

Day 1 Linux Mint Introduction Course

- 1: Introduction to the Linux OS via **Installation**, and brief investigation of the Desktop and finding Apps: Welcome Screen User Guide; Menu button, search typing (e.g term); personalize desktop.
- 2: Basic Command Line Tools – compare the Desktop file system view to the command line tree
- 3: First Commands:
directory listing; who am I?; where am I?;
`ls`; `whoami`; `pwd`;
- 4: Who is “root”? Superuser admin; root “/”
- 5: Moving around the file system: `cd`
- 6: Some built in capabilities – programming, webserver, MYSQL Database

Nixie Pixel Video During Install At Bottom of My Website on the File System Tree

<http://www.stevepedwards.com/DebianAdmin/>
<https://youtu.be/2qQTXp4rBEE>



The screenshot shows a web browser displaying the 'Debian Admin' website. The browser's address bar shows the URL <http://www.stevepedwards.com/DebianAdmin/>. The website's header features a navigation bar with links: 'Customise', '8', '0', '+ New', 'Edit Page', and 'Counterize'. The main content area has a large blue banner with the text 'Debian Admin' and 'This site contains Debian/Mint/Pi Linux Admin info and tips for its general use'. Below the banner, there is a section titled 'Debian Wheezy 3.2.0-4-amd64 # 1 Light LXDE Install 2014' with an 'Edit' link. The text in this section reads: 'So what's with the QR code background? Point your Phone QR Scanner App at it and find out.' Below this, there is a date 'July 2015:' followed by a list of packages: 'samba, rsync et al are already in: apt-get update && apt-get upgrade apt-get install ssh nmap vim automake autoconf module-assistant x11vnc nbtscan locate libnss-winbind winbind n++ libcurl3 chkrootkit parted testdisk hardinfo nemo-terminal alarm-clock'. On the right side, there is a search bar, a 'Meta' section, and links for 'Site Admin', 'Log out', 'Entries RSS', and 'Comments RSS'.

Customise 8 0 + New Edit Page Counterize How are you, stevepedwards

Debian Admin

This site contains Debian/Mint/Pi Linux Admin info and tips for its general use

Debian Wheezy 3.2.0-4-amd64 # 1 Light LXDE Install 2014

Edit

So what's with the QR code background? Point your Phone QR Scanner App at it and find out.

July 2015: *This is a personal requirements for Mint: post first install additions as samba, rsync et al are already in:
`apt-get update && apt-get upgrade`
`apt-get install ssh nmap vim automake autoconf module-assistant x11vnc nbtscan locate libnss-winbind winbind n++ libcurl3 chkrootkit parted testdisk hardinfo nemo-terminal alarm-clock`

