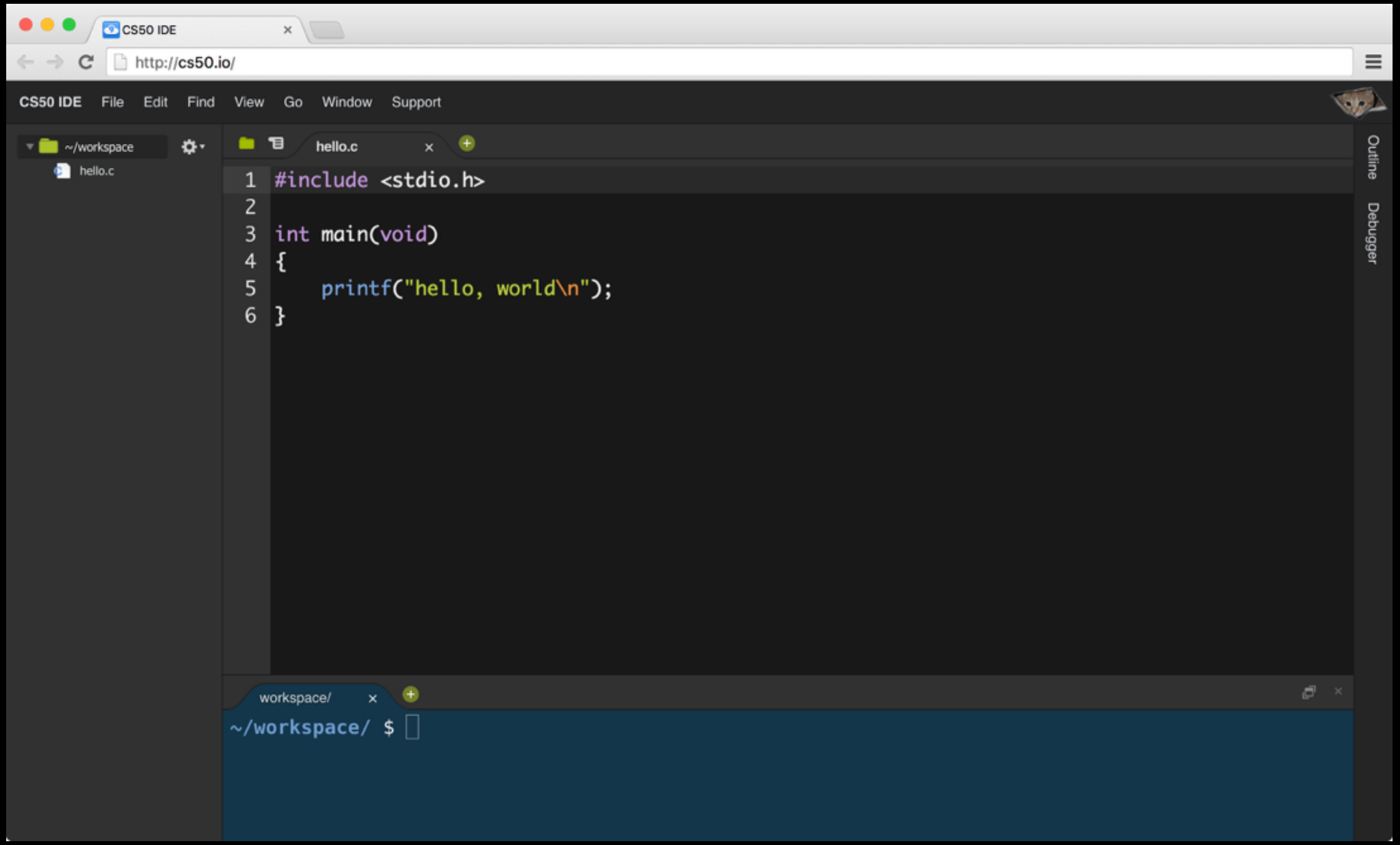
Week 2

last time

```c
#include <stdio.h>

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


CS50 IDE
http://cs50.io/
CS50 IDE File Edit Find View Go Window Support
~/workspace
hello.c
hello.c
1 #include <stdio.h>
2
3 int main(void)
4 {
5 printf("hello, world\n");
6 }
Outline
Debugger
workspace/
~/workspace/ $

functions

loops

variables

Boolean expressions

conditions

