This is CS50.

scribe notes

problem set 0

walkthrough

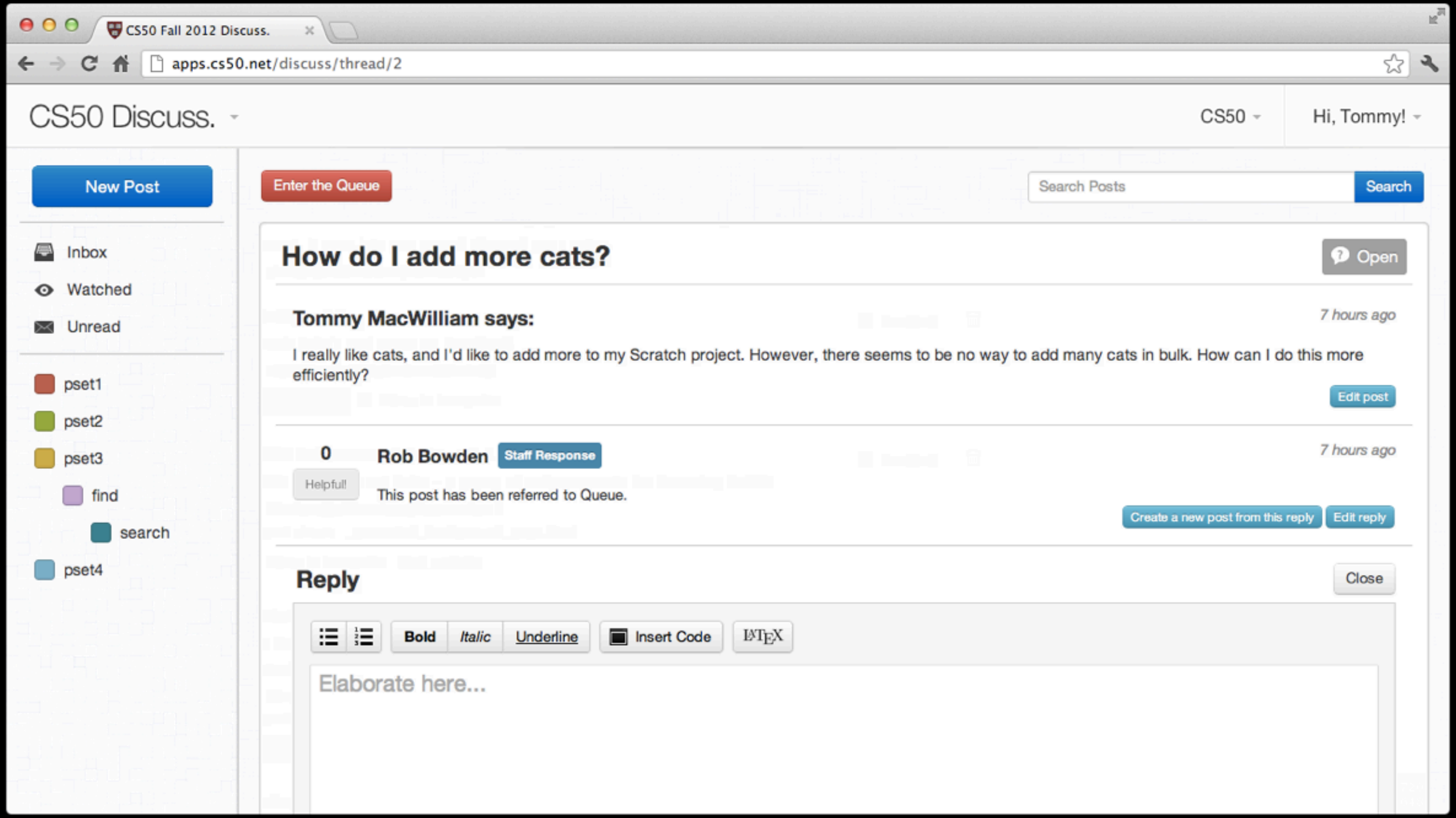
cs50.net/psets

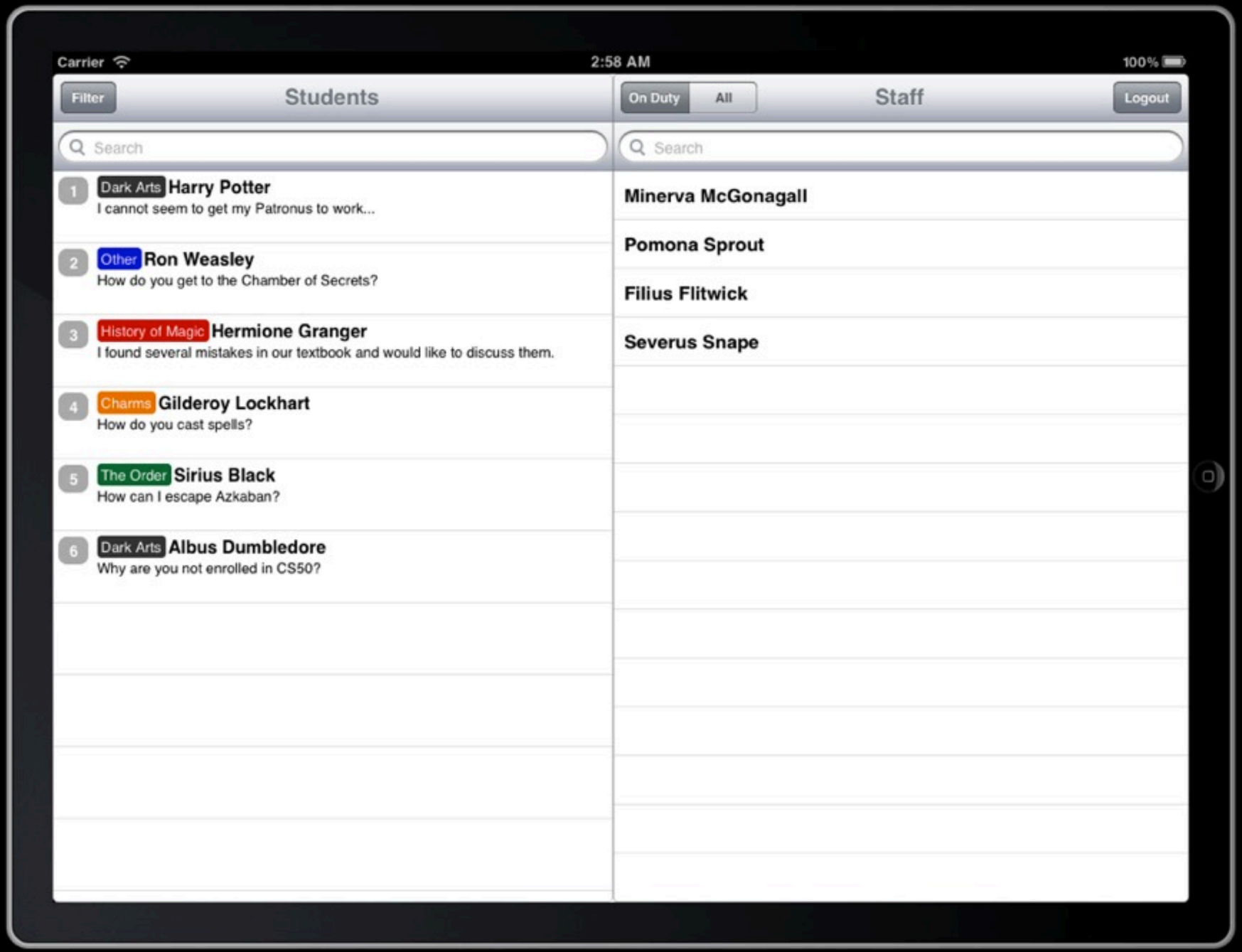
sectioning

cs50.net/section

office hours

cs50.net/ohs


CS50 Fall 2012 Discuss.
apps.cs50.net/discuss/thread/2
CS50 Discuss.
CS50
Hi, Tommy!
New Post
Enter the Queue
Search Posts
Search
Inbox
Watched
Unread
pset1
pset2
pset3
find
search
pset4
How do I add more cats?
Open
Tommy MacWilliam says:
7 hours ago
I really like cats, and I'd like to add more to my Scratch project. However, there seems to be no way to add many cats in bulk. How can I do this more efficiently?
