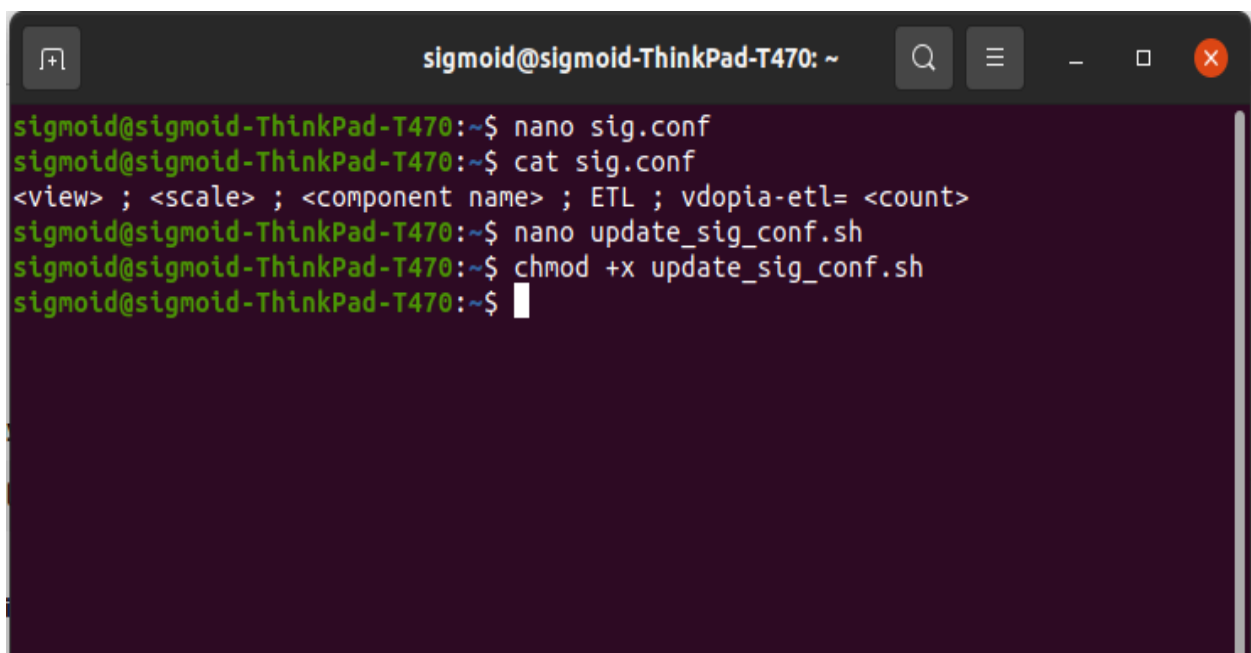
- 1) Component Name [INGESTOR/JOINER/WRANGLER/VALIDATOR]**
- 2) Scale [MID/HIGH/LOW]**
- 3) View [Auction/Bid]**
- 4) Count [single digit number]**

Explanation of a conf file line.

<view> ; <scale> ; <component name> ; ETL ; vdopia-etl= <count>

Note:- vdopiasample stands for Auction & vdopiasample-bid is for Bid

The script should change the values in the file according to the input provided. At a time only one line of the conf file should be altered.