```
printf

...
```

```
get_char

get_double

get_float

get_int

get_long_long

get_string

...
```

```
bool

char

double

float

int

long long

string

...
```

nytimes.com

1/3
.33333333333

this time

debugging

help50

eprintf

debug50

scope

correctness

design

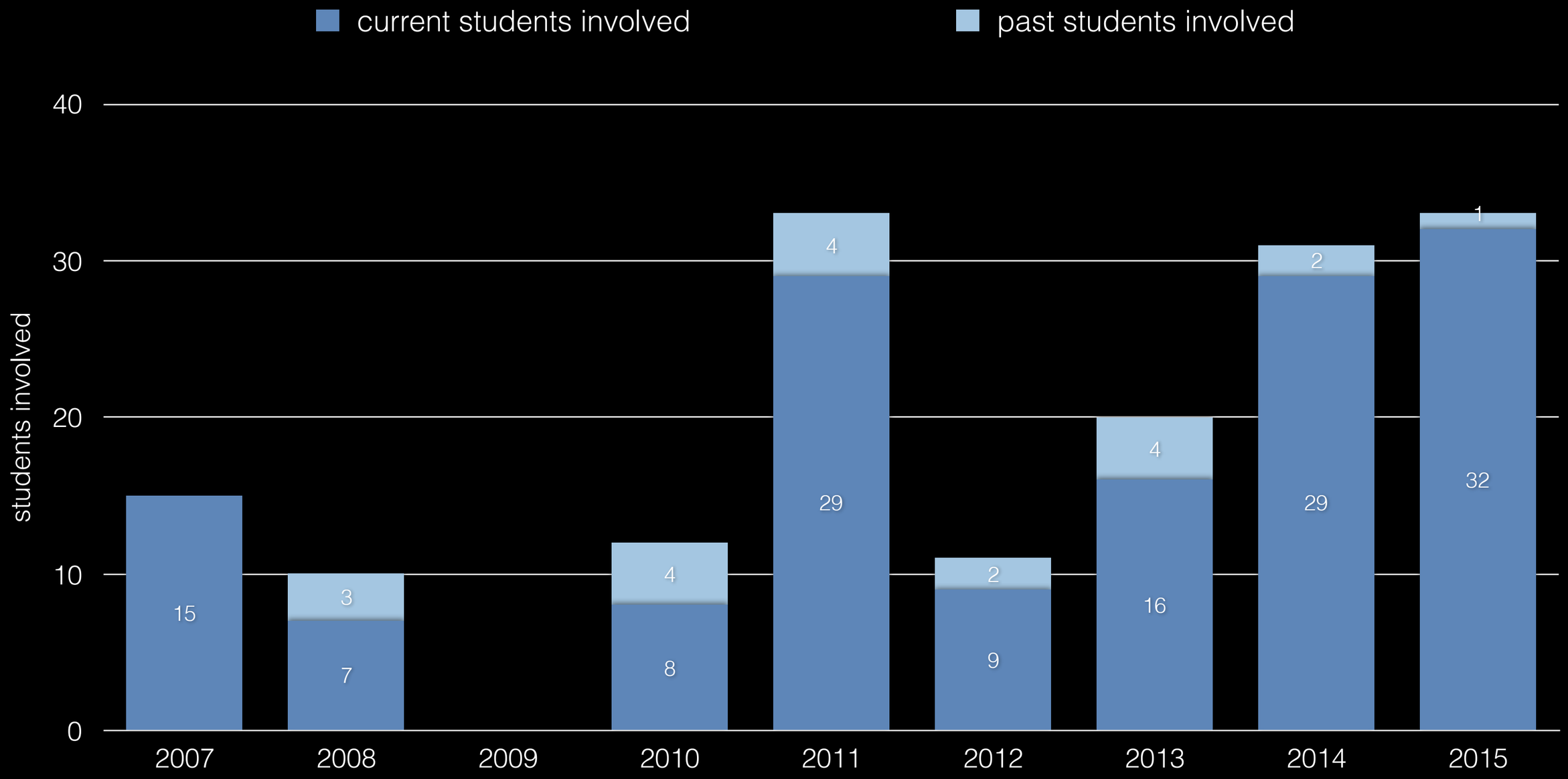
style

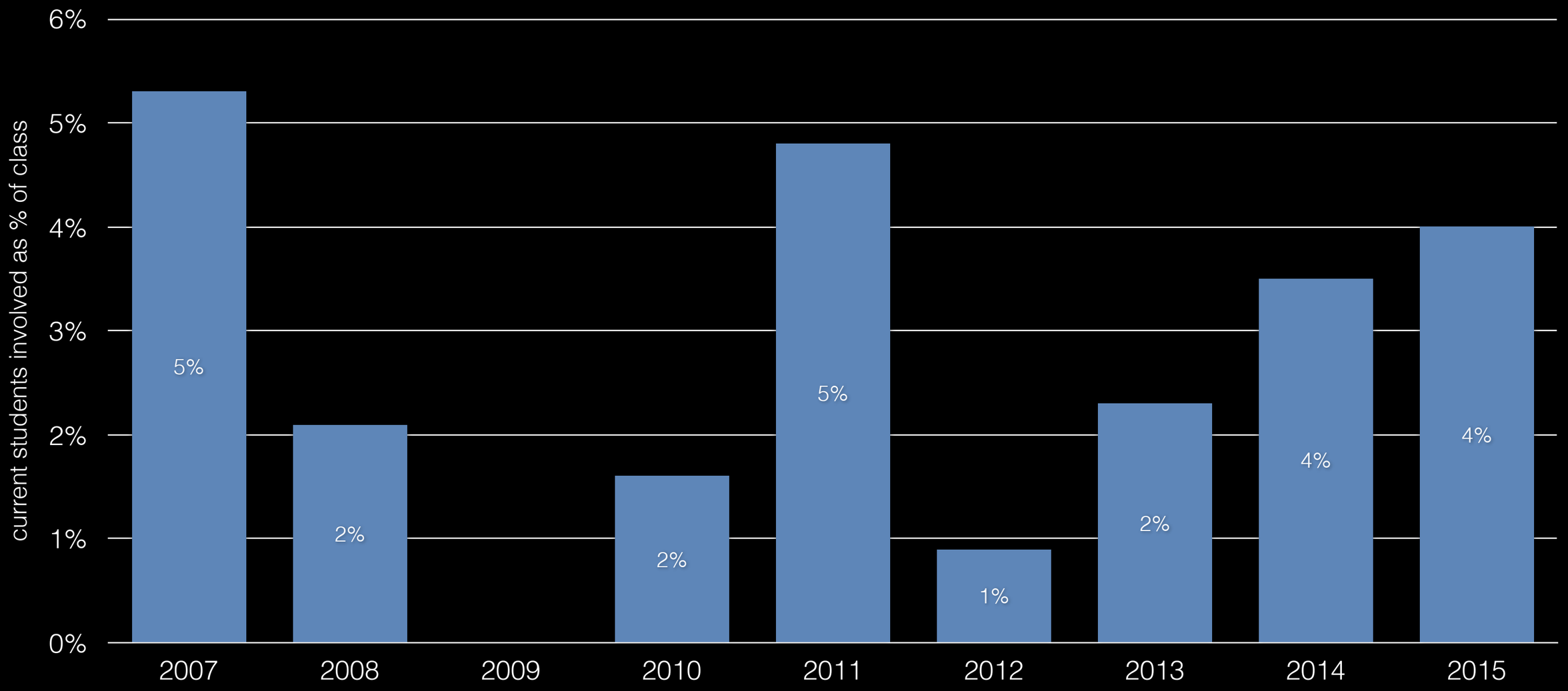
1 2 3 4 5

1	2	3	4	5
poor	fair	good	better	best

$$\text{scope} \times (\text{correctness} \times 3 + \text{design} \times 2 + \text{style} \times 1)$$