Search

Meta

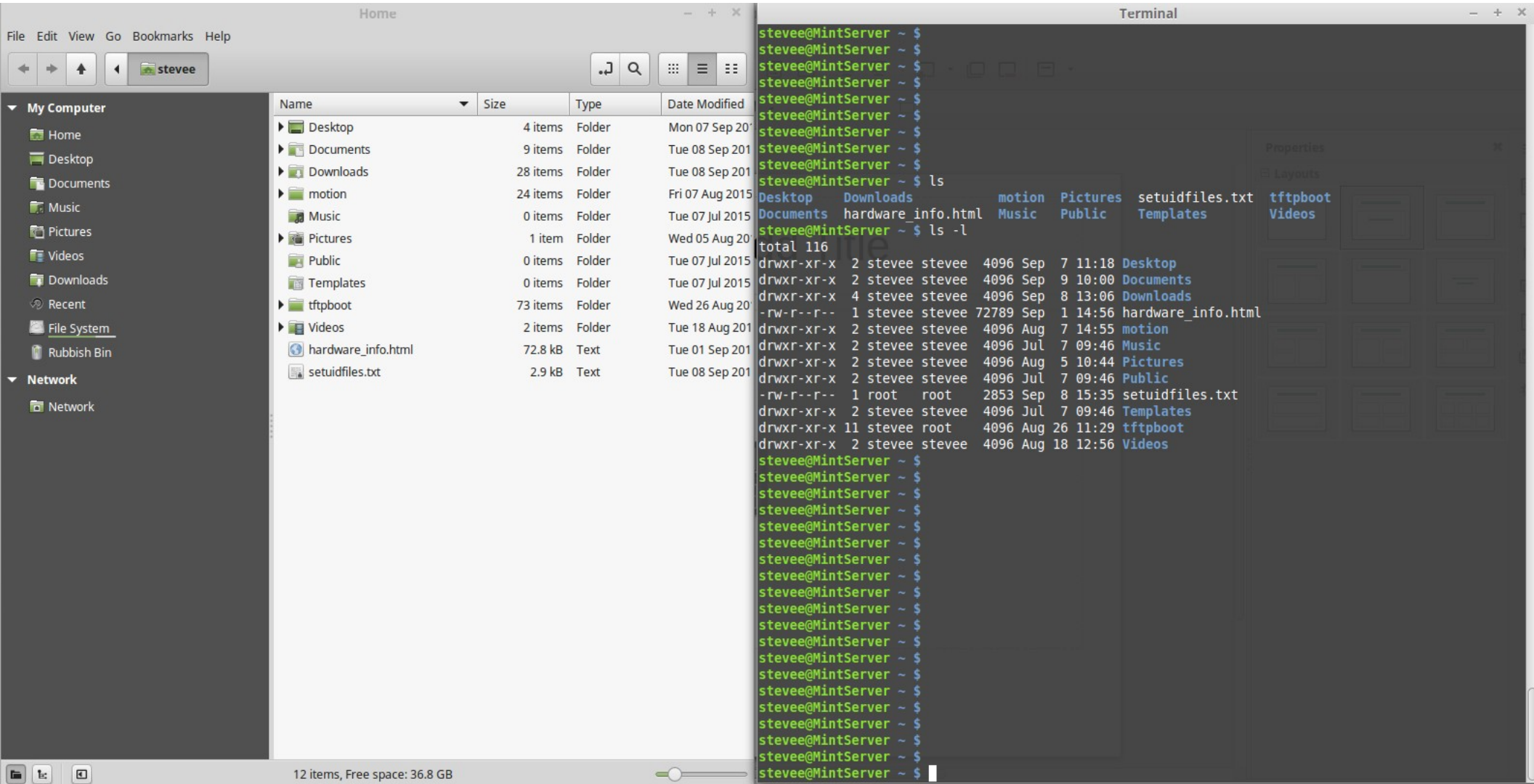
Site Admin

Log out

Entries RSS

Comments RSS

User's Home Directory Views



ls -l; whoami; pwd

```
stevee@MintServer ~ $ ls -l
total 116
drwxr-xr-x  2 stevee stevee 4096 Sep  7 11:18 Desktop
drwxr-xr-x  2 stevee stevee 4096 Sep  9 10:10 Documents
drwxr-xr-x  4 stevee stevee 4096 Sep  8 13:06 Downloads
-rw-r--r--  1 stevee stevee 72789 Sep  1 14:56 hardware_info.html
drwxr-xr-x  2 stevee stevee 4096 Aug  7 14:55 motion
drwxr-xr-x  2 stevee stevee 4096 Jul  7 09:46 Music
drwxr-xr-x  2 stevee stevee 4096 Sep  9 10:07 Pictures
drwxr-xr-x  2 stevee stevee 4096 Jul  7 09:46 Public
-rw-r--r--  1 root   root   2853 Sep  8 15:35 setuidfiles.txt
drwxr-xr-x  2 stevee stevee 4096 Jul  7 09:46 Templates
drwxr-xr-x 11 stevee root   4096 Aug 26 11:29 tftpboot
drwxr-xr-x  2 stevee stevee 4096 Aug 18 12:56 Videos
stevee@MintServer ~ $ whoami
stevee
stevee@MintServer ~ $ pwd
/home/stevee
stevee@MintServer ~ $
```