Edit post
0
Helpful!
Rob Bowden
Staff Response
7 hours ago
This post has been referred to Queue.
Create a new post from this reply
Edit reply
Reply
Close
Bold
Italic
Underline
Insert Code
LaTeX
Elaborate here...


Carrier
2:58 AM
100%
Filter
Students
On Duty
All
Staff
Logout
Search
Search
1
Dark Arts
Harry Potter
I cannot seem to get my Patronus to work...
2
Other
Ron Weasley
How do you get to the Chamber of Secrets?
3
History of Magic
Hermione Granger
I found several mistakes in our textbook and would like to discuss them.
4
Charms
Gilderoy Lockhart
How do you cast spells?
5
The Order
Sirius Black
How can I escape Azkaban?
6
Dark Arts
Albus Dumbledore
Why are you not enrolled in CS50?
Minerva McGonagall
Pomona Sprout
Filius Flitwick
Severus Snape


when clicked
say
hello, world!


```
int main(void)
{
    printf("hello, world!\n");
    return 0;
}
```

statements

statements


```
printf("hello, world!\n");
```

loops

loops


```
while (true)
{
    printf("hello, world!\n");
}
```

loops

loops


```
for (int i = 0; i < 10; i++)
{
    printf("hello, world!\n");
}
```

variables

variables

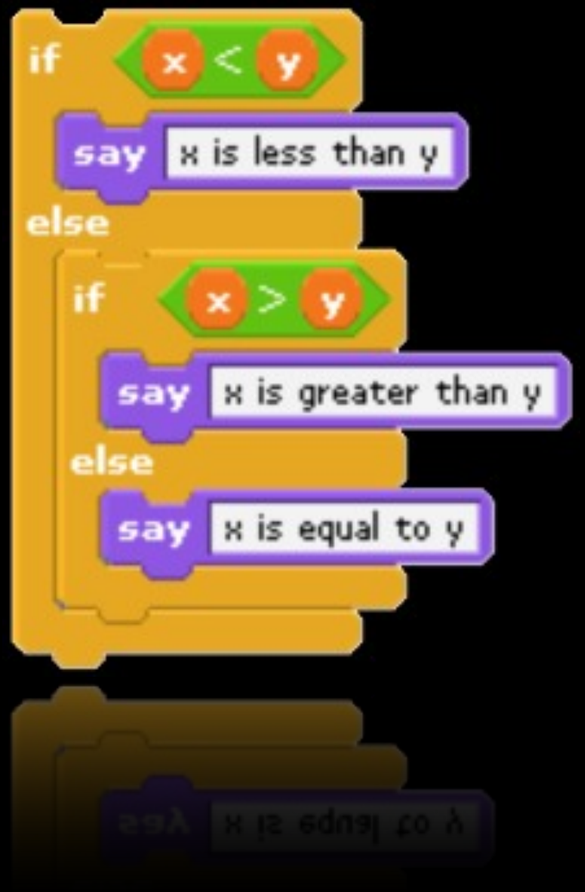

```
int counter = 0;
while (true)
{
    printf("%d\n", counter);
    counter++;
}
```

