

Week 2

last time

```
#include <stdio.h>

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

The screenshot shows the CS50 IDE interface. At the top, there's a browser-like header with a red, yellow, and green button, the title "CS50 IDE", and a URL field containing "http://cs50.io/". Below this is a menu bar with "CS50 IDE", "File", "Edit", "Find", "View", "Go", "Window", and "Support". To the right of the menu is a small profile picture of a person.

The main area features a dark-themed code editor. On the left, a sidebar shows a folder icon for "~/workspace" and a file icon for "hello.c". The code editor tab for "hello.c" is active, displaying the following C code:

```
1 #include <stdio.h>
2
3 int main(void)
4 {
5     printf("hello, world\n");
6 }
```

To the right of the code editor are two panels: "Outline" and "Debugger".

At the bottom of the interface is a terminal window titled "workspace/". It displays the command line path " ~/workspace/ \$" followed by a cursor icon.

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

...



1/3

this time

debugging

help50

eprintf

debug50

scope

correctness

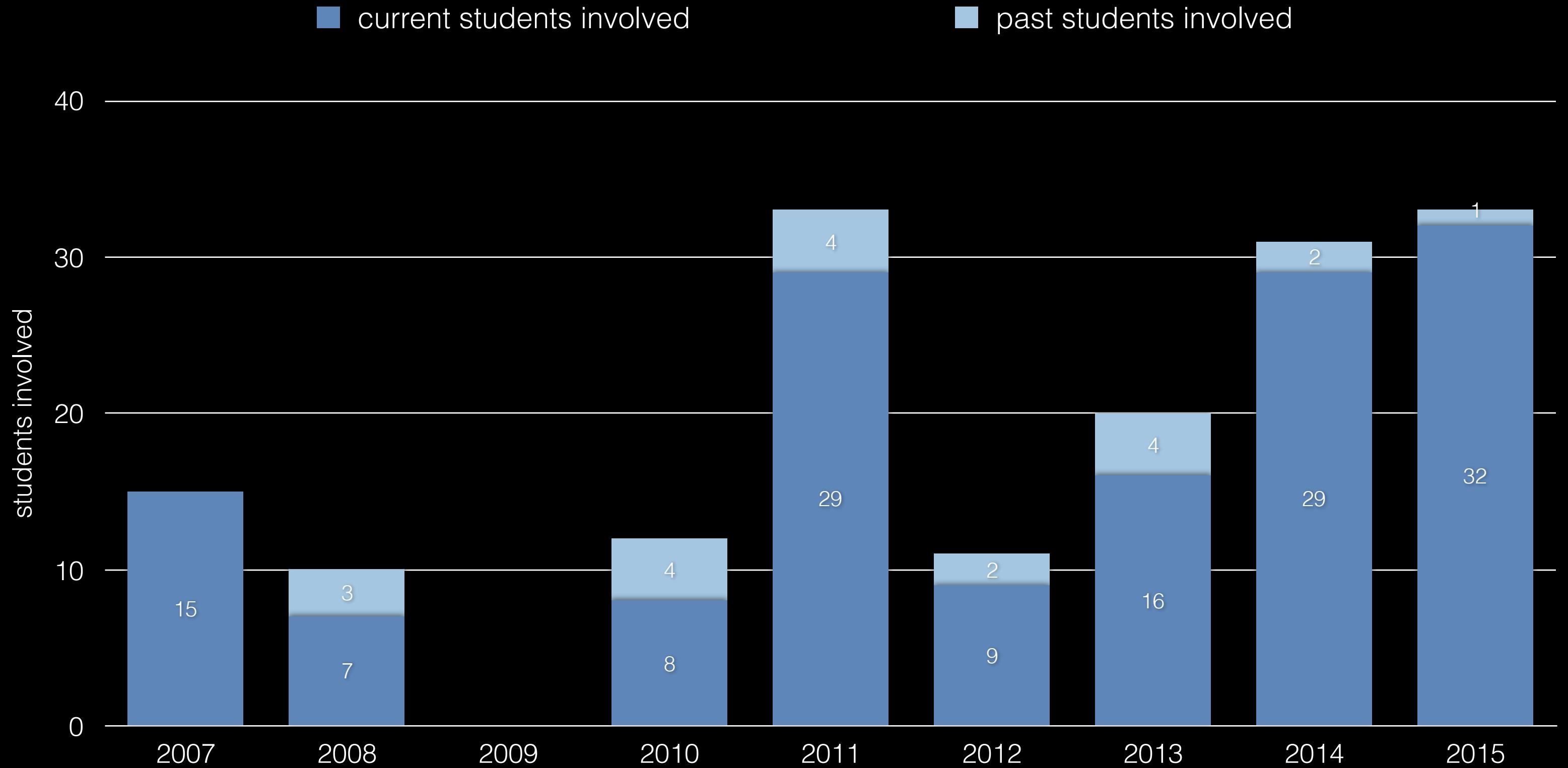
design

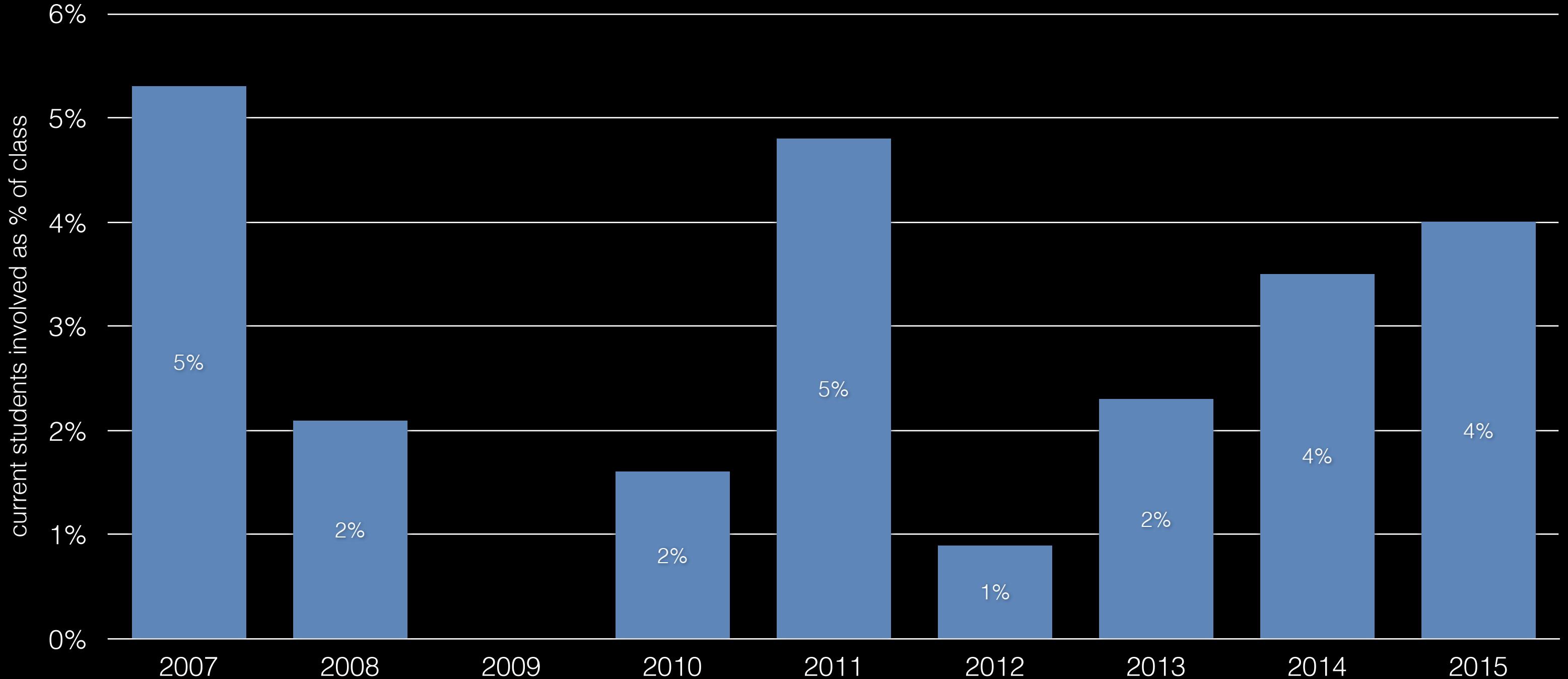
style

1 2 3 4 5
poor fair good better best

scope × (correctness × 3 + design × 2 + style × 1)

academic honesty





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







Why is 'OVALTINE'
so good?