Information about a command type: `man ls`

- The “man” and “info” pages – “q” to quit

```
LS(1) File Edit Format Tools Window User Commands LS(1)
NAME
ls - list directory contents

SYNOPSIS
ls [OPTION]... [FILE]...

DESCRIPTION
List information about the FILES (the current directory by default). Sort entries alpha-
betically if none of -cftuvSUX nor --sort is specified.

Mandatory arguments to long options are mandatory for short options too.

-a, --all
do not ignore entries starting with .

-A, --almost-all
do not list implied . and ..

--author
with -l, print the author of each file

-b, --escape
print C-style escapes for nongraphic characters

--block-size=SIZE
scale sizes by SIZE before printing them. E.g., '--block-size=M' prints sizes in
units of 1,048,576 bytes. See SIZE format below.

-B, --ignore-backups
do not list implied entries ending with ~

-c
with -lt: sort by, and show, ctime (time of last modification of file status
information) with -l: show ctime and sort by name otherwise: sort by ctime, newest
first

-C
list entries by columns

--color[=WHEN]
colorize the output. WHEN defaults to 'always' or can be 'never' or 'auto'. More
info below

-d, --directory
list directory entries instead of contents, and do not dereference symbolic links

-D, --dired
generate output designed for Emacs' dired mode

Manual page ls(1) line 1 (press h for help or q to quit)
```

Google Research – usable examples

The image shows a dual-browser window. The left browser window displays Google search results for 'linux ls command'. The right browser window displays the article '15 Basic 'ls' Command Examples in Linux' from tecmint.com.

Google Search Results (Left Window):

- Search query: linux ls command
- Results include: linux ls command options, linux ls command file size human readable, linux ls command file size, linux ls command examples.
- About 1,360,000 results (0.38 seconds)
- Snippet: Is is a **Linux shell command** that lists directories.
- Link: Is command in Linux/Unix | list files/directories www.rapidtables.com/code/linux/ls.htm
- Article: 15 Basic 'ls' Command Examples in Linux www.tecmint.com/15-basic-ls-command-examples-in-linux/ (13 Sep 2012)
- Article: Is - Linux Command - Unix Command - At linux.about.com/od/commands/l/blcmdl1_ls.htm
- Article: Linux and UNIX Is command help and examples www.computerhope.com/unix/uls.htm
- Article: 'ls' Command in Linux With Examples - Yc www.yourownlinux.com/.../linux-ls-command-tutorial (27 Jan 2014)

Article Content (Right Window):

15 Basic 'ls' Command Examples in Linux

BY RAVI SAIVE LAST UPDATED: SEPTEMBER 13, 2012

AdChoices | [Mint Linux](#) | [Linux RHEL](#) | [Boot Linux](#) | [LS Example](#)

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Is command is one of the most frequently used command in Linux. I believe Is command is the first command you may use when you get into the command prompt of Linux Box. We use Is command daily basis and frequently even though we may not aware and never use all the option available. In this article, we'll be discussing basic Is command where we have tried to cover as much parameters as possible.

SHARE

- 36
- 181
- 159
- 0

Linux !!!
<http://www.tecmint.com>

15 Basic 'ls' Commands

Preparation for the LFCE (Linux Foundation Certified Engineer) Exam

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212.71.234.61

Who is “root”? The Superuser Admin

- **Becoming root after install, and setting a password:**
- `stevee@MintServer ~ $ sudo su`
- `[sudo] password for stevee:`
- `MintServer stevee # passwd root`
- `Enter new UNIX password:`
- `Retype new UNIX password:`
- `passwd: password updated successfully`
- `MintServer stevee #`
- `MintServer stevee # whoami`
- `root`
- `MintServer stevee # pwd`
- `/home/stevee`

What is the “root” directory?

The root of an inverted “tree”

It is the top of the directory tree “/”

MintServer stevee # `ls /`

bin dev initrd.img lost+found proc sbin
sys vmlinuz

boot etc lib media tmp

cdrom home lib32 mnt root srv
usr lib64 opt run var

Moving around the tree with TAB completion

- MintServer stevee # pwd
- /home/stevee
- MintServer stevee # cd /
- MintServer / # pwd
- /
- MintServer / # cd /home/ [TAB,TAB]
- gary/ gavin/ matthew/ stevee/

So What Can Linux Do with a Command Line...?

Almost anything in computing, including command line programming.

