

Shell Script Assignment

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

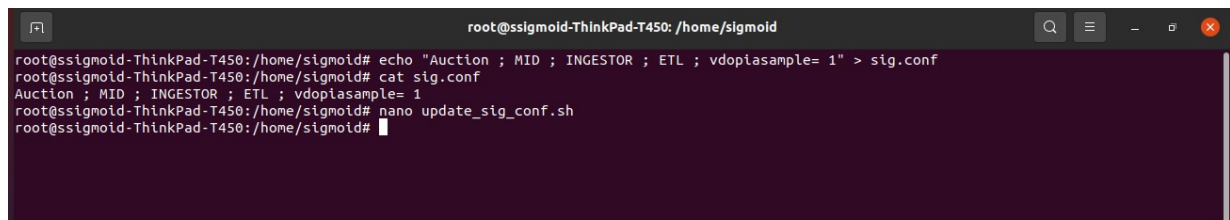
The script should change the values in the file according to the input provided.

At a time only one line of the conf file should be altered.

Create the sig.conf File

```
echo "Auction ; MID ; INGESTOR ; ETL ; vdopiasample= 1" > sig.conf
```

Create the update_sig_conf.sh File



```
root@ssigmoid-ThinkPad-T450: /home/sigmoid
root@ssigmoid-ThinkPad-T450:/home/sigmoid# echo "Auction ; MID ; INGESTOR ; ETL ; vdopiasample= 1" > sig.conf
root@ssigmoid-ThinkPad-T450:/home/sigmoid# cat sig.conf
Auction ; MID ; INGESTOR ; ETL ; vdopiasample= 1
root@ssigmoid-ThinkPad-T450:/home/sigmoid# nano update_sig_conf.sh
root@ssigmoid-ThinkPad-T450:/home/sigmoid#
```

update_sig_conf.sh

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

```
# Function to validate component name
```

```
validate_component() {
    case "$1" in
        INGESTOR|JOINER|WRANGLER|VALIDATOR) return 0 ;;
        *) echo "Invalid Component Name. Must be one of
[INGESTOR, JOINER, WRANGLER, VALIDATOR]." ; return 1 ;;
    esac
}
```

```
# Function to validate scale
```

```
validate_scale() {
```

```

        case "$1" in
            MID|HIGH|LOW) return 0 ;;
            *) echo "Invalid Scale. Must be one of [MID, HIGH,
LOW]." ; return 1 ;;
        esac
    }

# Function to validate view
validate_view() {
    case "$1" in
        Auction|Bid) return 0 ;;
        *) echo "Invalid View. Must be one of [Auction,
Bid]." ; return 1 ;;
    esac
}

# Function to validate count
validate_count() {
    if [[ "$1" =~ ^[0-9]$ ]]; then
        return 0
    else
        echo "Invalid Count. Must be a single digit number
(0-9)."
        return 1
    fi
}

# Read and validate inputs
read -p "Enter Component Name
[INGESTOR/JOINER/WRANGLER/VALIDATOR]: " component
while ! validate_component "$component"; do
    read -p "Please enter a valid Component Name
[INGESTOR/JOINER/WRANGLER/VALIDATOR]: " component
done

read -p "Enter Scale [MID/HIGH/LOW]: " scale
while ! validate_scale "$scale"; do
    read -p "Please enter a valid Scale [MID/HIGH/LOW]: "
scale
done

read -p "Enter View [Auction/Bid]: " view
while ! validate_view "$view"; do
    read -p "Please enter a valid View [Auction/Bid]: " view
done

read -p "Enter Count [single digit number]: " count
while ! validate_count "$count"; do

