

Overview

check50 is a command-line program built into the CS50 IDE with which you can check the correctness of your programs.

Key Terms

- **check50**
- **command-line**

Usage

To run **check50**, open a terminal in the CS50 IDE and type **check50 <problem_slug>**.

To check Hello, for example, you may run **check50 cs50/2017/ap/hello**.

Output

When running **check50** on a program, a series of checks will be performed. Based on the correctness of your code, you will see differencing output in the terminal window.

Assuming your program is correct, you should then see output like the right where each green smiley means your program passed a check (i.e., test).

```
:) hello.c exists
:) hello.c compiles
:) prints "hello, world\n"
```

If you instead see yellow or red smileys, it means your code isn't correct! For instance, suppose you instead see the right.

Because **check50** doesn't think `hello.c` exists, as per the red smiley, odds are you uploaded the wrong file or misnamed your file. The other smileys, meanwhile, are yellow because those checks are dependent on `hello.c`

```
:( hello.c exists
  \ expected hello.c to exist
:| hello.c compiles
  \ can't check until a frown turns upside down
:| prints "hello, world\n"
  \ can't check until a frown turns upside down
```

Suppose instead you see the right.

Odds are, in this case, you printed something other than `hello, world\n` verbatim, per the spec's expectations. In particular, the right suggests you printed `hello, world`, without a trailing newline (`\n`).

```
:) hello.c exists
:) hello.c compiles
:( prints "hello, world\n"
  \ expected output, but not "hello, world"
```

Relationship to Grades

Know that **check50** won't actually record your scores in CS50.me. Rather, it lets you check your work's correctness before you submit your work. Once you actually submit your work using **submit50**, your work will be graded automatically using the same tests.