- **BASH scripts – command piping – the output of one command becomes the input to another**

- MintServer stevee # `ls -l`

- `total 116`

- `drwxr-xr-x 2 stevee stevee 4096 Sep 7 11:18 Desktop`

- `drwxr-xr-x 2 stevee stevee 4096 Sep 9 11:13 Documents`

- `drwxr-xr-x 4 stevee stevee 4096 Sep 8 13:06 Downloads`

- `-rw-r--r-- 1 stevee stevee 72789 Sep 1 14:56 hardware_info.html`

- `drwxr-xr-x 2 stevee stevee 4096 Aug 7 14:55 motion`

- `drwxr-xr-x 2 stevee stevee 4096 Jul 7 09:46 Music`

- `drwxr-xr-x 2 stevee stevee 4096 Sep 9 10:48 Pictures`

- `drwxr-xr-x 2 stevee stevee 4096 Jul 7 09:46 Public`

- `-rw-r--r-- 1 root root 2853 Sep 8 15:35 setuidfiles.txt`

- `drwxr-xr-x 2 stevee stevee 4096 Jul 7 09:46 Templates`

- `drwxr-xr-x 11 stevee root 4096 Aug 26 11:29 tftpboot`

- `drwxr-xr-x 2 stevee stevee 4096 Aug 18 12:56 Videos`

- MintServer stevee # `ls -l | wc -l`

- `13`

- `stevee@AMDA8 ~ $ cat /etc/passwd | grep ":" | sort | wc -l`

- `47`

C programming – you will be shown how to compile and run a C script

```
#include <stdio.h>

#include <math.h>

int main()
{
    int i,j;

    int a;

    int input;

    printf("Input prime limit eg < 1000..");

    scanf("%d", &input);

    for( i=2; i<input; i=i+1 )
    {
        a=0;

        for(j=2; j<i; j=j+1)

            if (i%j == 0)

                a=1;

        if (a == 0)

            printf("%d ", i);

    }

    return 0;

}
```

```
MintServer stevee # ./primesprog
Input prime limit eg < 1000..3500
2 3 5 7 11 13 17 19 23 29 31 37 41 43 47 53 59 61 67 71 73 79 83 89 97 101 1
03 107 109 113 127 131 137 139 149 151 157 163 167 173 179 181 191 193 197 1
99 211 223 227 229 233 239 241 251 257 263 269 271 277 281 283 293 307 311 3
13 317 331 337 347 349 353 359 367 373 379 383 389 397 401 409 419 421 431 4
33 439 443 449 457 461 463 467 479 487 491 499 503 509 521 523 541 547 557 5
63 569 571 577 587 593 599 601 607 613 617 619 631 641 643 647 653 659 661 6
73 677 683 691 701 709 719 727 733 739 743 751 757 761 769 773 787 797 809 8
11 821 823 827 829 839 853 857 859 863 877 881 883 887 907 911 919 929 937 9
41 947 953 967 971 977 983 991 997 1009 1013 1019 1021 1031 1033 1039 1049 1
051 1061 1063 1069 1087 1091 1093 1097 1103 1109 1117 1123 1129 1151 1153 11
63 1171 1181 1187 1193 1201 1213 1217 1223 1229 1231 1237 1249 1259 1277 127
9 1283 1289 1291 1297 1301 1303 1307 1319 1321 1327 1361 1367 1373 1381 1399
1409 1423 1427 1429 1433 1439 1447 1451 1453 1459 1471 1481 1483 1487 1489
1493 1499 1511 1523 1531 1543 1549 1553 1559 1567 1571 1579 1583 1597 1601 1
607 1609 1613 1619 1621 1627 1637 1657 1663 1667 1669 1693 1697 1699 1709 17
21 1723 1733 1741 1747 1753 1759 1777 1783 1787 1789 1801 1811 1823 1831 184
7 1861 1867 1871 1873 1877 1879 1889 1901 1907 1913 1931 1933 1949 1951 1973
1979 1987 1993 1997 1999 2003 2011 2017 2027 2029 2039 2053 2063 2069 2081
2083 2087 2089 2099 2111 2113 2129 2131 2137 2141 2143 2153 2161 2179 2203 2
207 2213 2221 2237 2239 2243 2251 2267 2269 2273 2281 2287 2293 2297 2309 23
11 2333 2339 2341 2347 2351 2357 2371 2377 2381 2383 2389 2393 2399 2411 241
7 2423 2437 2441 2447 2459 2467 2473 2477 2503 2521 2531 2539 2543 2549 2551
2557 2579 2591 2593 2609 2617 2621 2633 2647 2657 2659 2663 2671 2677 2683
2687 2689 2693 2699 2707 2711 2713 2719 2729 2731 2741 2749 2753 2767 2777 2
789 2791 2797 2801 2803 2819 2833 2837 2843 2851 2857 2861 2879 2887 2897 29
03 2909 2917 2927 2939 2953 2957 2963 2969 2971 2999 3001 3011 3019 3023 303
7 3041 3049 3061 3067 3079 3083 3089 3109 3119 3121 3137 3163 3167 3169 3181
3187 3191 3203 3209 3217 3221 3229 3251 3253 3257 3259 3271 3299 3301 3307
3313 3319 3323 3329 3331 3343 3347 3359 3361 3371 3373 3389 3391 3407 3413 3
433 3449 3457 3461 3463 3467 3469 3491 3499 MintServer stevee #
MintServer stevee #
```