```

```

        read -p "Please enter a valid Count [single digit
number]: " count
done

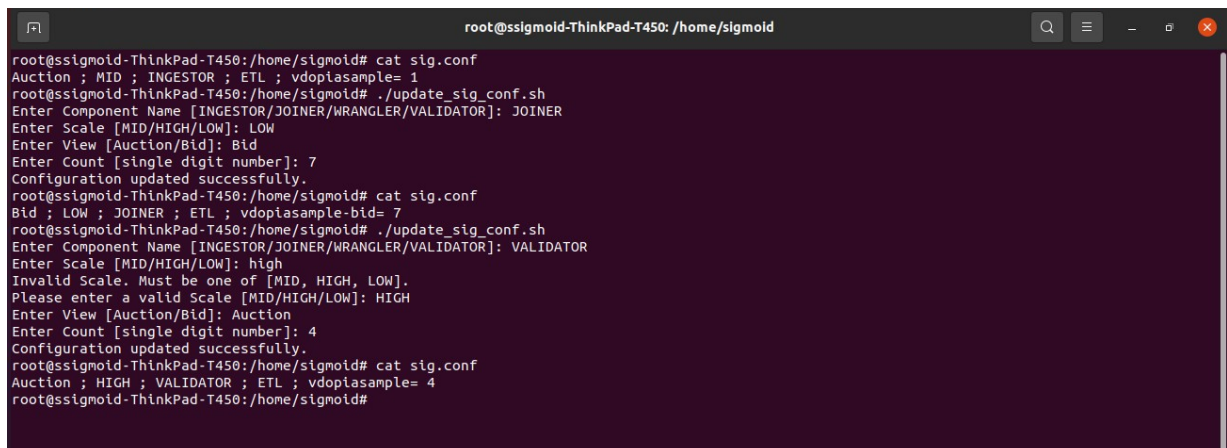
if [[ "$view" == "Auction" ]]; then
    vdopiasample="vdopiasample"
else
    vdopiasample="vdopiasample-bid"
fi

new_line="$view ; $scale ; $component ; ETL ; $vdopiasample=
$count"

conf_file="sig.conf"
if [ -f "$conf_file" ]; then
    # Use sed to replace the first matching line
    sed -i "0,/,/{s|.*|$new_line|;b}" "$conf_file"
    echo "Configuration updated successfully."
else
    echo "Error: $conf_file not found."
fi

```

Run the Script:



A terminal window titled 'root@ssigmoid-ThinkPad-T450: /home/sgmoid' showing the execution of a script. The user runs 'cat sig.conf' and sees 'Auction ; MID ; INGESTOR ; ETL ; vdopiasample= 1'. Then they run './update_sig_conf.sh'. The script prompts for 'Component Name' (JOINED), 'Scale' (LOW), and 'View' (Bid). The user enters '7' for the count. The script updates the config and shows 'Auction ; LOW ; JOINER ; ETL ; vdopiasample-bid= 7'. The user runs the script again, enters 'VALIDATOR' for component, 'high' for scale (which is rejected as invalid), 'HIGH' for scale, 'Auction' for view, and '4' for count. The script updates the config to 'Auction ; HIGH ; VALIDATOR ; ETL ; vdopiasample= 4'.

```

root@ssigmoid-ThinkPad-T450:/home/sgmoid# cat sig.conf
Auction ; MID ; INGESTOR ; ETL ; vdopiasample= 1
root@ssigmoid-ThinkPad-T450:/home/sgmoid# ./update_sig_conf.sh
Enter Component Name [INGESTOR/JOINER/WRANGLER/VALIDATOR]: JOINER
Enter Scale [MID/HIGH/LOW]: LOW
Enter View [Auction/Bid]: Bid
Enter Count [single digit number]: 7
Configuration updated successfully.
root@ssigmoid-ThinkPad-T450:/home/sgmoid# cat sig.conf
Bid ; LOW ; JOINER ; ETL ; vdopiasample-bid= 7
root@ssigmoid-ThinkPad-T450:/home/sgmoid# ./update_sig_conf.sh
Enter Component Name [INGESTOR/JOINER/WRANGLER/VALIDATOR]: VALIDATOR
Enter Scale [MID/HIGH/LOW]: high
Invalid Scale. Must be one of [MID, HIGH, LOW].
Please enter a valid Scale [MID/HIGH/LOW]: HIGH
Enter View [Auction/Bid]: Auction
Enter Count [single digit number]: 4
Configuration updated successfully.
root@ssigmoid-ThinkPad-T450:/home/sgmoid# cat sig.conf
Auction ; HIGH ; VALIDATOR ; ETL ; vdopiasample= 4
root@ssigmoid-ThinkPad-T450:/home/sgmoid#

```