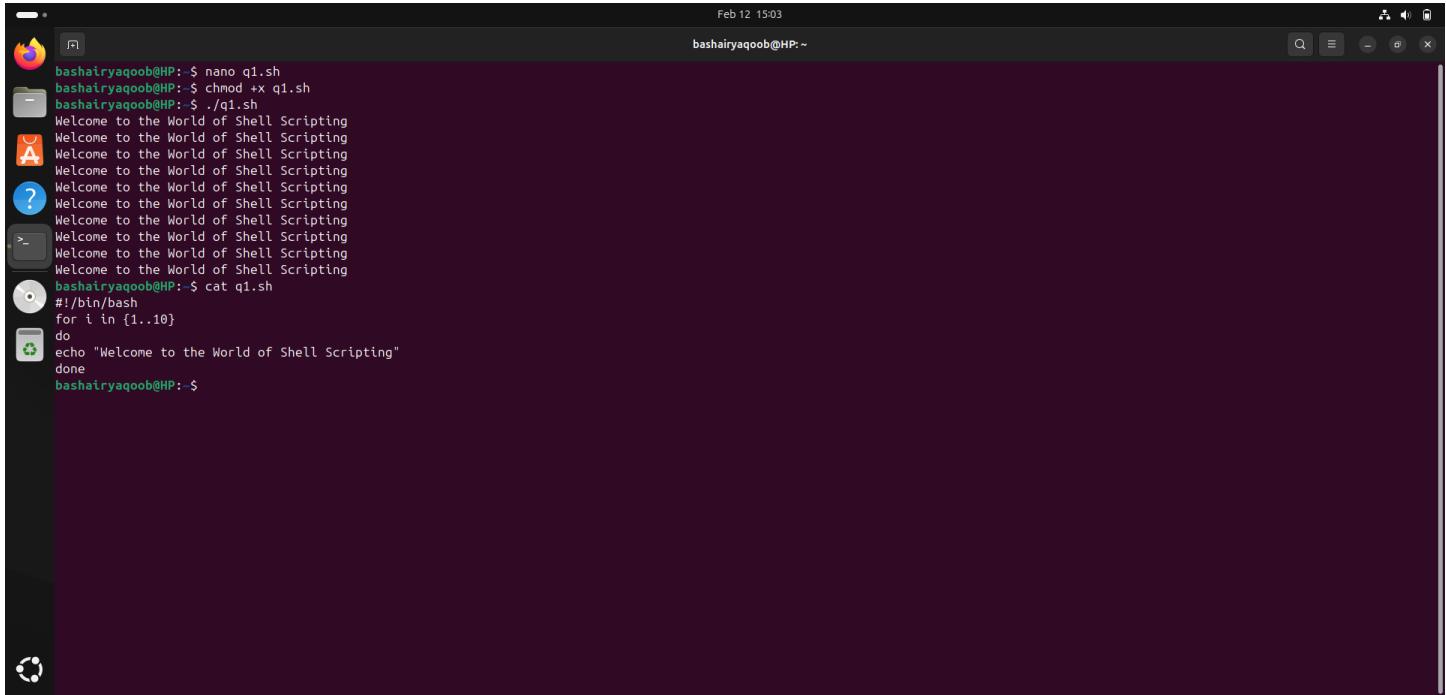


OS LAB 3:

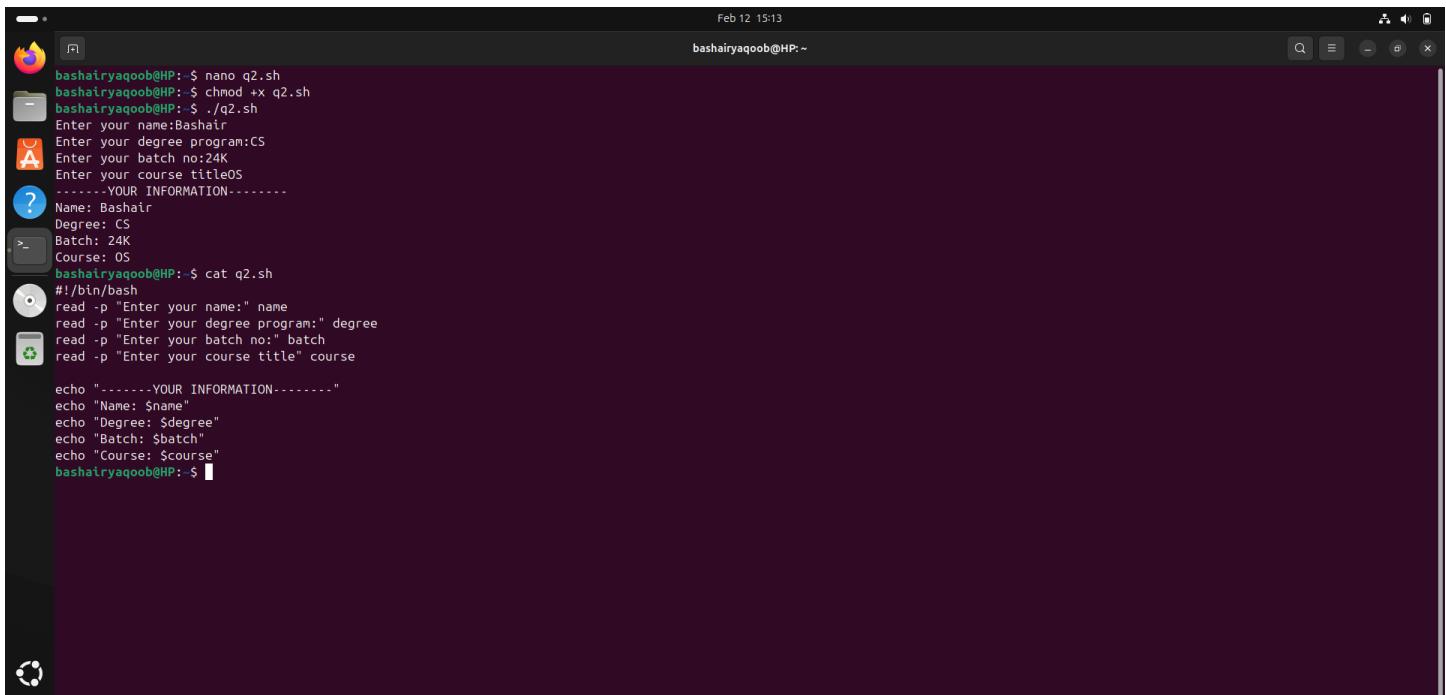
24k-0810

Task 1:



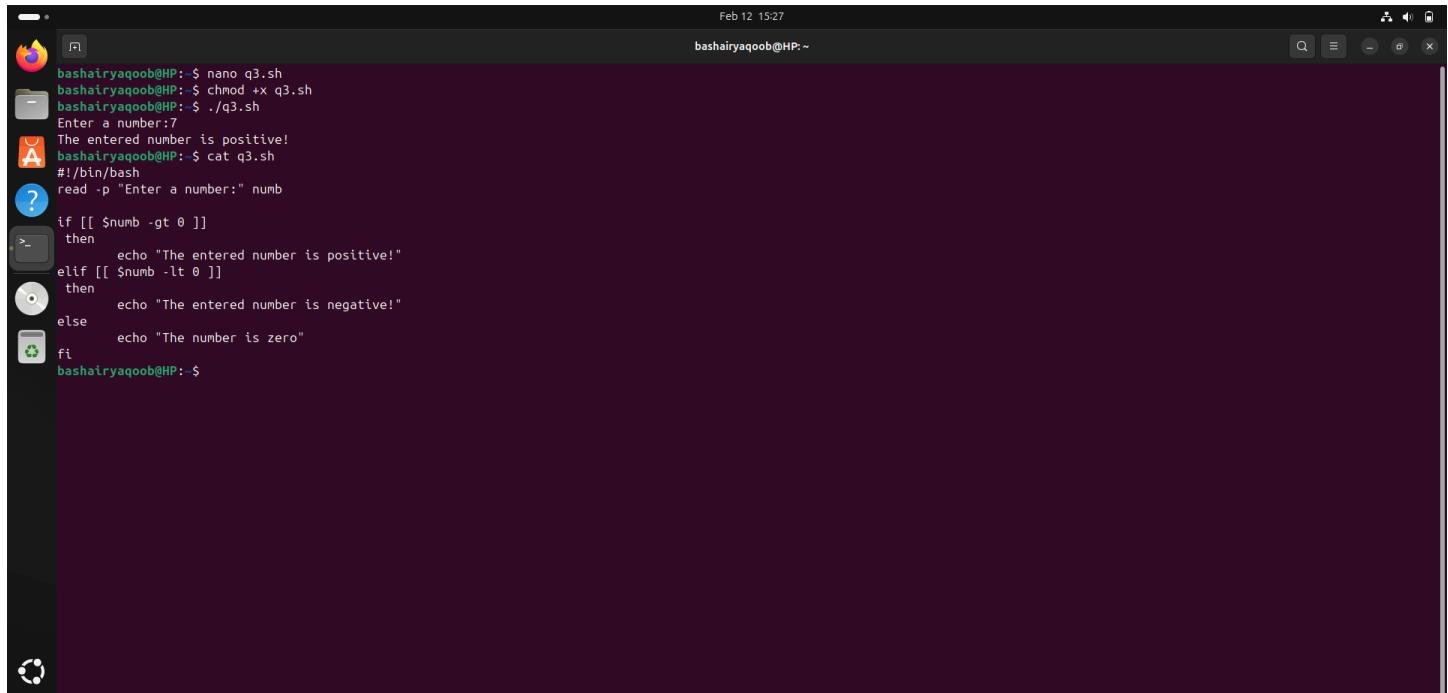
```
Feb 12 15:03 bashairyaqoob@HP:~  
bashairyaqoob@HP:~$ nano q1.sh  
bashairyaqoob@HP:~$ chmod +x q1.sh  
bashairyaqoob@HP:~$ ./q1.sh  
Welcome to the World of Shell Scripting  
bashairyaqoob@HP:~$ cat q1.sh  
#!/bin/bash  
for i in {1..10}  
do  
echo "Welcome to the World of Shell Scripting"  
done  
bashairyaqoob@HP:~$
```

Task 2:



```
Feb 12 15:13 bashairyaqoob@HP:~  
bashairyaqoob@HP:~$ nano q2.sh  
bashairyaqoob@HP:~$ chmod +x q2.sh  
bashairyaqoob@HP:~$ ./q2.sh  
Enter your name:Bashair  
Enter your degree program:CS  
Enter your batch no:24K  
Enter your course titleOS  
-----YOUR INFORMATION-----  
Name: Bashair  
Degree: CS  
Batch: 24K  
Course: OS  
bashairyaqoob@HP:~$ cat q2.sh  
#!/bin/bash  
read -p "Enter your name:" name  
read -p "Enter your degree program:" degree  
read -p "Enter your batch no:" batch  
read -p "Enter your course title" course  
  
echo "-----YOUR INFORMATION-----"  
echo "Name: $name"  
echo "Degree: $degree"  
echo "Batch: $batch"  
echo "Course: $course"  
bashairyaqoob@HP:~$
```