Primes.c

- First, view the source code files in /Scripts with `ls` :
- `cat primes.c`
- Now compile it with GNU C Compiler
- `gcc -v primes.c -o primes.prog`
- Now run the compiled executable:
- `./primes.prog`
- Input prime limit eg `< 1000..99`
- `2 3 5 7 11 13 17 19 23 29 31 37 41 43 47 53 59 61 67 71
73 79 83 89 97 Done`

Python – you will be shown how to run a script

Python program to check if number is prime or not

- def is_prime(n):
- i = 2
- while i < n:
- if n%i == 0:
- return False
- i += 1
- return True
- n = int(raw_input("What number should I go up to? "))
- p = 2
- while p <= n:
- if is_prime(p):
- print p,
- p=p+1
- print "Done"
-

```
/pythonprime.py /home/steve/pythonprime.py
MintServer steve # python pythonprime.py
What number should I go up to? 999
2 3 5 7 11 13 17 19 23 29 31 37 41 43 47 53 59 61 67 71 73 79 83 89 97 101 1
03 107 109 113 127 131 137 139 149 151 157 163 167 173 179 181 191 193 197 1
99 211 223 227 229 233 239 241 251 257 263 269 271 277 281 283 293 307 311 3
13 317 331 337 347 349 353 359 367 373 379 383 389 397 401 409 419 421 431 4
33 439 443 449 457 461 463 467 479 487 491 499 503 509 521 523 541 547 557 5
63 569 571 577 587 593 599 601 607 613 617 619 631 641 643 647 653 659 661 6
73 677 683 691 701 709 719 727 733 739 743 751 757 761 769 773 787 797 809 8
11 821 823 827 829 839 853 857 859 863 877 881 883 887 907 911 919 929 937 9
41 947 953 967 971 977 983 991 997 Done
```


pythonprime.py

- View the source code file
- `cat pythonprime.py`
- No compilation required, so run it:
- `python pythonprime.py`
- What number should I go up to? 99
- 2 3 5 7 11 13 17 19 23 29 31 37 41 43 47 53 59
61 67 71 73 79 83 89 97 Done

Java Programming C programming – you will be shown how to compile and run a script - [apt-get install openjdk-7-jdk](#)