academic honesty


current students involved
past students involved
students involved
40
30
20
10
0
2007
2008
2009
2010
2011
2012
2013
2014
2015
15
3
7
4
8
4
29
2
9
4
16
2
29
1
32


6%
5%
4%
3%
2%
1%
0%
current students involved as % of class
5%
2%
2%
5%
1%
2%
4%
4%
2007
2008
2009
2010
2011
2012
2013
2014
2015

all current submissions

all past submissions

code repos

discussion forums

job sites

...

"Be reasonable."

"The essence of all work that you submit to this course must be your own."

"… when asking for help, you may show your code to others, but you may not view theirs ..."

regret clause

"If you commit some act that is not reasonable but bring it to the attention of the course's heads within 72 hours, the course may impose local sanctions that may include an unsatisfactory or failing grade for work submitted, but the course will not refer the matter for further disciplinary action except in cases of repeated acts."

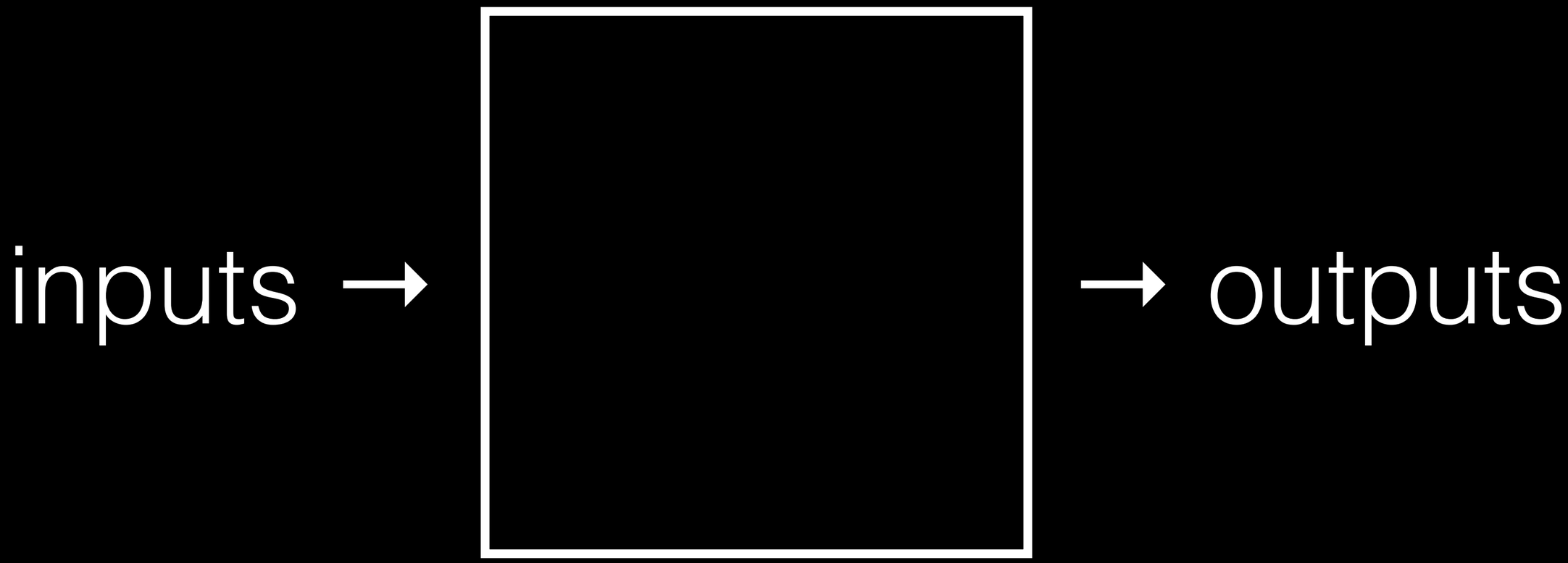
60 SECONDS OF PUPPIES