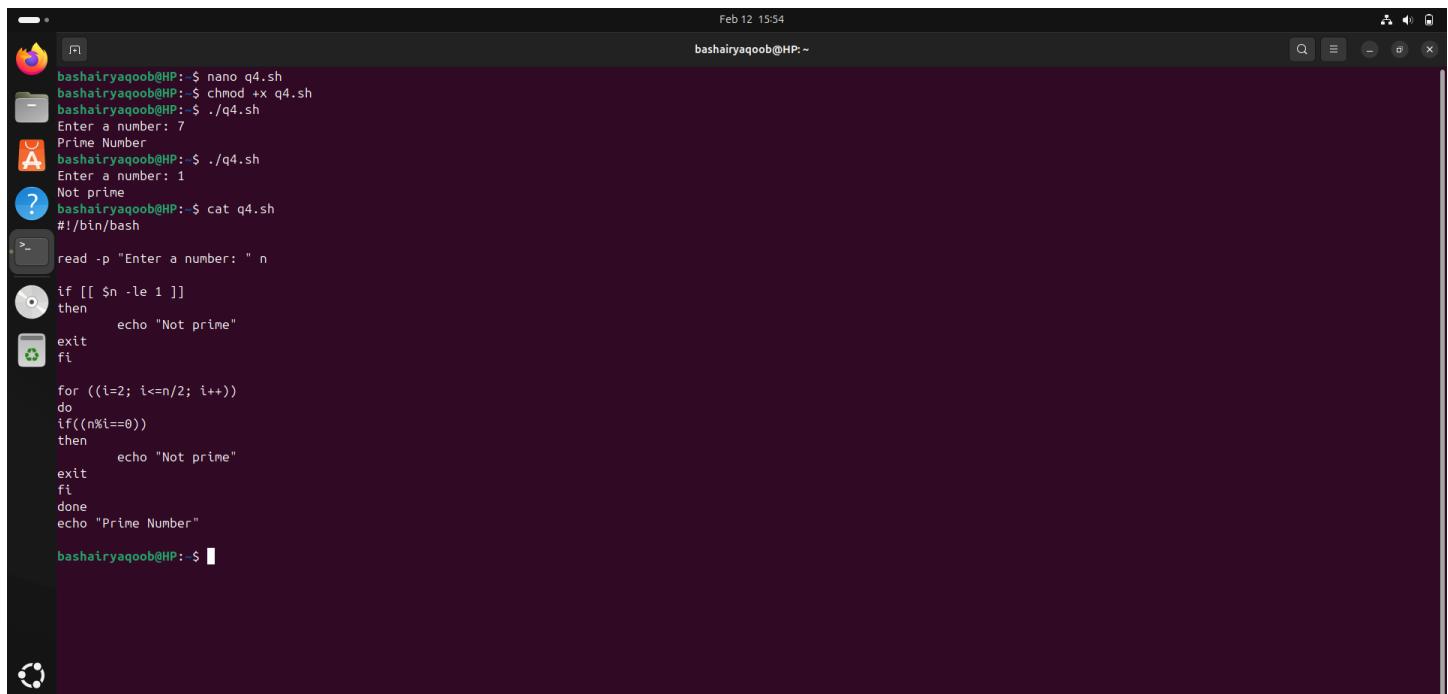
Task 3:



Feb 12 15:27
bashairyaqoob@HP:~

```
bashairyaqoob@HP:~$ nano q3.sh
bashairyaqoob@HP:~$ chmod +x q3.sh
bashairyaqoob@HP:~$ ./q3.sh
Enter a number:
The entered number is positive!
bashairyaqoob@HP:~$ cat q3.sh
#!/bin/bash
read -p "Enter a number:" numb
if [[ $numb -gt 0 ]]
then
    echo "The entered number is positive!"
elif [[ $numb -lt 0 ]]
then
    echo "The entered number is negative!"
else
    echo "The number is zero"
fi
bashairyaqoob@HP:~$
```

Task 4:



Feb 12 15:54
bashairyaqoob@HP:~

```
bashairyaqoob@HP:~$ nano q4.sh
bashairyaqoob@HP:~$ chmod +x q4.sh
bashairyaqoob@HP:~$ ./q4.sh
Enter a number: 7
Prime Number
bashairyaqoob@HP:~$ cat q4.sh
#!/bin/bash
# read -p "Enter a number: " n
if [[ $n -le 1 ]]
then
    echo "Not prime"
exit
fi
done
echo "Prime Number"

bashairyaqoob@HP:~$
```