- `/** primes_findpubKey.java`
- `import java.util.Scanner;`
- `public class primes_findpubKey`
- `{`
- `public static void main (String args[])`
- `{`
- `Scanner stdin = new Scanner (System.in);`
- `int i ;`
- `int j ;`
- `int a ;`
- `int k = 0 ;`
- `//int pubKey ;`
- `int logic ;`
- `// int limit;`
- `System.out.println("Input prime upper limit eg < 1000..");`
- `int limit = stdin.nextInt();`
- `System.out.println("Input pubKey...");`
- `int pubKey = stdin.nextInt();`
- `for(i = 2 ; i <= limit ; i = i + 1)`
- `{`
- `a=0;`
- `for(j = 2 ; j < i ; j = j+1)`
- `if (i % j == 0)`
- `a=1;`
- `if (a == 0)`
- `System.out.print("," + i);`
- `System.out.print("") ;`
- `if (pubKey % i == 0)`
- `//k = 1 ;`
- `System.out.println("A Private KEY IS : " + i);`
- `}`
- `}`
- `}`

```
MintServer stevee # java primes_findpubKey
Input prime upper limit eg < 1000..
3500
Input pubKey...
50963
,2,3,5,7,11A Private KEY IS : 11
,13,17,19,23,29,31,37,41A Private KEY IS : 41
,43,47,53,59,61,67,71,73,79,83,89,97,101,103,107,109,113A Private KEY IS : 1
13
,127,131,137,139,149,151,157,163,167,173,179,181,191,193,197,199,211,223,227
,229,233,239,241,251,257,263,269,271,277,281,283,293,307,311,313,317,331,337
,347,349,353,359,367,373,379,383,389,397,401,409,419,421,431,433,439,443,449
A Private KEY IS : 451
,457,461,463,467,479,487,491,499,503,509,521,523,541,547,557,563,569,571,577
,587,593,599,601,607,613,617,619,631,641,643,647,653,659,661,673,677,683,691
,701,709,719,727,733,739,743,751,757,761,769,773,787,797,809,811,821,823,827
,829,839,853,857,859,863,877,881,883,887,907,911,919,929,937,941,947,953,967
,971,977,983,991,997,1009,1013,1019,1021,1031,1033,1039,1049,1051,1061,1063,
1069,1087,1091,1093,1097,1103,1109,1117,1123,1129,1151,1153,1163,1171,1181,1
187,1193,1201,1213,1217,1223,1229,1231,1237A Private KEY IS : 1243
,1249,1259,1277,1279,1283,1289,1291,1297,1301,1303,1307,1319,1321,1327,1361,
1367,1373,1381,1399,1409,1423,1427,1429,1433,1439,1447,1451,1453,1459,1471,1
481,1483,1487,1489,1493,1499,1511,1523,1531,1543,1549,1553,1559,1567,1571,15
79,1583,1597,1601,1607,1609,1613,1619,1621,1627,1637,1657,1663,1667,1669,169
3,1697,1699,1709,1721,1723,1733,1741,1747,1753,1759,1777,1783,1787,1789,1801
,1811,1823,1831,1847,1861,1867,1871,1873,1877,1879,1889,1901,1907,1913,1931,
1933,1949,1951,1973,1979,1987,1993,1997,1999,2003,2011,2017,2027,2029,2039,2
053,2063,2069,2081,2083,2087,2089,2099,2111,2113,2129,2131,2137,2141,2143,21
53,2161,2179,2203,2207,2213,2221,2237,2239,2243,2251,2267,2269,2273,2281,228
7,2293,2297,2309,2311,2333,2339,2341,2347,2351,2357,2371,2377,2381,2383,2389
,2393,2399,2411,2417,2423,2437,2441,2447,2459,2467,2473,2477,2503,2521,2531,
2539,2543,2549,2551,2557,2579,2591,2593,2609,2617,2621,2633,2647,2657,2659,2
663,2671,2677,2683,2687,2689,2693,2699,2707,2711,2713,2719,2729,2731,2741,27
49,2753,2767,2777,2789,2791,2797,2801,2803,2819,2833,2837,2843,2851,2857,286
1,2879,2887,2897,2903,2909,2917,2927,2939,2953,2957,2963,2969,2971,2999,3001
,3011,3019,3023,3037,3041,3049,3061,3067,3079,3083,3089,3109,3119,3121,3137,
3163,3167,3169,3181,3187,3191,3203,3209,3217,3221,3229,3251,3253,3257,3259,3
271,3299,3301,3307,3313,3319,3323,3329,3331,3343,3347,3359,3361,3371,3373,33
89,3391,3407,3413,3433,3449,3457,3461,3463,3467,3469,3491,3499MintServer ste
vee #
```

primes.java

- Java requires the Developer Kit installed:
- `sudo apt-get install openjdk-7-jdk`
- View the source code:
- `cat primes.java`
- Compile the code – the file *primes.class* is created:
- `javac primes.java`
- The `java` command id's the class file and runs it:
- `java primes`
- Input prime upper limit eg `< 1000..`
- `99`
- `2,3,5,7,11,13,17,19,23,29,31,37,41,43,47,53,59,61,67,71,73,79,83,89,97 Done`