It is a concentrated extraction of ripe barley malt, pure creamy cow's milk and specially prepared cocoa, together with natural phosphatides and vitamins.

It is further fortified with additional vitamins B and D.

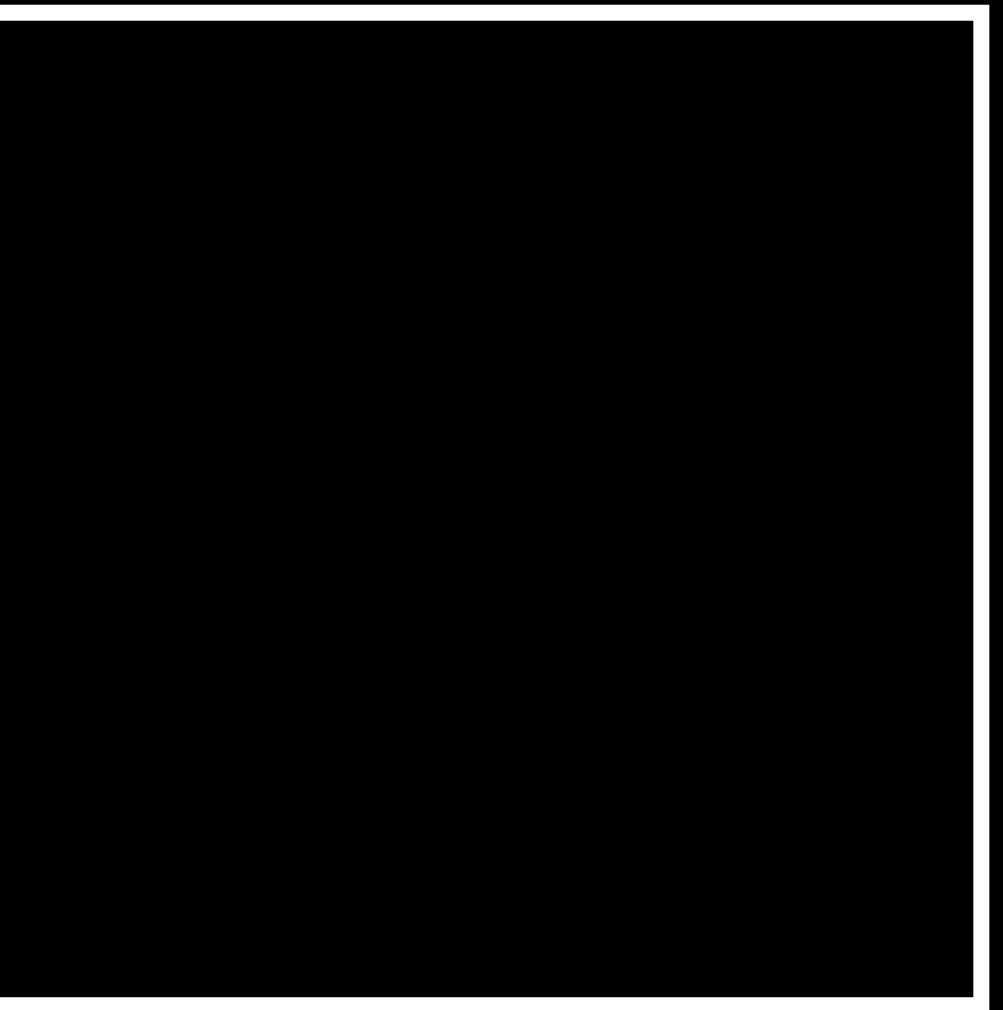
A detailed illustration of an Ovaltine can and a cup of Ovaltine. The can is labeled "OVALTINE" in large letters, with "A PERFECT FOOD BEVERAGE" and "NET WEIGHT 45 OZS." The cup is filled with a frothy beverage and sits on a saucer with a spoon.

OVALTINE

The Beverage for Family Fitness!

