

Sending Email and Analyzing Log Files

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Outline

- ▶ Assigned Reading
 - ▶ Chapter 11 "Sending E-mail"
 - ▶ Chapter 17 "Using Log Files to Improve Your Site"
- ▶ Simple (Text) Email
- ▶ HTML Email
- ▶ Multipart Email
- ▶ Log Files

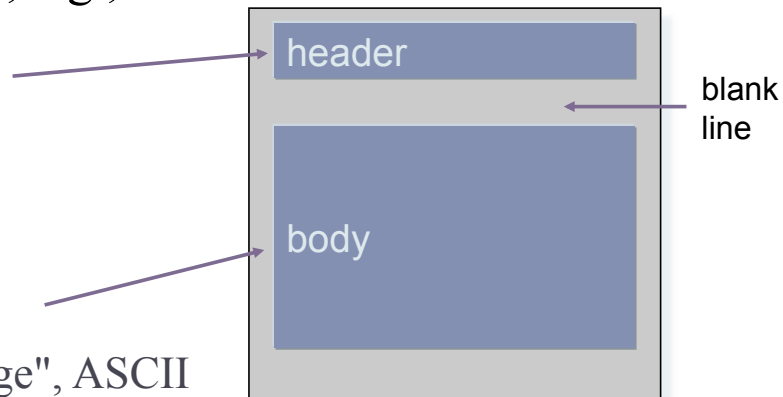
Electronic Mail Format (RFC 2822)

- ▶ Header lines, e.g.,

- ▶ From:
- ▶ To:
- ▶ Subject:

- ▶ Body

- ▶ The "message", ASCII characters only



Sending E-Mail in PHP

```
mail($to, $subject, $message, $headers);
```

```
<?php
mail("myemail@cs.odu.edu",
    "My subject line",
    "If I could think of a msg I would put it here...");
echo "Congrats, your email was sent!";
?>
```

headers are optional, but we'll see them in use in a bit

Demo/Walkthrough Time

- ▶ Examples from Chapter 11

<https://mweigle418.cs.odu.edu/~mweigle/textbook/ch11.htm>

- ▶ My First Email
- ▶ Using a Form to Send Email

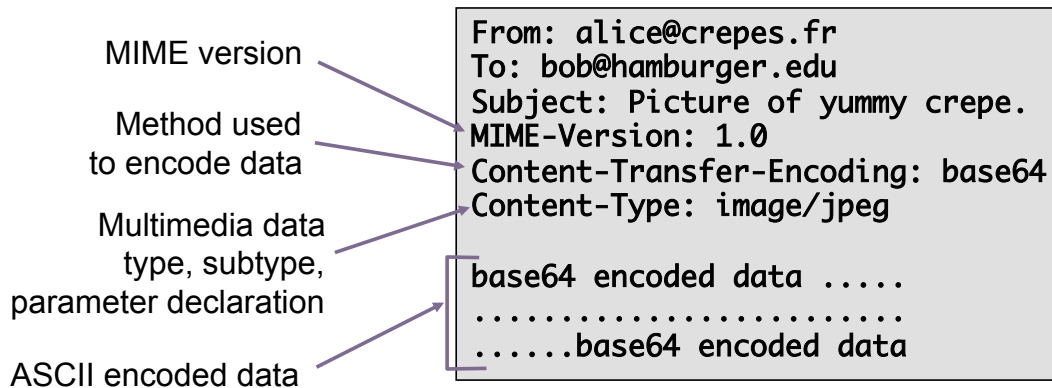
Sending HTML Email

- ▶ If you don't specify that your email is HTML formatted, your mail reader will interpret it as plain text.
 - ▶ *send HTML email with previous form-based code*

E-Mail Message Format

MIME — Multimedia mail extensions (RFC 2045, 2056)

- ▶ SMTP requires all data to be 7-bit ASCII characters
 - ▶ All non-ASCII data must be encoded as ASCII strings
- ▶ Additional lines in the message header declare MIME content type



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MIME Multimedia Mail Extensions

MIME types

Content-Type: <type>/<subtype>[; <parameters>]

Content-Type: text/plain; charset=us-ascii

Content-Type: application/pdf; filename=foo.pdf

- ▶ Text
 - ▶ Subtypes: plain, html
- ▶ Image
 - ▶ Subtypes: jpeg, gif
- ▶ Audio
 - ▶ Subtypes: basic (8-bit μ -law encoded), 32kadtcm (32 kbps ADPCM)
- ▶ Video
 - ▶ Subtypes: mpeg, quicktime
- ▶ Application
 - ▶ Other data that must be processed by reader before it is "viewable"
 - ▶ Subtypes: msword, octet-stream

