Presentation

1. Send a mail to our mailbox.

Subject: Restaurant

Content: I would like to eat in a chinese restaurant in 13 arrondissement at Paris. Thank you. Tom.

Command line: echo “I would like to eat in a chinese restaurant in 13 arrondissement at Paris. Thank you. Tom. ” | mail -s “Restaurant” iosaprojet@gmail.com

2. Use FETMAIL to save the mail to our computer.

Command line: sudo fetchmail

```
pc4:~ peiyunli$ sudo fetchmail
Password:
fetchmail: Avertissement: appeler fetchmail avec les privil`eges de << root >> e
st d'econseill'e.
fetchmail: fetchmail en t^ache de fond (77565) a 'et'e r'eactiv'e.
pc4:~ peiyunli$
```

It will give us a warning because we have already set up the FETCHMAIL so every time we receive a letter in our mailbox iosaprojet@gmail.com the computer will save it automatically to our local file /var/Mail/username, which means we don’t need to run FETCHMAIL again.

Now we can find the mail in /var/Mail/username

```
From: Peiyun Li <lipeiyun1991@gmail.com>
X-Google-Original-From: peiyunli@pc4.home (Peiyun Li)
Received: by pc4.home (Postfix, from userid 501)
        id C37F32CCD89A; Thu, 29 May 2014 14:28:57 +0200 (CEST)
To: iosaprojet@gmail.com
Subject: “Restaurant”
Message-Id: <20140529122857.C37F32CCD89A@pc4.home>
Date: Thu, 29 May 2014 14:28:57 +0200 (CEST)

“I would like to eat in a chinese restaurant in 13 arrondissement at Paris. Thank you.
Tom. ”
```

3. Retrieve key words from the mail: who, where, type

a) First we should know who send the mail.

Command line: awk '/From /{print $2}' /var/Mail/username

```
pc4:~ peiyunli$ awk '/From /{print $2}' /var/Mail/peiyunli
lipeiyun1991@gmail.com
```

Note: According to the file saved in /var/Mail/username we will find that the second row after “From ” is the email address of the sender.

```
From lipeiyun1991@gmail.com  Thu May 29 14:32:21 2014
Return-Path: <lipeiyun1991@gmail.com>
X-Original-To: peiyunli@localhost
Delivered-To: peiyunli@localhost.home
Received: from pc4.home (localhost [IPv6:::1])
        by pc4.home (Postfix) with ESMTP id 539112CCD986
        for <peiyunli@localhost>; Thu, 29 May 2014 14:32:20 +0200 (CEST)
Delivered-To: iosaprojet@gmail.com
```

*<awk '/Return-Path: /{print $2}' /var/Mail/username> works too.

b) Then we should know where (which arrondissement) the sender wants to eat.

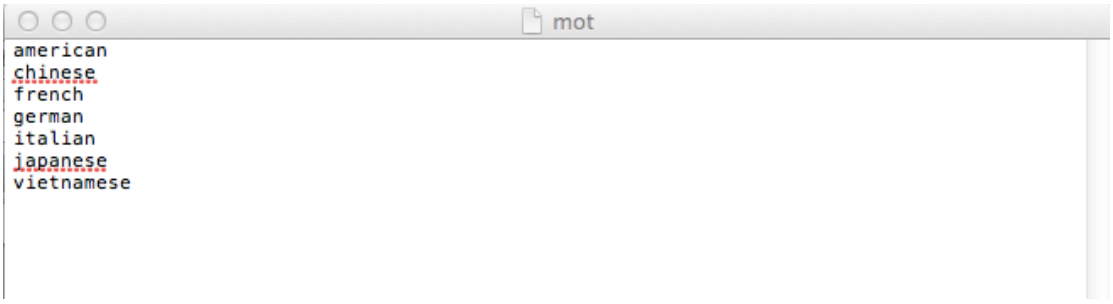
Command line: awk '{for(i=1;i<=NF;i++) if($i ~ /arrondissement/) print $(i-1),$i}' /var/Mail/username

```
pc4:~ peiyunli$ awk '{for(i=1;i<=NF;i++) if($i ~ /arrondissement/) print $(i-1),
$i}' /var/Mail/peiyunli
13 arrondissement
```

Note: First we find the row where the "arrondissement" is situated in, and then we print the word just before the "arrondissement" with "arrondissement".