Boolean expressions

Boolean expressions

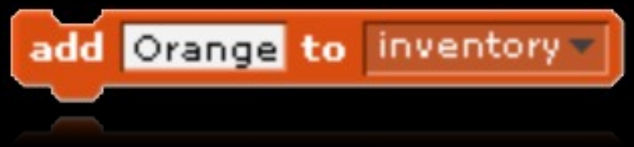

```
(x < y)
((x < y) && (y < z))
```

conditions




```
if (x < y)
{
    printf("x is less than y\n");
}
else if (x > y)
{
    printf("x is greater than y\n");
}
else
{
    printf("x is equal to y\n");
}
```

arrays

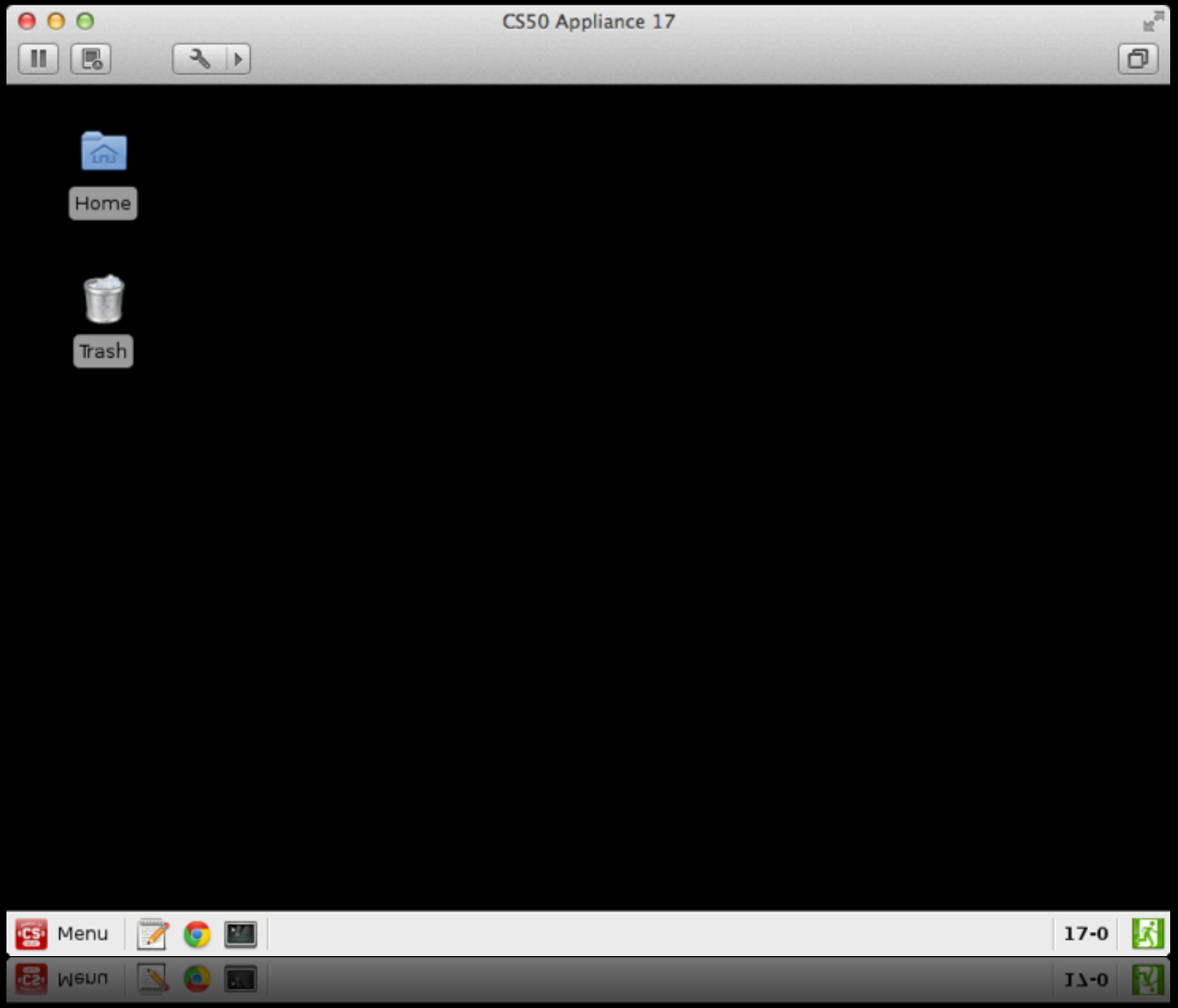



```
string inventory[1];
inventory[0] = "Orange";
```

