OPERATING SYSTEMS
CSE 2005
J COMPONENT
PROJECT REPORT

TOPIC : MINI WEB BROWSER
ON TERMINAL

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CONFIGURATION & SOURCE CODE :

On Linux : Type the following lines into the Terminal window

```
$ sudo apt-get install mutt
```

On OS X :
Type the following lines into the Terminal window

```
/usr/bin/ruby -e "$(curl -fsSL https:// raw.githubusercontent.com /Homebrew/install /master/ install)"
```

After the installation process , Type :

```
$ brew mutt
```


After the installation process completes , the information of the email ID needs to be configured. In order to do this ,

```
$ nano ~/.muttrc
```

An Editor window will open on the Terminal . Into that window Paste the following lines . Replace everything in UPPERCASE AND BOLD with your gmail ID's information .

```
set imap_user           = USERNAME@gmail.ccom
set imap_pass           = PASSWORD
set smtp_url            = smtp://USERNAME@smtp.gmail.com:587/
set smtp_pass           = PASSWORD
set from                = USERNAME@gmail.com
set realname            = "Munish Raj"
set editor              = 'vim -c "set spell spelllang=en_us"'

# Don't let your firewall kill your idle connection.
set imap_keepalive      = 900

# Do not copy sent mail.  Gmail smtp already does this.
set copy                = no

set folder              = imaps://imap.gmail.com:993
set spoolfile           = +INBOX #or +[Gmail]/Important
set postponed           = +[Gmail]/Drafts

# This is using the 'trash' patch.
set trash               = +[Gmail]/Trash
set smtp_authenticators = 'gssapi:login'
# Cache
set header_cache        = ~/.mutt/cache/headers
set message_cachedir    = ~/.mutt/cache/bodies
set certificate_file    = ~/.mutt/certificates
# Gmail style keybindings
bind  editor <space> noop
bind  index,pager c  mail                #Compose
macro index,pager e  "<save-message>=[Gmail]/All Mail<enter><enter>" "Archive conversation"
bind  generic    x  tag-entry           #Select Conversation
bind  index      x  tag-thread          #Select Conversation
bind  pager      x  tag-message         #Select Conversation
bind  index,pager s  flag-message        #Star a message
macro index,pager +  <save-message>=[Gmail]/Important<enter><enter> "Mark as important"
macro index,pager !  <save-message>=[Gmail]/Spam<enter><enter> "Report spam"
bind  index,pager a  group-reply         #Reply all
bind  index,pager \# delete-thread       #Delete
```

```
bind  index,pager l  copy-message        #Label
bind  index,pager v  save-message        #Move to
macro index,pager I  <set-flag>O         "Mark as read"
macro index,pager U  <clear-flag>O       "Mark as unread"
macro index,pager ga "<change-folder>=[Gmail]/All Mail<enter>"  "Go to all mail"
macro index,pager gs <change-folder>=[Gmail]/Starred<enter>     "Go to 'Starred'"
macro index,pager gd <change-folder>=[Gmail]/Drafts<enter>      "Go to 'Drafts'"
macro index,pager gl <change-folder>?                           "Go to 'Label'"
macro index,pager gi <change-folder>=INBOX<enter>              "Go to inbox"
macro index,pager gt "<change-folder>=[Gmail]/Sent Mail<enter>" "Go to 'Sent Mail'"
folder-hook +INBOX 'macro index,pager y "<save-message>=[Gmail]/All Mail<enter><enter>" "Archive
conversation"'
folder-hook +[Gmail]/Trash macro index,pager y <save-message>=INBOX<enter><enter> "Move to inbox"
folder-hook +[Gmail]/Starred bind  index,pager y flag-message #"Toggle star"

# This should be ' »>-<L' to match Gmail, but $to_chars breaks on unicode.
set to_chars             = ' +>-<L'
# Don't move read mail.
set move                 = no

# Sort by newest conversation first.
set sort                 = reverse-threads
set sort_aux             = last-date-received

# Contact aliases, could also use `goobook`.
set alias_file           = ~/.mutt/aliases
set sort_alias           = alias
set reverse_alias        = yes
set reverse_name         = yes
# source $alias_file
```

Save and exit the window.