secret-key cryptography

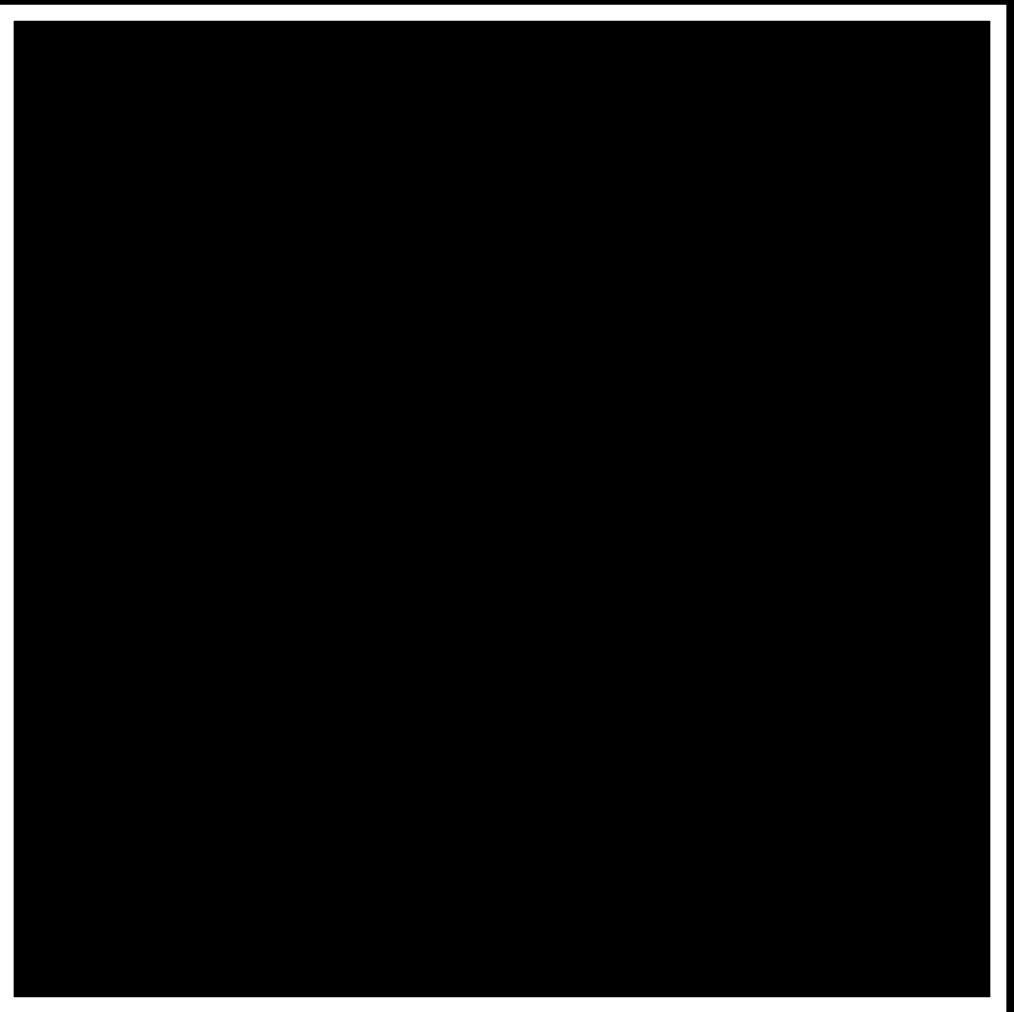
inputs →



→ outputs

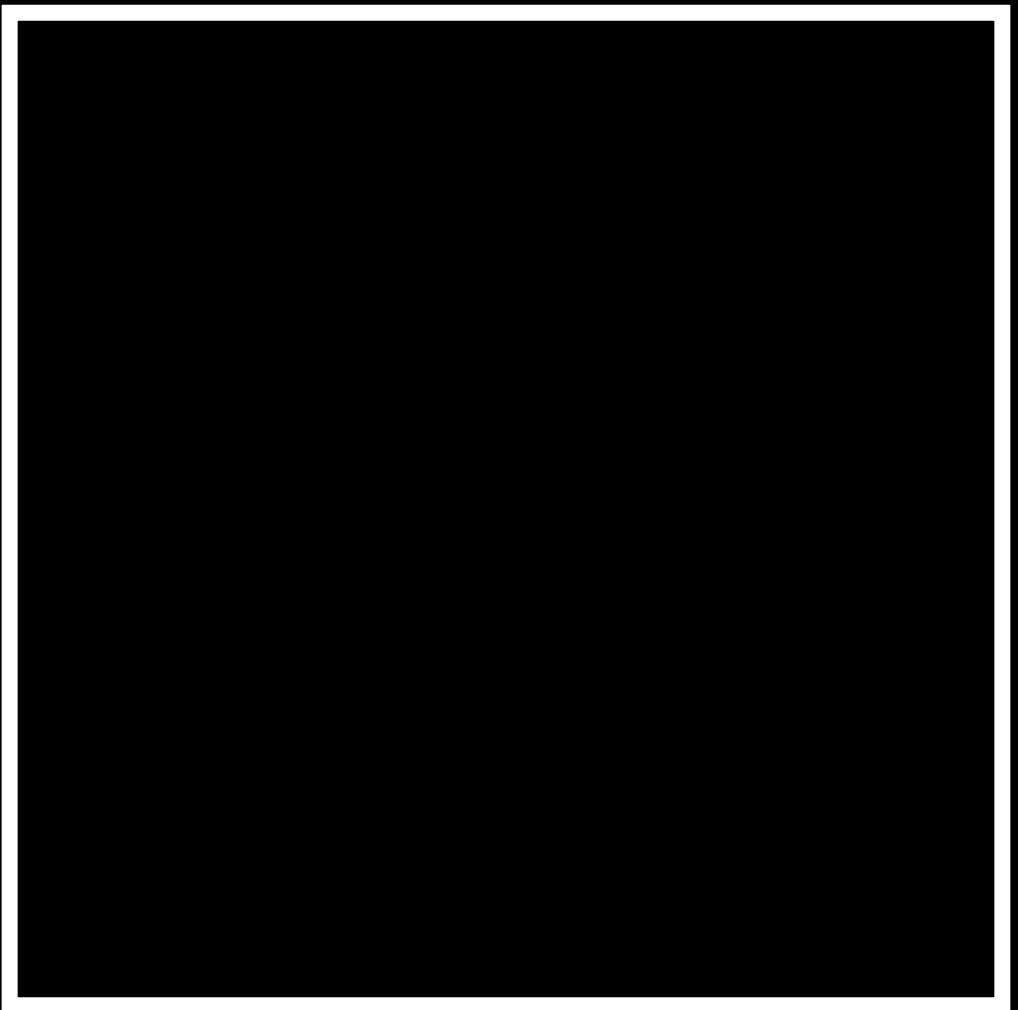
key →

plaintext →



→ ciphertext

plaintext ←



← key

← ciphertext

string

z a m y l a

string

z	a	m	y	l	a
---	---	---	---	---	---

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

z	a	m	y	l	a
---	---	---	---	---	---

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				

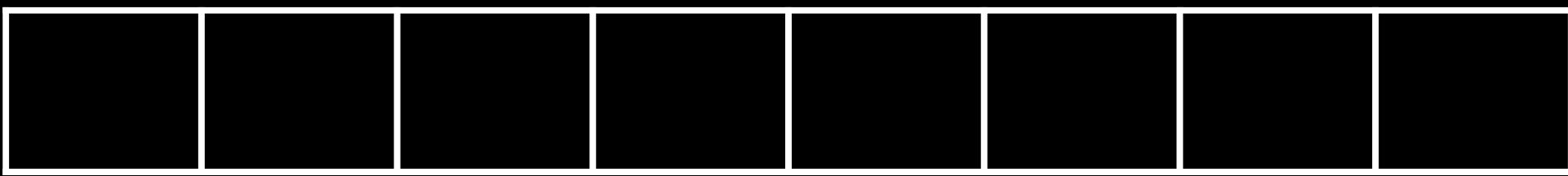
string

z	a	m	y	l	a	\theta	A
n	d	i	\theta	M	a	r	i
a	\theta						

command-line arguments

```
int main(void)
```

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



or fher gb qevax lbhe Binygvar