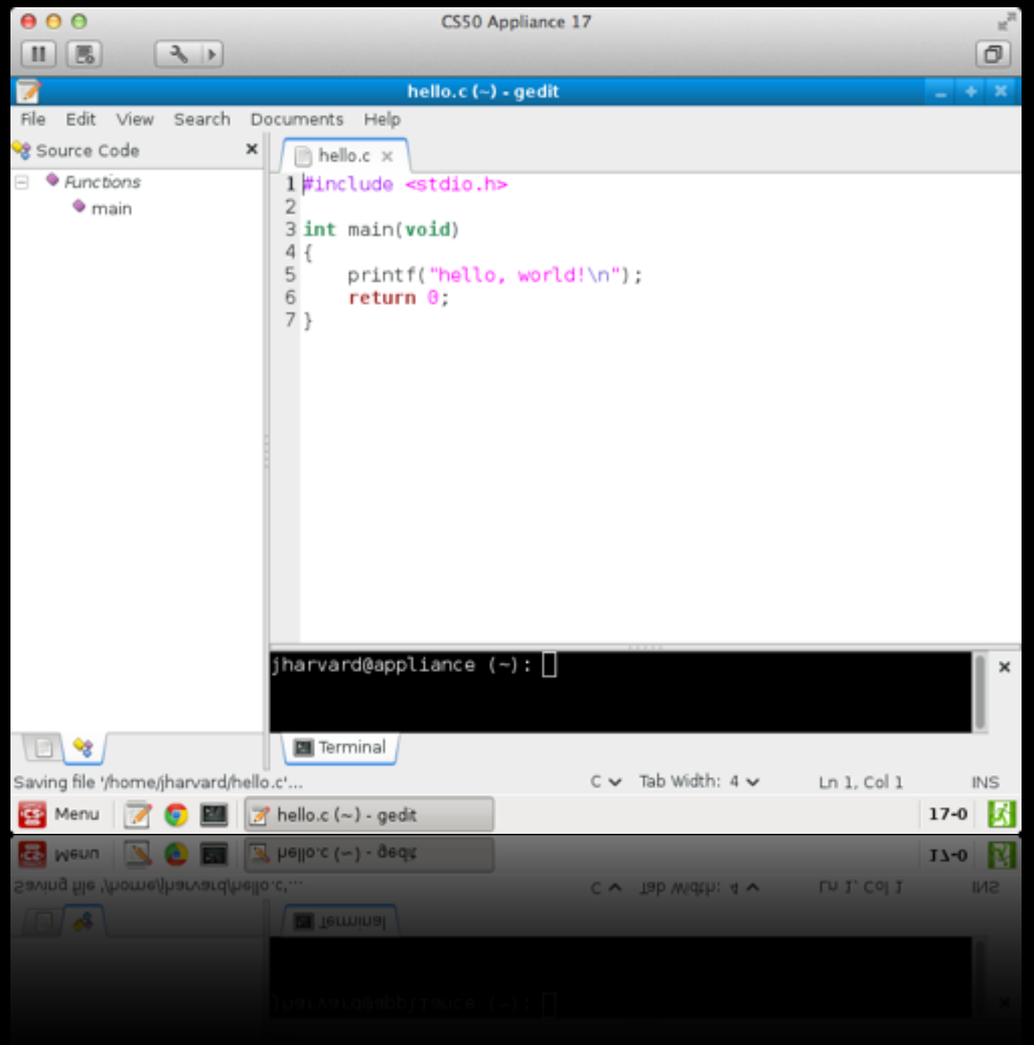
```c
#include <stdio.h>

int main(void)
{
    printf("hello, world!");
    return 0;
}
```

```
10000011 00000001 00010001 00000000 00111101 11111100 01110100 00111101
00000000 01000000 00000000 00000000 00000000 00000000 00000000 00000000
10010000 00000000 00000000 00000000 01010000 00000000 00000111 00110000
00001011 00000001 00001011 00000011 00001010 00000000 00000000 00000000
00000000 00100000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00100000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
01110000 00010000 00000000 00100000 00000001 00000000 00000000 00000000
00000000 00000000 00000000 00100000 00000001 00000000 00000000 00000000
00000000 00000000 00000000 01000000 00000001 00000000 00000000 00000000
00000000 00100000 00000000 01000000 00000001 00000000 00000000 00000000
11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111
10010000 10000000 00000000 01000000 00000001 00000000 00000000 00000000
00101110 01100100 01111001 01101110 01100001 01101101 01101001 01100011
10110000 00000100 00000000 00100000 00000001 00000000 00000000 00000000
10110000 00000100 00000000 00100000 00000001 00000000 00000000 00000000
10100000 00000001 00000000 00000000 00000000 00000000 00000000 00000000
10110000 00000100 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00100000 00000000 00000000
                                    ...
```