Task 5:

```
Feb 12 16:04
bashairyaqoob@HP:~$ nano q5.sh
bashairyaqoob@HP:~$ chmod +x q5.sh
bashairyaqoob@HP:~$ ./q5.sh
Enter 5 numbers:
3 6 0 9 15
Maximum: 15
Minimum: 0
bashairyaqoob@HP:~$ cat q5.sh
#!/bin/bash

echo "Enter 5 numbers: "
read n1 n2 n3 n4 n5

max=$n1
min=$n1

for num in $n2 $n3 $n4 $n5
do
    if [[ $num -gt $max ]]; then
        max=$num
    fi

    if [[ $num -lt $min ]]; then
        min=$num
    fi
done

echo "Maximum: $max"
echo "Minimum: $min"
bashairyaqoob@HP:~$
```

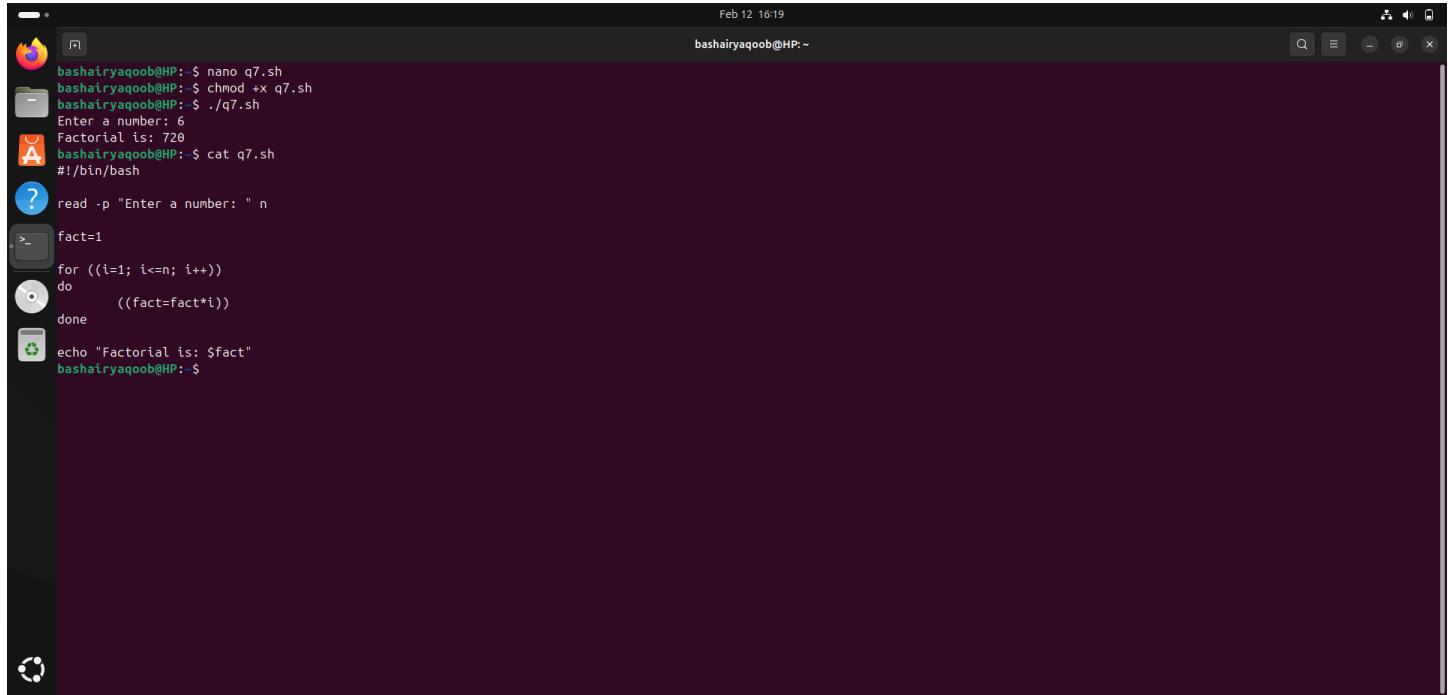
Task 6:

```
Feb 12 16:10
bashairyaqoob@HP:~$ nano q6.sh
bashairyaqoob@HP:~$ chmod +x q6.sh
bashairyaqoob@HP:~$ ./q6.sh
Enter number of terms:5
Fibonacci series:
0 1 1 2 3
bashairyaqoob@HP:~$ cat q6.sh
#!/bin/bash

read -p "Enter number of terms:" n
a=0
b=1

echo "Fibonacci series:"
for ((i=0; i<n; i++))
do
    echo -n "$a "
    ((temp=a+b))
    a=$b
    b=$temp
done
echo
bashairyaqoob@HP:~$
```