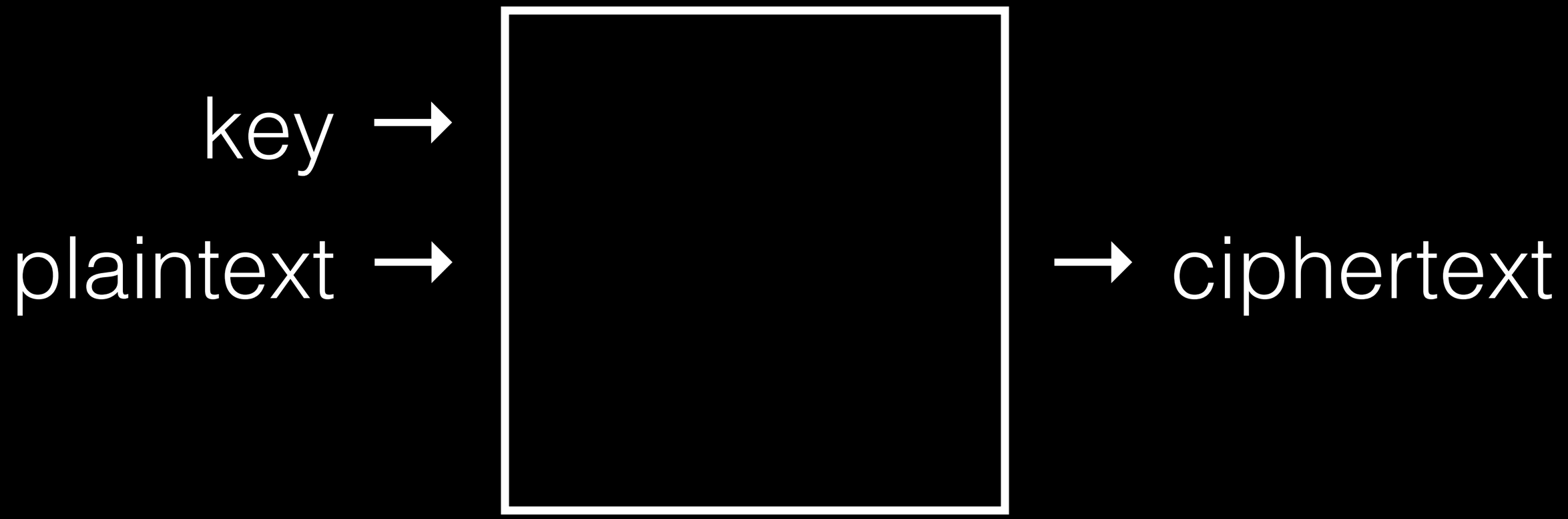
cryptography

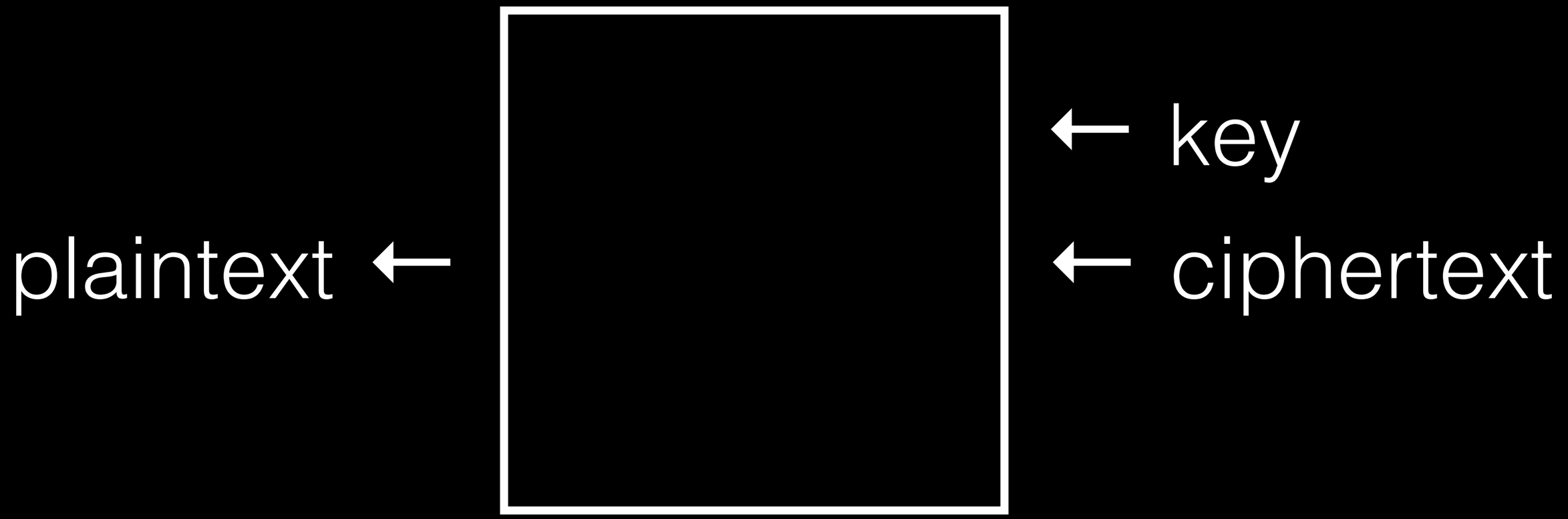
http://www.radioarchives.org/annie/

sloppress.com

secret-key cryptography


inputs
outputs

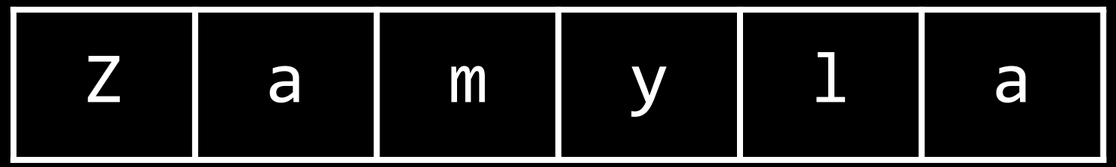

key
plaintext
ciphertext


plaintext
key
ciphertext

string

Z a m y l a

string



typecasting

ASCII

A	B	C	D	E	F	G	H	I	...
65	66	67	68	69	70	71	72	73	...

ASCII

A	B	C	D	E	F	G	H	I	...
65	66	67	68	69	70	71	72	73	...

a	b	c	d	e	f	g	h	i	...
97	98	99	100	101	102	103	104	105	...

libraries

