this is week 3

fall 2013

playlist50

Royals (Lorde) | Love Somebody (Maroon 5) | Safe and Sound (Capital Cities)

agenda

resources

GDB

sorting & searching

resources

lecture notes & source code

cs50.net/shorts

study.cs50.net

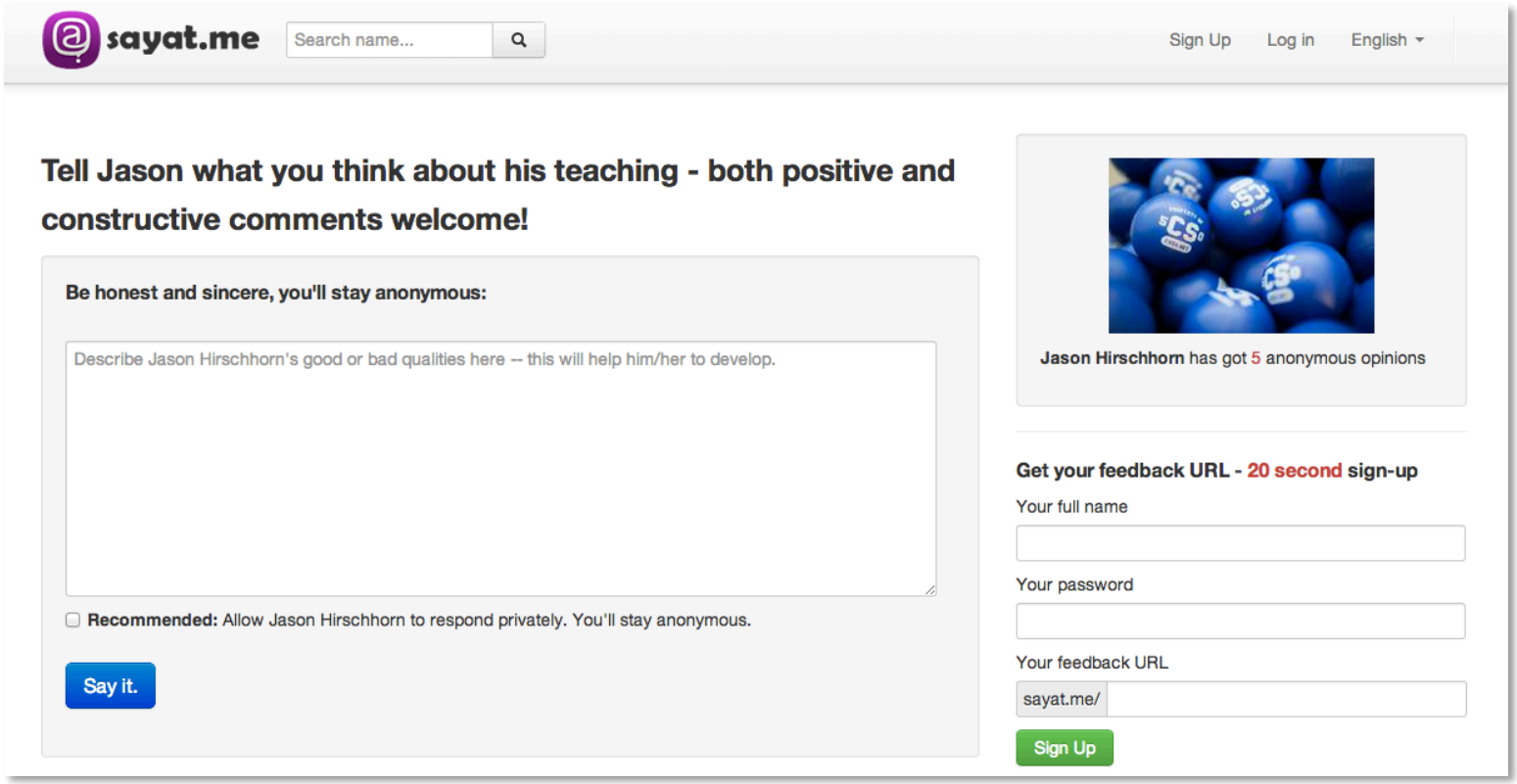
man

Google

cs50.net/discuss

OHs

me!



