Week 2
last time
```c
#include <stdio.h>

int main(void)
{
    printf("hello, world\n");
}
```
```c
#include <stdio.h>

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

...
this time
debugging
help50
eprintf
scope
correctness
design
style
scope \times (\text{correctness} \times 3 + \text{design} \times 2 + \text{style} \times 1)
academic honesty
The bar graph illustrates the number of students involved from 2007 to 2015. The graph is divided into two categories: current students involved and past students involved.

- In 2007, 15 students were involved, with 7 current and 8 past students.
- In 2008, 3 students were involved, with 2 current and 1 past student.
- In 2009, 4 students were involved, with 4 current and 0 past students.
- In 2010, 8 students were involved, with 7 current and 1 past student.
- In 2011, 29 students were involved, with 28 current and 1 past student.
- In 2012, 2 students were involved, with 1 current and 1 past student.
- In 2013, 4 students were involved, with 3 current and 1 past student.
- In 2014, 29 students were involved, with 28 current and 1 past student.
- In 2015, 1 student was involved, with 1 current and 0 past students.

The graph shows a significant increase in the number of current students involved from 2007 to 2011, followed by a decrease in 2012 and a steady number thereafter.
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 ..."
"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 phosphates and vitamins.
It is further fortified with additional vitamins B and D.

OVALTINE
The Beverage for Family Fitness!
secret-key cryptography
inputs → outputs
plaintext ← ciphertext

← 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

cctype
header files

stdio.h

cs50.h

string.h

cctype.h
man
reference.cs50.net
string

Z a m y 1 a
string

Z a m y l a
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command-line arguments
int main(void)
int main(int argc, string argv[])
or fher gb qevax lbhe Binygvar