```
stdio

cs50

string

ctype
```

header files

```
stdio.h

cs50.h

string.h

ctype.h
```

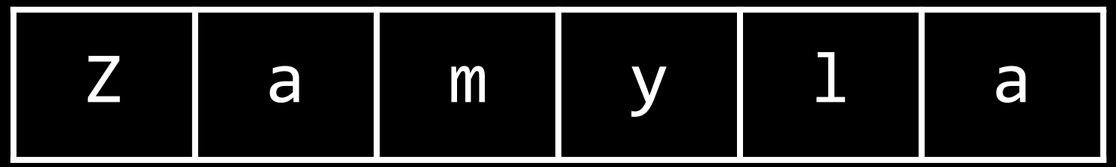
man

reference.cs50.net

string

Z a m y l a

string



string

Z	a	m	y	l	a		

string

Z	a	m	y	l	a	\0	

string

Z	a	m	y	l	a	\0	A
n	d	i	\0				

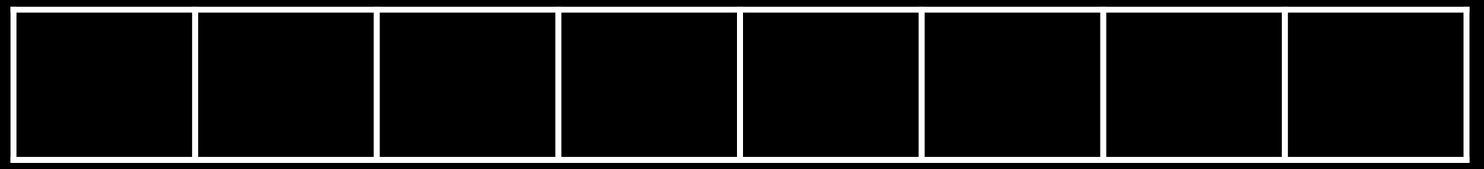
string

Z	a	m	y	l	a	\0	A
n	d	i	\0	M	a	r	i
a	\0						

command-line arguments

```
int main(void)
```

```
int main(int argc, string argv[])
```



or fher gb qevax lbhe Binygvar