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Sending HTML E-Mail

```
$to = "myemail@cs.odu.edu";  
$subject = "My subject line";  
$message = "<h1>If I could</h1>";  
$message .= "<b>think</b>";  
$message .= "<i> of a msg</i>";  
$message .= "<pre> I would put it here.</pre>";  
$headers = "MIME-Version: 1.0\r\n";  
$headers .= "Content-type: text/html; charset=iso-8859-1\r\n";  
$headers .= "Content-Transfer-Encoding: 7bit\r\n";  
  
mail($to, $subject, $message, $headers);
```

Demo/Walkthrough Time

▶ Examples from Chapter 11

<https://mweigle418.cs.odu.edu/~mweigle/textbook/ch11.htm>

▶ Sending HTML Email

Sending HTML and Text Email

- ▶ What if you want to send both HTML and plain text in the same email?
- ▶ What if you want to send text and an image in the same email?
- ▶ Multipart MIME

Multipart Messages

MIME version

From: alice@crepes.fr
To: bob@hamburger.edu
Subject: Picture of yummy crepe.
MIME-Version: 1.0
Content-Type: multipart/mixed; boundary=98766789

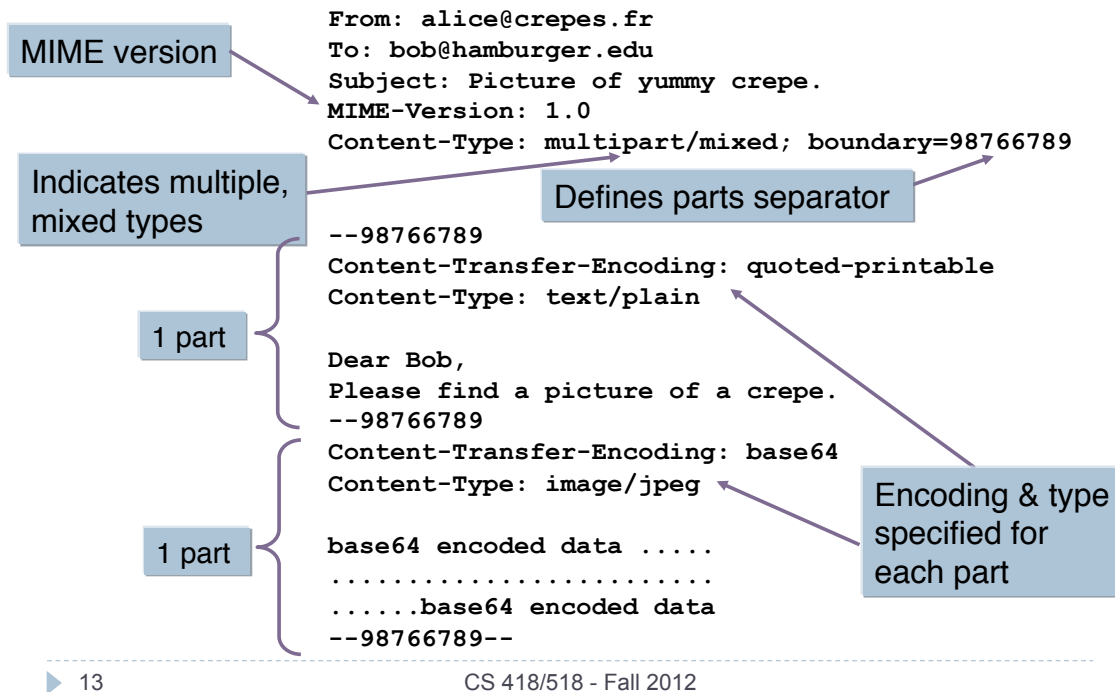
Header/Body
separators

--98766789
Content-Transfer-Encoding: quoted-printable
Content-Type: text/plain

Dear Bob,
Please find a picture of a crepe.
--98766789
Content-Transfer-Encoding: base64
Content-Type: image/jpeg

base64 encoded data
.....
.....base64 encoded data
--98766789--

Multipart Messages



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Demo/Walkthrough Time

▶ Examples from Chapter 11

<https://mweigle418.cs.odu.edu/~mweigle/textbook/ch11.htm>

- ▶ Sending Multipart Messages
- ▶ Sending Confirmation Emails

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Outline

- ▶ Simple (Text) Email
- ▶ HTML Email
- ▶ Multipart Email
- ▶ Log Files

Apache Log Files

- ▶ Access Logs
 - ▶ track every hit
 - ▶ useful info about your clients
 - ▶ hits for each page
 - ▶ how users arrived at your page (referrer)
 - ▶ what browser is used
- ▶ Error Logs
 - ▶ track every error or warning