Type

```
$ cd ~
$ vim project.sh
#!/bin/bash"
clear
x=0
while [ $x != -1 ]
do
clear
echo " 1 : Access gmail inbox "
echo " 2 : WEATHER REPORT"
echo " 3 : Download files "
echo " 4 : Chat over LAN"
echo " 5 : Check network connectivity"
echo " 6 : View all active processes"
echo " -1 : Exit Program"
read a
if [ $a == 6 ]
then
top
fi
if [ $a == 5 ]
then
ping  wwww.google.com
fi
if [ $a == 4 ]
then
chat.sh
fi
if [ $a == 3 ]
then
bash download.sh
fi
if [ $a == 2 ]
then
curl http://wttr.in/LOCATION
sleep 5
fi
if [ $a == 1 ]
then
clear
echo " 1 : Log in to different Account "
echo " 2 : Log in to same account as last log in "
read b
if [ $b == 1 ]
then
rm mail.txt
touch mail.txt
clear
echo "ENTER THE NEW EMAIL ID "
```

```
read email_id
echo $email_id >> mail.txt
clear
echo "NEW EMAIL ID : "
cat mail.txt
echo "MODIFY YOUR CONFIGURATIONS"
sleep 1
nano ~/.muttrc
fi
clear
echo " 1 : VIEW INBOX "
echo " 2 : SEND MAIL WITH ATTATCHMENT "
echo " 3 : SEND MAIL WITHOUT ATTATCMENT "
read val
if [ $val == 1 ]
then
mutt
fi
if [ $val == 2 ]
then
bash try.sh
fi
if [ $val == 3 ]
then
bash mail.sh
fi
fi
if [ $a == -1 ]
then
break
exit 1
fi
done
echo " EXITTING PROGRAM "
sleep 1
clear
```

$ vim try.sh

```
clear
echo "MAIL ID"
read mail
echo "SUBJECT"
read sub
echo "message"
read message
echo $message > message.txt
echo " ENTER ATTATCHMENT ADRESS"
read att
echo "connecting to server"
echo "server connection established"
echo "mail verifivcation"
echo "logging in"
echo "sending mail"
echo "uploading attatchment"
mutt -s "$sub" $mail < message.txt -a $att
clear
echo " MESSAGE SENT "
wait 1
clear
```

$ vim mail.sh

```
clear
echo "MAIL ID"
read mail
echo "SUBJECT"
read sub
echo "message"
read message
echo $message > message.txt
echo "connecting to server"
echo "server connection established"
echo "mail verifivcation"
echo "logging in"
echo "sending mail"
mutt -s "$sub" $mail < message.txt
bash project.sh
clear
echo " MESSAGE SENT "
a=0
wait 1
clear
```

$ vim download.sh

```
#!/bin/bash
clear
echo " 1 : Downloas directly from a URL "
read a
if [ $a == 1 ]
then
```

```
echo " ENTER URL "
read url
echo "ENTER SAVE NAME"
read name
curl -i -o $name $url
fi
echo " FILE DOWNLOADED , SAVED TO /Users/munish/download "
sleep 2
clear
```

$ vim chat.sh

```
#!/bin/bash
clear
echo "Enter the IP address of the person you want to chat with"
read ip
talk $ip
clear
```

$ cd ..   OR $ cd ~

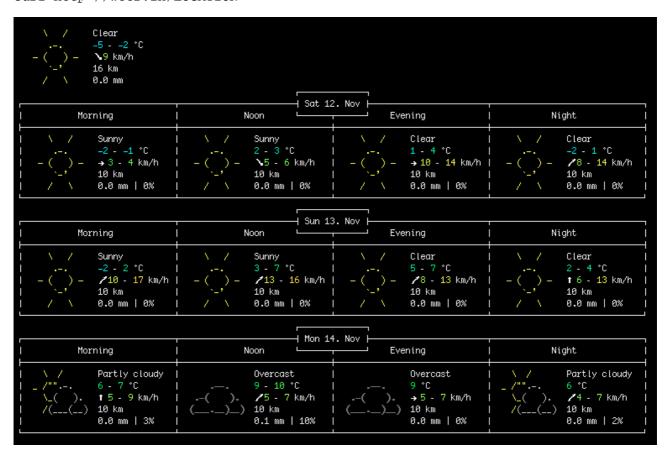## -----------------END OF CONFIGURATION-----------------

SUMMARRY OF ALL MAJOR COMMANDS USED IN SHELL SCRIPT

$ bash project.sh

```
1 : Access gmail inbox
2 : WEATHER REPORT
3 : Download files
4 : Chat over LAN
5 : Check network connectivity
6 : View all active processes
-1 : Exit Program
```