Task 7:



Feb 12 16:19
bashairyaqoob@HP:~

```
bashairyaqoob@HP:~$ nano q7.sh
bashairyaqoob@HP:~$ chmod +x q7.sh
bashairyaqoob@HP:~$ ./q7.sh
Enter a number: 6
Factorial is: 720
bashairyaqoob@HP:~$ cat q7.sh
#!/bin/bash

? read -p "Enter a number: " n
>_ fact=1
for ((i=1; i<=n; i++))
do
    ((fact=fact*i))
done
echo "Factorial is: $fact"
bashairyaqoob@HP:~$
```

Task 8:

The screenshot shows two terminal windows side-by-side. The left terminal window displays the contents of a file named 'q8.sh' created with 'nano'. The right terminal window shows the execution of this script.

Terminal 1 (Left):

```
GNU nano 7.2
#!/bin/bash
mkdir -p shelldir cdir jpgdir
mv *.sh shelldir 2>/dev/null
mv *.c cdir 2>/dev/null
mv *.jpg jpgdir 2>/dev/null
echo "Files moved successfully"
```

Terminal 2 (Right):

```
Feb 12 16:29
bashairyaqoob@HP:~ q8.sh *
^C Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location M-U Undo M-A Set Mark M-I To Bracket M-Q Where Was M-O Previous M-W Next M-F Back
^X Exit ^R Read File ^N Replace ^U Paste ^J Justify ^Y Go To Line M-E Redo M-6 Copy
Feb 12 16:30
bashairyaqoob@HP:~ nano q8.sh
bashairyaqoob@HP:~ ls
Desktop Documents Downloads Music Pictures Public q8.sh snap Templates Videos
bashairyaqoob@HP:~ chmod +x q8.sh
bashairyaqoob@HP:~ ./q8.sh
Files moved successfully
bashairyaqoob@HP:~ ls
cdir Desktop Documents Downloads jpgdir Music Pictures Public shelldir snap Templates Videos
bashairyaqoob@HP:~
```