A terminal window titled 'sigmoid@sigmoid-ThinkPad-T470: ~' with search, menu, and window control icons. The terminal shows the following commands and output:

```
sigmoid@sigmoid-ThinkPad-T470:~$ nano sig.conf
sigmoid@sigmoid-ThinkPad-T470:~$ cat sig.conf
<view> ; <scale> ; <component name> ; ETL ; vdopia-etl= <count>
sigmoid@sigmoid-ThinkPad-T470:~$ nano update_sig_conf.sh
sigmoid@sigmoid-ThinkPad-T470:~$ chmod +x update_sig_conf.sh
sigmoid@sigmoid-ThinkPad-T470:~$
```

```
#!/bin/bash
```

```
validate_input() {  
    input="$1"  
    allowed="$2"  
    if [[ ! " $allowed " =~ " $input " ]]; then  
        echo "Invalid input. Allowed options are: $allowed"  
        exit 1  
    fi  
}
```

```
validate_count() {  
    local count="$1"  
    if [[ ! "$count" =~ ^[0-9]$ ]]; then  
        echo "Invalid count. Please enter a single digit number (0-9)."  
        exit 1  
    fi  
}
```

```
echo "Please enter the Component Name [INGESTOR/JOINER/WRANGLER/VALIDATOR]:"  
read -r component_name  
validate_input "$component_name" "INGESTOR JOINER WRANGLER VALIDATOR"
```

```
echo "Please enter the Scale [MID/HIGH/LOW]:"  
read -r scale  
validate_input "$scale" "MID HIGH LOW"
```

```
echo "Please enter the View [Auction/Bid]:"  
read -r view  
validate_input "$view" "Auction Bid"
```

```
echo "Please enter the Count (single digit number 0-9):"  
read -r count  
validate_count "$count"
```

```
if [[ "$view" == "Auction" ]]; then  
    view_name="vdopiasample"  
else
```

```
    view_name="vdopiasample-bid"
fi

new_line="$view ; $scale ; $component_name ; ETL ; $view_name-etl= $count"

echo "The new configuration line to be inserted is:"
echo "$new_line"

update_line_in_file() {
    file="$1"
    new_line="$2"
    sed -i "0,/{s|.*|$new_line|;b}" "$conf_file"
}

conf_file="sig.conf"

if [[ ! -f "$conf_file" ]]; then
    echo "Configuration file '$conf_file' not found!"
    exit 1
fi

update_line_in_file "$conf_file" "$new_line"
echo "Configuration updated successfully!"
```

```
sigmoid@sigmoid-ThinkPad-T470: ~  
sigmoid@sigmoid-ThinkPad-T470: ~ x sigmoid@sigmoid-ThinkPad-T470: ~ x  
sigmoid@sigmoid-ThinkPad-T470:~$ ./update_sig_conf.sh  
Please enter the Component Name [INGESTOR/JOINER/WRANGLER/VALIDATOR]:  
JOINER  
Please enter the Scale [MID/HIGH/LOW]:  
MID  
Please enter the View [Auction/Bid]:  
Auction  
Please enter the Count (single digit number 0-9):  
5  
The new configuration line to be inserted is:  
Auction ; MID ; JOINER ; ETL ; vdopiasample-etl= 5  
Configuration updated successfully!  
sigmoid@sigmoid-ThinkPad-T470:~$ ./update_sig_conf.sh  
Please enter the Component Name [INGESTOR/JOINER/WRANGLER/VALIDATOR]:  
WRANGLER  
Please enter the Scale [MID/HIGH/LOW]:  
HIGH  
Please enter the View [Auction/Bid]:  
BID  
Invalid input. Allowed options are: Auction Bid  
sigmoid@sigmoid-ThinkPad-T470:~$ ./update_sig_conf.sh  
Please enter the Component Name [INGESTOR/JOINER/WRANGLER/VALIDATOR]:  
WRANGLER  
Please enter the Scale [MID/HIGH/LOW]:  
HIGH  
Please enter the View [Auction/Bid]:  
Bid  
Please enter the Count (single digit number 0-9):  
5  
The new configuration line to be inserted is:  
Bid ; HIGH ; WRANGLER ; ETL ; vdopiasample-bid-etl= 5  
Configuration updated successfully!  
sigmoid@sigmoid-ThinkPad-T470:~$
```

Updated sig.conf:

```
sigmoid@sigmoid-ThinkPad-T470: ~  
sigmoid@sigmoid-ThinkPad-T470: ~ x sigmoid@sigmoid-ThinkPad-T470: ~ x  
sigmoid@sigmoid-ThinkPad-T470:~$ cat sig.conf  
Bid ; HIGH ; WRANGLER ; ETL ; vdopiasample-bid-etl= 5  
sigmoid@sigmoid-ThinkPad-T470:~$
```