WETHER REPORT :

curl http://wttr.in/LOCATION

DOWNLOAD FILES

curl -i -o "**NAME** " **URL**

```
Trojan:~ munish$ curl -i -o munish http://ieema.org/wp-content/themes/kleo-child/images/india_map.jpg
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100  197k  100  197k     0      0  86915      0 0:00:02 0:00:02 --:--:-- 86931
Trojan:~ munish$ █
```

ACCESS GMAIL INBOX

mutt

```
q:Quit  d:Del  u:Undel  v:Save  c:Mail  r:Reply  a:Group  ?:Help
    1 N + Nov 11 Feedspot Today   (154K) Friday Product Post: Holy Pimoroni!, Introducing "Buy Parts" Electronics-Lab New Feature, Program a mBot..
    2 N + Nov 11 Facebook         ( 17K) Weekly Facebook Page update for Odyssey-2014
    3 N < Nov 12 To munish02@gma (0.4K) FUCK YOUR MOMMA
    4 N + Nov 11 Quora Digest     ( 86K) What is the most embarrassing thing you've caught your brother or sister doing? - Quora
    5   + Nov 11 AASHNA ANITHKUM ( 25K) FROM SAGARIKA
    6 r + Nov 11 Dhruv Tyagi      (1.9M) New Doc 3
    7   + Nov 11 Krishna Adithya ( 33K) Fwd: You're invited to India's Largest IoT Challenge - Win Prizes worth 5lacs!
    8 N + Nov 11 Pinterest        ( 52K) Tattoos and body art, Kids and parenting and other topics picked for you
    9 N + Nov 11 Krishna Adithya (1.0M) Fwd: AEC
   10 N + Nov 11 Venturesity      ( 39K) You're invited to India's Largest IoT Challenge - Win Prizes worth 5lacs!
   11   + Nov 11 Zamzar Conversi (8.0K) Converted file from Zamzar: DLD-LAB-9.rtf
   12   > Nov 11 SHREYA SHRISTI   (4.4M) nano j component
   13 r + Nov 11 GUNDA VAMSI KRI ( 27M)
   14 N + Nov 11 Parv Sachdeva    ( 22K) Munish can you add me?
   15 N < Nov 11 To munish02@gma (0.4K) sdfg
   16 O + Nov 10 Feedspot Today   (163K) Taking Your PiRetrocade to the Next Level, WPS80 digital soldering station, Sensor IC gives accurate RH and..
   17 O + Nov 11 airpkgs@irctc.c (8.9K) East India Heritage Flight Package Ex Bengaluru
   18   < Nov 11 To munish02@gma ( 74K) haha
   19 O < Nov 11 To munish02@gma (0.4K) dafjb
   20 O < Nov 11 To munish02@gma (1.1M) munsih
   21 O < Nov 11 To munish02@gma (0.4K) munuish
   22 O < Nov 11 To munish02@gma (0.4K) Hello
   23 O < Nov 11 To munish02@gma (0.4K) munish02@gmail.com
   24   < Nov 11 To munish02@gma (0.4K) THIS IS SOO COOL
   25 O + Nov 10 Google           (9.7K) Access for less secure apps has been turned on
   26   + Nov 10 Google           ( 11K) Review blocked sign-in attempt
   27     Nov 11 Events Riviera   ( 22K) Event List of Riviera'17
   28 O + Nov 10 HackerRank Team  ( 47K) Join 101 Hack 43 on November 17th
   29 O + Nov 10 IndusInd Bank    (282K) Important Information regarding banking transaction
   30   + Nov 10 Dhruv Tyagi      (2.6M) New Doc
   31 O + Nov 10 Cybrary          (153K) More of What You Want: Threat and Security Resources + A Bonus!
   32   + Nov 10 Internshala      ( 13K) Munish, 7 new internships matching your profile - apply today!
   33 O + Nov 09 LinkedIn         (108K) Munish, Top companies like Pepsi, Amazon, Microsoft, Jio are hiring interns
   34 O + Nov 10 Flipkart         ( 57K) Exchange Store is now open!
   35   + Nov 10 Radha Karmali    (3.3M) Fwd: Nano PPT
   36 O + Nov 10 HackerRank Team  ( 48K) Code Like a Woman on November 19th
   37 r + Nov 10 MUNISH RAJ M 15 (2.8M) Fwd: emt
   38 O + Nov 09 Feedspot Today   (167K) Making the most of your Proto Pedal, PIC16F 28/40 Pin Development Board, MAC Address Finder
   39 O + Nov 09 Pinterest        ( 48K) Your Facebook friend Sheetal Harish just joined Pinterest!
   40 O + Nov 09 Quora Digest     ( 85K) What is the reason behind NDTV being banned by Narendra Modi? - Quora
   41 O + Nov 09 Facebook         ( 26K) Your weekly Page update
   42 r + Nov 09 V KRISHNA ADITH (6.9M) Fwd: MATLAB CLAB CODES
   43   + Nov 09 snapdealshop@ir ( 28K) *Half Price Store | 50% OFF*
   44 O + Nov 08 Feedspot Today   (167K) T³: Adventures in Science - Series and Parallel Circuits, SD Card Sound Player, Simple ESP-01 testboard
   45 O + Nov 08 Anshul Mathew o ( 14K) Anshul Mathew mentioned you on Facebook
   46 O + Nov 08 Quora Digest     ( 86K) What are some good Android tricks that are not commonly known? - Quora
   47 O + Nov 08 Pinterest        ( 47K) Your Facebook friend Rashi Ramesh just joined Pinterest!
   48 O + Nov 08 Cybrary          (124K) A Programmer's Paradise! Guides, Tools, & Events to Get You Further
   49 O + Nov 08 internationaltr (8.6K) BHUTAN - THE LAND OF HAPPINESS EX BENGALURU
   50 O + Nov 07 Feedspot Today   (167K) Guest tutorial: IoT Industrial Scale, DueProLogic - USB-CPLD Development System, Environmental data..
   51 O + Nov 07 IFTTT            ( 15K) Meet the new IFTTT
   52 O + Nov 07 Quora Digest     ( 87K) Why is Rahul Gandhi still unmarried? - Quora
   53 O + Nov 07 Cybrary 0P3N    (130K) Password Management: Security Gaps, Insiders, & Sneaky Malware
---Mutt: =INBOX [Msgs:2647 New:9 Old:2334 Post:24 636M]---(reverse-threads/last-date-received)------------------------------------------------------------------(2%)---
You are on the first message.
```