CS50 Appliance 17
Home
Trash
Menu
17-0

how to write a program



how to compile a program

```
clang hello.c
```

how to run a program

```
./a.out
```

how to compile a program

```
clang -o hello hello.c
```

how to run a program

```
./hello
```

how to compile a program

```
make hello
```

functions

`main`

Standard Library

stdio.h

```
printf

...
```

CS50 Library

cs50.h

```
GetChar

GetDouble

GetFloat

GetInt

GetLongLong

GetString
```

printf

%c %d %f %lld %s ...

escape sequences

`\n` `\r` `\t` `\'` `\"` `\\` `\0` ...

math

\+ - * / %

primitive types

```
char   double   float   int   long long   ...
```

CS50 types

`bool` `string` `...`

precedence

Operator	Description	Associativity
( ) [ ] . -> ++ -- ++ --	Parentheses (grouping) Brackets (array subscript) Member selection via object name Member selection via pointer Postfix increment/decrement (see Note 1) Prefix increment/decrement	left-to-right right-to-left
+ - ! ~ (*type*) * & sizeof	Unary plus/minus Logical negation/bitwise complement Cast (change *type*) Dereference Address Determine size in bytes	
* / %	Multiplication/division/modulus	left-to-right
+ -	Addition/subtraction	left-to-right
<< >>	Bitwise shift left, Bitwise shift right	left-to-right
< <= > >=	Relational less than/less than or equal to Relational greater than/greater than or equal to	left-to-right
== != &	Relational is equal to/is not equal to Bitwise AND	left-to-right left-to-right
^	Bitwise exclusive OR	left-to-right
|	Bitwise inclusive OR	left-to-right
&&	Logical AND	left-to-right
||	Logical OR	left-to-right
?:	Ternary conditional	right-to-left
= += -= *= /= %= &= ^= |= <<= >>=	Assignment Addition/subtraction assignment Multiplication/division assignment Modulus/bitwise AND assignment Bitwise exclusive/inclusive OR assignment Bitwise shift left/right assignment	right-to-left
,	Comma (separate expressions)	left-to-right

http://www.difranco.net/cop2220/op-prec.htm

how to compile a program

```
clang -o hello hello.c -lcs50
```

how to compile a program

```
make hello
```

to be continued...