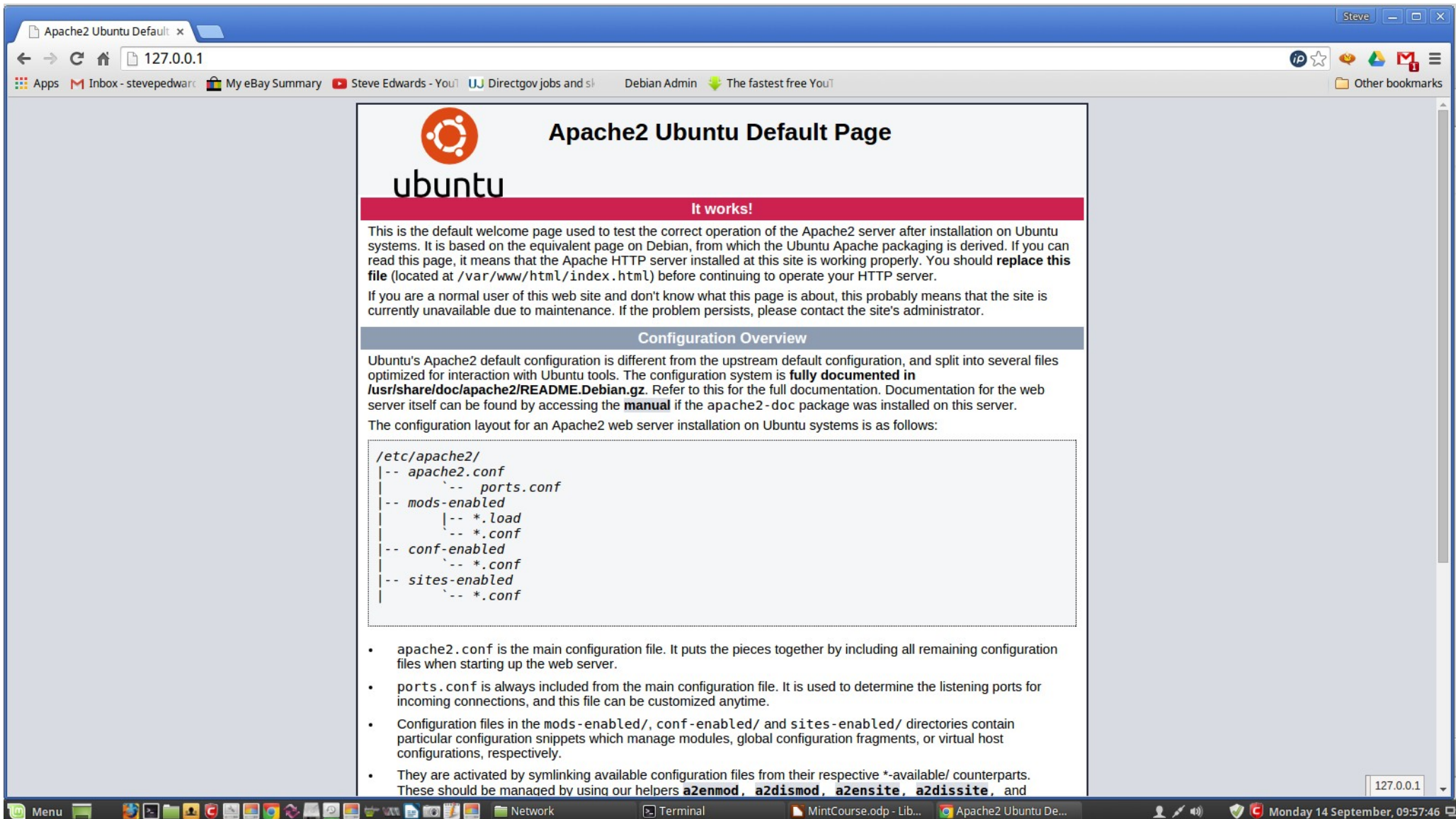
MYSQL Databases

`apt-get install mysql-server-core-5.6 ; service mysql start`

- MintServer stevee # `mysql -u root -p`
- Enter password:
- Welcome to the MySQL monitor. Commands end with ; or \g.
- Your MySQL connection id is 2
- Server version: 5.6.19-0ubuntu0.14.04.1 (Ubuntu)
- Copyright (c) 2000, 2015, Oracle and/or its affiliates. All rights reserved.
- Oracle is a registered trademark of Oracle Corporation and/or its
- affiliates. Other names may be trademarks of their respective
- owners.
- Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
- `mysql> show databases ;`
- +-----+
- | Database |
- +-----+
- | information_schema |
- | mysql |
- | performance_schema |
- +-----+
- 4 rows in set (0.02 sec)