http://sayat.me/cs50

GDB

squash those bugs!

get started

```
jharvard@appliance (~/pset3) gdb <executable>
```

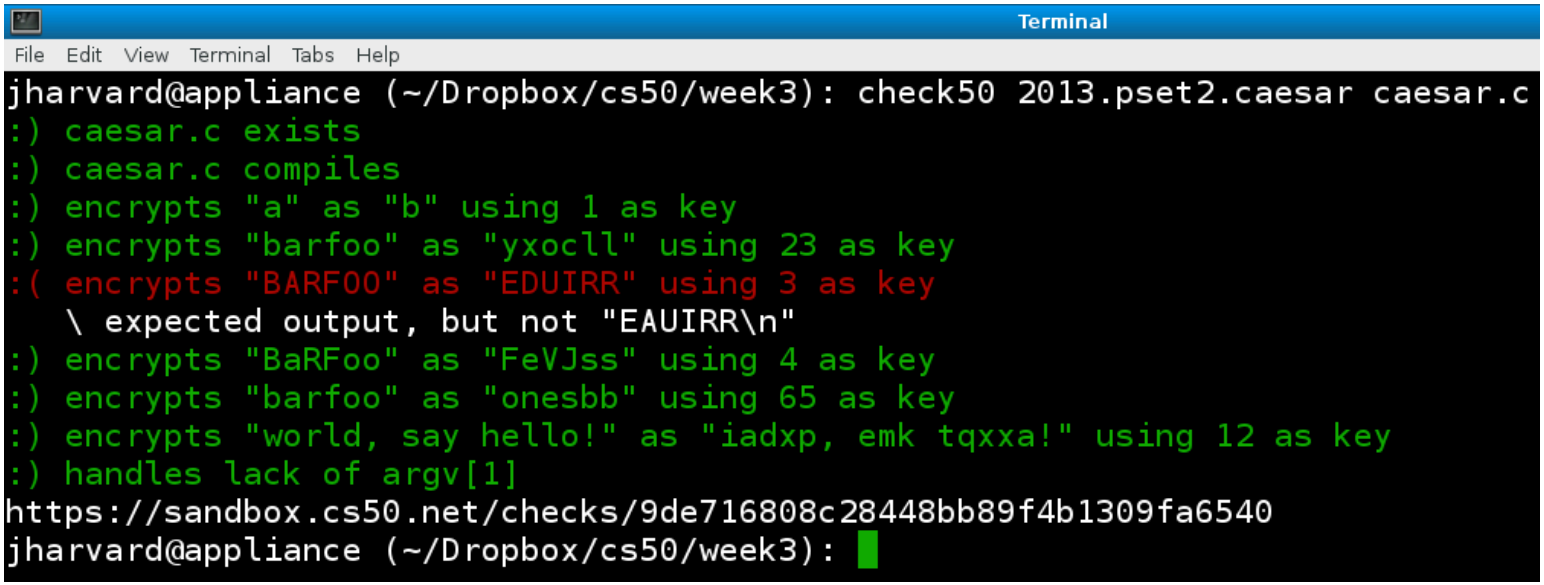
```
jharvard@appliance (~/pset3) gdb ./caesar
```

useful commands

break (b) main	print (p)
run <arguments>	info locals
next (n)	continue (c)
step (s)	disable
list	quit (q)

your turn: caesar.c

Use GDB to find the bugs in the program.



let's turn that frown upside down (there may be more bugs as well!)

sorting & searching

4 8 15 16 23 42

your turn: binary.c

Implement an iterative version of binary search using the following function declaration:

```
bool binary_search(int value, int values[], int n);
```

Where `value` is what you are searching for in the `values` array of size `n`. No need to write a main function; simply include helpers.h in another .c file.

your turn: binary.c

And one more thing...please start by writing some pseudocode.

your turn: binary.c

```
while length of list > 0
    look at middle of list
        if number found, return true
    else if middle higher, search left
    else if middle lower, search right
return false
```

your turn: selection.c

Implement selection sort using the following function declaration:

```
void selection_sort(int values[], int n);
```

Where `value` is what you are searching for in the `values` array of size `n`. No need to write a main function; simply include helpers.h in another .c file.