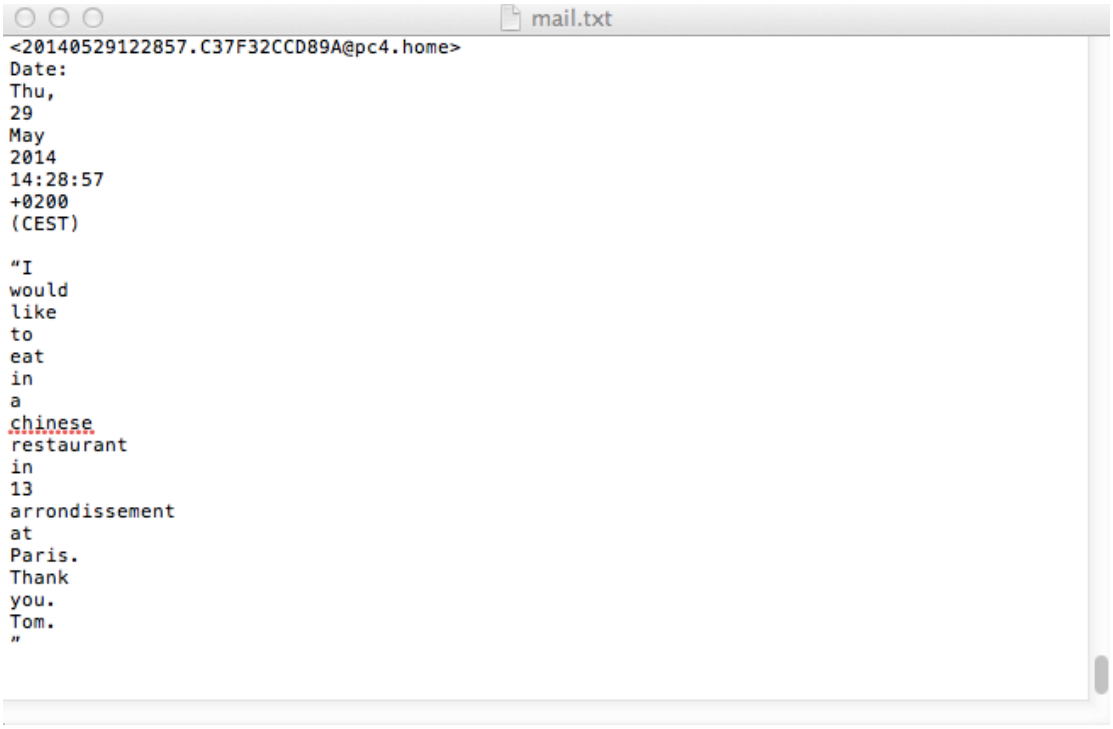
c) Next we should know which type of cuisine the sender wants to eat. So we'll create a key words file with all types of cuisine and then compare the email to this key words file.

i. We create a file with all types of restaurant we can find (Ex: chinese, japanese, french, american…) and sort it.



ii. We replace spaces by carriage returns of the email so every word of it will be on one line and output it into a new file <mail>.

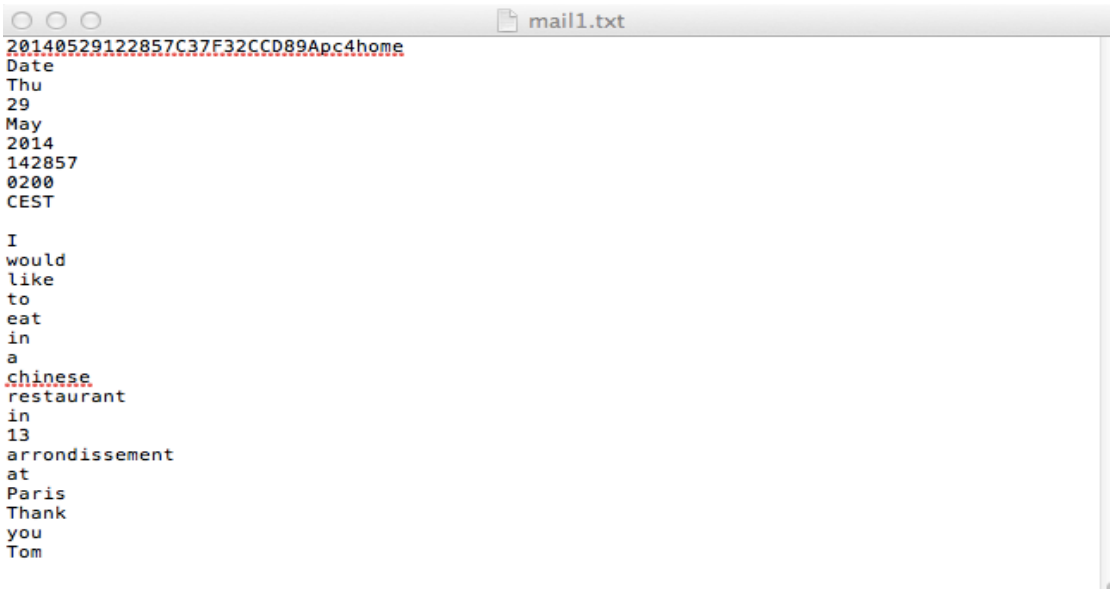
Command line: tr ' ' '\012' < /var/Mail/username > mail.txt



Note: '\012' means Return. Command 'tr' will replace the first word with the second word.

iii. Then we need to delete all the punctuations in the mail so we won't miss any key words and output it into a new file mail1.txt.

Command line: tr -d "[:punct:]" < mail.txt > mail1.txt



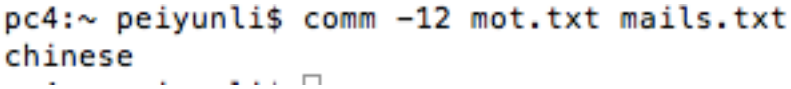
Note: [:punct:] means punctuations. "-d" means delete.

iv. Before we compare the two files, we need to sort the mail file, if not it will have errors. So we sort the mail into a new file mails.txt.

Command line: sort mail1.txt > mails.txt

v. At last, we can compare two files to get the key word about type of the cuisine.

Command line: comm -12 mot.txt mails.txt



Note: '-12' means showing the words both appears in the file1 and file2.

4. **Now we have retrieved 3 key words: who, where and type. We'll use them to match the restaurant.**

   a) We create a list of restaurants.

   b) We use key words Where and Type which we have retrieved from mail to match the restaurant.

      Command line: grep 'Where' restaurant.txt | grep 'Type'

```
pc4:~ peiyunli$ grep '...13' restaurant.txt|grep 'chinese'
Name:Fame da Lupo;Type of cuisine:chinese; Adresse:23, Boulevard des Capucines 7
50013 Paris
```

      Note: '...13' means a string which length is 5 and ends with '13'.

5. **At last, we should send the information we get to the sender.**

Command line: echo 'Information' | mail -s "Restaurant" addressSender@usermail.com

6. **Now we can receive the letter.**