Assignment 4

Question: Users can put a compressed file at any path of the linux file system. The name of the file will be **research** and the extension will be of compression type, example for gzip type extension will be .gz. You have to find the file and check the compression type and uncompress it.

Solution:

To achieve thjs we can write a script with find a file starts with research. After that it will check the compression type of file and uncompress it if possible.

Explanations of all steps :

1. Create a script file with sudo access so that it can decompress the file of any location in our file system.
 • Switch to root user


```
sigmoid@sigmoid:~/scripts$ sudo su
[sudo] password for sigmoid:
root@sigmoid:/home/sigmoid/scripts#
```

2. Create a script file using file editor.
eg . Decompress.sh (providing .sh is not mandatory to increase the readability I have given)


```
root@sigmoid:~/myscripts# nano decompress.sh
```

3. **write the script in file:**

```
#!/bin/bash

echo Searching for research file  in your system...

#searhing the file

file=$(find / -name "research.*" 2>/dev/null )

#checking if the exist or not
if [ -z "$file" ];
then

  echo "Sorry! No research file available in your System"
  exit 1
fi

echo The available file is "$file"

#check file extension to find compression type
type="${file##*.}"
```

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#uncompressing the file

case "$type" in
#if giz compressed file found
gz) echo uncompressing "$file"
    gzip -d "$file"
;;

#if zip compressed file found
zip) echo uncompressing "$file"
     unzip "$file"
;;
for other type of file
*) echo "unknown compression file type $file"
exit 1
;;
esac

echo "File uncomprssed successfully"

___

file=$(find / -name "research.*" 2>/dev/null)

> it will search for the file whose name starts with research and ends with any extension.
Like research.txt , research.gip etc and store the file path in file variable.

if [-z "$file"];
then
  echo "Sorry! No research file available in your System"
  exit 1
fi

> this step will check that the availability of research file.
If the file variable is empty then it will execute this statement and display "Sorry! No research file available in your system.
And exit 1 will exit the execution of script.

```
root@sigmoid:~/myscripts# ./decompress.sh
Searching for research file in your system...
Sorry! No research file available in your System
```

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>if file is available in system it will display the file name

```
root@sigmoid:~/myscripts# ./decompress.sh
Searching for research file in your system...
The available file is /root/myscripts/research.txt
```

type="${file##*.}"

> in this step it will extract the extension of available research file and store it in type variable. Eg if the research.gz file is available then it will extract the gz and store it in type variable.

Now we will use case statement to decompress the file.

Case "$type" in
#if giz compressed file found
gz) echo uncompressing "$file"
   gzip -d "$file"
;;

```
root@sigmoid:~/myscripts# ./decompress.sh
Searching for research file in your system...
The available file is /root/myscripts/research.gz
uncompressing /root/myscripts/research.gz
File uncomprssed successfully
```

#if zip compressed file found
zip) echo uncompressing "$file"
    unzip "$file"
;;

```
root@sigmoid:~/myscripts# ./decompress.sh
Searching for research file in your system...
The available file is /root/myscripts/research.zip
uncompressing /root/myscripts/research.zip
Archive:  /root/myscripts/research.zip
replace file1? [y]es, [n]o, [A]ll, [N]one, [r]ename: y
 extracting: file1
replace file2? [y]es, [n]o, [A]ll, [N]one, [r]ename: y
 extracting: file2
replace file3? [y]es, [n]o, [A]ll, [N]one, [r]ename: y
 extracting: file3
File uncomprssed successfully
```

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```
root@sigmoid:~/myscripts# ./decompress.sh
Searching for research file in your system...
The available file is /root/myscripts/research.bz2
uncompressing /root/myscripts/research.bz2
File uncomprssed successfully
```

```
root@sigmoid:~/myscripts# ./decompress.sh
Searching for research file in your system...

The available file is /root/myscripts/research.xz
uncompressing /root/myscripts/research.xz
File uncomprssed successfully
```

```
root@sigmoid:~/myscripts# ./decompress.sh
Searching for research file in your system...
The available file is /root/myscripts/research.txt
unknown compression file type /root/myscripts/research.txt
root@sigmoid:~/myscripts#
```

esac

it will check the file extension and decompress accordingly. If the file with different extension which cannot be decompressed then it will display "unknown compression file type <with file path>"

echo "File uncomprssed successfully"
> After successful decompression of file it will display "File uncompressed successful"