SEND MAILS FROM GMAIL WITHOUT ATTATCHMENT

mutt -s "**SUBJECT" TO_EMAIL_ID "MESSAGE"** -a **PATH OF ATTATCHMENT**

SEND MAILS WITHOUT ATTATCHMENT

mutt - s "**SUBJECT" TO_EMAIL_ID "MESSAGE"**

CHECK NETWORK CONNECTIVITY

ping www.google.com

```
Trojan:~ munish$ ping google.com
PING google.com (172.217.26.206): 56 data bytes
64 bytes from 172.217.26.206: icmp_seq=0 ttl=58 time=40.040 ms
64 bytes from 172.217.26.206: icmp_seq=1 ttl=58 time=39.436 ms
64 bytes from 172.217.26.206: icmp_seq=2 ttl=58 time=37.093 ms
64 bytes from 172.217.26.206: icmp_seq=3 ttl=58 time=45.553 ms
64 bytes from 172.217.26.206: icmp_seq=4 ttl=58 time=41.562 ms
64 bytes from 172.217.26.206: icmp_seq=5 ttl=58 time=37.605 ms
64 bytes from 172.217.26.206: icmp_seq=6 ttl=58 time=36.950 ms
64 bytes from 172.217.26.206: icmp_seq=7 ttl=58 time=36.695 ms
64 bytes from 172.217.26.206: icmp_seq=8 ttl=58 time=40.756 ms
```

HANDLING TEXT FILES :

TO CREATE TEXT FILES :
touch **NAME_OFTEXT_FILE**.txt

TO VIEW TEXT FILES :
cat **NAME_OF_TEXT_FILE.**txt

TO REMOVE TEXT FILES :
rm **NAME_OF_TEXT_FILE**.txt

TO APPEND TEXT FILES :
echo "**TEXT_TO_BE_ADDED**" > **NAME_OF_TEXT_FILE**.txt

TO TAKE INPUTS AS A VARIABLE FROM TEXT FILE
read a
< **NAME_OF_TEXT_FILE**.txt

CLEAR SCREEN :
clear