Access Log Format

IPAddress - username [date:time] "HTTP Req Line" RspCode
RspSize "ReferrerURL" "User-Agent"

- ▶ IP address
 - ▶ client's IP
- ▶ username
 - ▶ only provided if using HTTP User Authentication, otherwise '-'
- ▶ HTTP request line
 - ▶ see what the client was requesting
- ▶ HTTP response code, size
 - ▶ what the server sent back
- ▶ Referrer URL
 - ▶ how the client got here (from what URL)
- ▶ User-Agent
 - ▶ client's browser

Access Log Examples

```
128.82.5.17 - - [18/Jul/2012:13:11:20 -0400] "GET /~mweigle/  
textbook/ch02.htm HTTP/1.1" 200 1844 "https://  
mweigle418.cs.odu.edu/~mweigle/textbook/" "Mozilla/5.0  
(Macintosh; Intel Mac OS X 10_7_4) AppleWebKit/536.11 (KHTML,  
like Gecko) Chrome/20.0.1132.57 Safari/536.11"
```

```
128.82.5.17 - - [18/Jul/2012:13:11:33 -0400] "GET /~mweigle/  
textbook/code/ch02/moviesite-rev03.php?favmovie=Stripes HTTP/  
1.1" 200 260 "https://mweigle418.cs.odu.edu/~mweigle/textbook/  
code/ch02/movie1-rev01.php" "Mozilla/5.0 (Macintosh; Intel Mac  
OS X 10_7_4) AppleWebKit/536.11 (KHTML, like Gecko) Chrome/  
20.0.1132.57 Safari/536.11"
```

```
128.82.5.17 - - [18/Jul/2012:13:13:11 -0400] "GET /~mweigle/  
textbook/images/br.png HTTP/1.1" 404 164 "https://  
mweigle418.cs.odu.edu/~mweigle/textbook/ch02.htm" "Mozilla/5.0  
(Macintosh; Intel Mac OS X 10_7_4) AppleWebKit/536.11 (KHTML,  
like Gecko) Chrome/20.0.1132.57 Safari/536.11"
```

Access Log Examples

Something Fishy...

```
128.82.4.227 - - [20/Jul/2012:08:42:05 -0400] "GET / HTTP/1.1" 200 3164 "-" "-"
128.82.4.227 - - [20/Jul/2012:08:42:05 -0400] "OPTIONS / HTTP/1.1" 200 213 "-" "-"
128.82.4.227 - - [20/Jul/2012:08:42:05 -0400] "POST /sdk HTTP/1.1" 404 3164 "-" "-"
128.82.4.227 - - [20/Jul/2012:08:42:05 -0400] "GET / HTTP/1.1" 200 3164 "-" "-"
128.82.4.227 - - [20/Jul/2012:08:42:05 -0400] "GET /spiffymcgee.jsp HTTP/1.1" 404
3180 "-" "-"

128.82.4.227 - - [20/Jul/2012:08:42:05 -0400] "GET /spiffymcgee.nsf HTTP/1.1" 404
3180 "-" "-"

128.82.4.227 - - [20/Jul/2012:08:42:05 -0400] "SEARCH / HTTP/1.1" 501 3244 "-" "-"
128.82.4.227 - - [20/Jul/2012:08:42:06 -0400] "OPTIONS * HTTP/1.1" 200 2807 "-" "-"
128.82.4.227 - - [20/Jul/2012:08:42:07 -0400] "GET /spiffymcgee.cfm HTTP/1.1" 404
3180 "-" "-"
```

- ▶ No referrer
- ▶ No user-agent

Error Log Examples

```
[Sat Sep 08 00:34:18 2012] [error] [client 128.82.8.59] PHP
Warning: mysqli::mysqli(): (HY000/2005): Unknown MySQL server
host 'SQL_HOST' (1) in /home/username/cs418_html/test.php on
line 3
```

```
[Sat Sep 08 00:34:18 2012] [error] [client 128.82.8.59] PHP
Warning: mysqli::query(): Couldn't fetch mysqli in /home/
username/cs418_html/test.php on line 28
```

```
[Sat Sep 08 18:46:38 2012] [error] [client 128.82.10.10] PHP
Parse error: syntax error, unexpected T_VARIABLE, expecting
',' or ';' in /home/username/cs418_html/labs/lab1-3.php on
line 90
```

```
[Sat Sep 15 17:30:20 2012] [error] [client 128.82.10.10] File
does not exist: /home/username/cs418_html/proj1/php/
javascript, referer: https://mweigle418.cs.odu.edu/~username/
proj1/php/forumview.php?forum_id=1
```

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Up Next: Images
Reading: Ch 7