Task 9:

```
Feb 12 16:36
bashairyaqoob@HP:~
```

```
bashairyaqoob@HP:~$ nano q9.sh
bashairyaqoob@HP:~$ chmod +x q9.sh
bashairyaqoob@HP:~$ ./q9.sh
Updating system...
[sudo] password for bashairyaqoob:
Hit:1 http://pk.archive.ubuntu.com/ubuntu noble InRelease [126 kB]
Get:2 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:3 http://pk.archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:4 http://pk.archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:5 http://pk.archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [1,741 kB]
Get:6 http://security.ubuntu.com/ubuntu noble-security/main amd64 Packages [1,446 kB]
Get:7 http://pk.archive.ubuntu.com/ubuntu noble-updates/main Translation-en [324 kB]
Get:8 http://pk.archive.ubuntu.com/ubuntu noble-updates/main amd64 Components [175 kB]
Get:9 http://pk.archive.ubuntu.com/ubuntu noble-updates/main amd64 c-n-f Metadata [16.5 kB]
Get:10 http://pk.archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Packages [2,588 kB]
Get:11 http://pk.archive.ubuntu.com/ubuntu noble-updates/restricted Translation-en [593 kB]
Get:12 http://pk.archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Components [212 kB]
Get:13 http://pk.archive.ubuntu.com/ubuntu noble-updates/restricted amd64 c-n-f Metadata [556 B]
Get:14 http://pk.archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [1,528 kB]
Get:15 http://pk.archive.ubuntu.com/ubuntu noble-updates/universe Translation-en [313 kB]
Get:16 http://pk.archive.ubuntu.com/ubuntu noble-updates/universe amd64 Components [386 kB]
Get:17 http://security.ubuntu.com/ubuntu noble-security/main Translation-en [234 kB]
Get:18 http://pk.archive.ubuntu.com/ubuntu noble-updates/universe amd64 c-n-f Metadata [31.9 kB]
Get:19 http://pk.archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Packages [32.1 kB]
Get:20 http://pk.archive.ubuntu.com/ubuntu noble-updates/multiverse Translation-en [6,816 B]
Get:21 http://pk.archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Components [940 B]
Get:22 http://pk.archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 c-n-f Metadata [496 B]
Get:23 http://pk.archive.ubuntu.com/ubuntu noble-backports/main amd64 Components [7,316 B]
Get:24 http://pk.archive.ubuntu.com/ubuntu noble-backports/restricted amd64 Components [216 B]
Get:25 http://pk.archive.ubuntu.com/ubuntu noble-backports/universe amd64 Components [10.5 kB]
Get:26 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [21.5 kB]
Get:27 http://pk.archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 Components [212 B]
Get:28 http://security.ubuntu.com/ubuntu noble-security/main amd64 c-n-f Metadata [9,892 B]
Get:29 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Packages [2,445 kB]
Get:30 http://security.ubuntu.com/ubuntu noble-security/restricted Translation-en [562 kB]
Get:31 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Components [212 B]
Get:32 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 c-n-f Metadata [536 B]
Get:33 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Packages [929 kB]
```

```
Feb 12 16:36
bashairyaqoob@HP:~
```

```
bashairyaqoob@HP:~$ ctags vim-doc vim-scripts
The following NEW packages will be installed:
  vim vim-runtime
0 upgraded, 2 newly installed, 0 to remove and 78 not upgraded.
Need to get 9,162 kB of archives.
After this operation, 41.6 MB of additional disk space will be used.
Get:1 http://pk.archive.ubuntu.com/ubuntu noble-updates/main amd64 vim-runtime all 2:9.1.0016-1ubuntu7.9 [7,281 kB]
Get:2 http://pk.archive.ubuntu.com/ubuntu noble-updates/main amd64 vim amd64 2:9.1.0016-1ubuntu7.9 [1,881 kB]
Fetched 9,162 kB in 8s (1,145 kB/s)
Selecting previously unselected package vim-runtime.
(Reading database ... 153785 files and directories currently installed.)
Preparing to unpack .../vim-runtime_2%a9.1.0016-1ubuntu7.9_all.deb ...
Adding 'diversion of /usr/share/vim/vim91/doc/help.txt to /usr/share/vim/vim91/doc/help.txt.vim-tiny by vim-runtime'
Adding 'diversion of /usr/share/vim/vim91/doc/tags to /usr/share/vim/vim91/doc/tags.vim-tiny by vim-runtime'
Unpacking vim-runtime (2:9.1.0016-1ubuntu7.9) ...
Selecting previously unselected package vim.
Preparing to unpack .../vim_2%a9.1.0016-1ubuntu7.9_amd64.deb ...
Unpacking vim (2:9.1.0016-1ubuntu7.9) ...
Setting up vim-runtime (2:9.1.0016-1ubuntu7.9) ...
Setting up vim (2:9.1.0016-1ubuntu7.9) ...
update-alternatives: using /usr/bin/vim.basic to provide /usr/bin/ex (ex) in auto mode
update-alternatives: using /usr/bin/vim.basic to provide /usr/bin/rview (rview) in auto mode
update-alternatives: using /usr/bin/vim.basic to provide /usr/bin/rvim (rvim) in auto mode
update-alternatives: using /usr/bin/vim.basic to provide /usr/bin/vi (vi) in auto mode
update-alternatives: using /usr/bin/vim.basic to provide /usr/bin/view (view) in auto mode
update-alternatives: using /usr/bin/vim.basic to provide /usr/bin/vim (vim) in auto mode
Processing triggers for man-db (2.12.0-4build2) ...
Installation Completed!
```