Webserver: `apt-get install apache2`

- `vi /etc/apache2/apache2.conf`
- `ServerName MintServer`



The screenshot shows a web browser window displaying the 'Apache2 Ubuntu Default Page'. The browser's address bar shows the IP address '127.0.0.1'. The page features the Ubuntu logo and the title 'Apache2 Ubuntu Default Page'. A pink banner with the text 'It works!' is prominently displayed. Below this, a paragraph explains that the page is the default welcome page used to test the correct operation of the Apache2 server after installation on Ubuntu systems. It states that if the page is visible, the Apache HTTP server is working properly. A note advises replacing the file at `/var/www/html/index.html` before continuing to operate the HTTP server. Another paragraph mentions that if a normal user is on the site and doesn't know what the page is about, it probably means the site is currently unavailable due to maintenance. A section titled 'Configuration Overview' follows, explaining that Ubuntu's Apache2 default configuration is different from the upstream default and is split into several files optimized for interaction with Ubuntu tools. It references the `/usr/share/doc/apache2/README.Debian.gz` file for full documentation. A code block shows the configuration layout for an Apache2 web server installation on Ubuntu systems, listing files like `apache2.conf`, `ports.conf`, `mods-enabled`, `conf-enabled`, and `sites-enabled`. A bulleted list at the bottom provides details about these files and how they are activated.

Apache2 Ubuntu Default Page

ubuntu

It works!

This is the default welcome page used to test the correct operation of the Apache2 server after installation on Ubuntu systems. It is based on the equivalent page on Debian, from which the Ubuntu Apache packaging is derived. If you can read this page, it means that the Apache HTTP server installed at this site is working properly. You should **replace this file** (located at `/var/www/html/index.html`) before continuing to operate your HTTP server.

If you are a normal user of this web site and don't know what this page is about, this probably means that the site is currently unavailable due to maintenance. If the problem persists, please contact the site's administrator.

Configuration Overview

Ubuntu's Apache2 default configuration is different from the upstream default configuration, and split into several files optimized for interaction with Ubuntu tools. The configuration system is **fully documented in** `/usr/share/doc/apache2/README.Debian.gz`. Refer to this for the full documentation. Documentation for the web server itself can be found by accessing the **manual** if the `apache2-doc` package was installed on this server.

The configuration layout for an Apache2 web server installation on Ubuntu systems is as follows:

```
/etc/apache2/
|-- apache2.conf
|   |-- ports.conf
|-- mods-enabled
|   |-- *.load
|   |-- *.conf
|-- conf-enabled
|   |-- *.conf
|-- sites-enabled
|   |-- *.conf
```

- `apache2.conf` is the main configuration file. It puts the pieces together by including all remaining configuration files when starting up the web server.
- `ports.conf` is always included from the main configuration file. It is used to determine the listening ports for incoming connections, and this file can be customized anytime.
- Configuration files in the `mods-enabled/`, `conf-enabled/` and `sites-enabled/` directories contain particular configuration snippets which manage modules, global configuration fragments, or virtual host configurations, respectively.
- They are activated by symlinking available configuration files from their respective `*-available/` counterparts. These should be managed by using our helpers `a2enmod`, `a2dismod`, `a2ensite`, `a2dissite`, and

Day Summary

- Installed Mint using mostly default settings
- GUI and terminal views of the file system
- First commands – `ls`; `whoami`; `pwd`
- Info about a command: `man ls`
- Google for easiest help and research
- Root user and root directory terms
- Moved around with `cd` and TAB key
- Looked at a piped command = basic programming
- C, Java and Python installed and a program compile and run. Linux as a multi programming platform
- MYSQL/Apache installed, viewed DataBase/Webpage
- Further reading below

Further Reading

- IP Address Classes:
<https://technet.microsoft.com/en-us/library/cc940018.aspx>
- Keyboard character names ~ tilde etc:
<http://www.computerhope.com/keys.htm>
<http://coolefriend.com/productivity/know-names-of-symbols-in-your-computer-keyboard/>
- Linux OS origin: https://en.wikipedia.org/wiki/Linus_Torvalds
- Binary numbers:
<http://www.wikihow.com/Convert-from-Binary-to-Decimal>
- Running prime number programmes:
<http://www.stevepedwards.com/DebianAdmin/understanding-basic-ideas-behind-optimised-code-and-erastosthenes-sieve/>
Explore the Desktop menus and Apps for yourself.
- Next course..Day 2 Users and Groups