

Table of Contents

[tl;dr](#)

[Help](#)

[Reminders](#)

[Getting Started](#)

[What to Do](#)

[FAQs](#)

[Not a directory](#)

[How to Submit](#)

[Step 1 of 4](#)

[Step 2 of 4](#)

[Step 3 of 4](#)

[Step 4 of 4](#)

Problem Set 2: Crypto

tl;dr

0. Watch [Week 2's lecture \(https://video.cs50.net/2016/fall/lectures/2\)](https://video.cs50.net/2016/fall/lectures/2).
1. Infer a user's initials from their name with `initials.c`.
2. Choose two adventures:
 - Implement Caesar's cipher.
 - Implement Vigenère's cipher.
 - Crack passwords.
3. Submit your code.
4. Submit a form.

Help

For help with Week 2 and Problem Set 2:

- Watch Zamyla's walkthroughs herein.
 - Start a [discussion \(https://courses.edx.org/courses/course-v1:HarvardX+CS50+X/a7ec0c0a7b6e460f877da0734811c4cd/\)](https://courses.edx.org/courses/course-v1:HarvardX+CS50+X/a7ec0c0a7b6e460f877da0734811c4cd/) with classmates.
-

Reminders

Per [Week 2's lecture \(https://video.cs50.net/2016/fall/lectures/2/\)](https://video.cs50.net/2016/fall/lectures/2/):

- Use `help50` as needed.
 - Use `eprintf` as needed.
 - Use `debug50` as needed.
-

Getting Started

Alright, here we go again!

Log into [cs50.io \(https://cs50.io/\)](https://cs50.io) and execute

```
.....  
update50
```

within a terminal window to make sure your workspace is up-to-date. If you somehow closed your terminal window (and can't find it!), make sure that **Console** is checked under the **View** menu, then click the green, circled plus (+) in CS50 IDE's bottom half, then select **New Terminal**.

Next, execute

```
.....  
mkdir ~/workspace/pset2/  
.....
```

at your prompt in order to make a directory called `pset2` in your `workspace` directory.

Now execute

```
.....  
cd ~/workspace/pset2/
```

to move yourself into (i.e., open) that directory. Your prompt should now resemble the below.

```
~/workspace/pset2/ $
```

If not, retrace your steps and see if you can determine where you went wrong. You can actually execute

```
history
```

at the prompt to see your last several commands in chronological order if you'd like to do some sleuthing. You can also scroll through the same one line at a time by hitting your keyboard's up and down arrows; hit Enter to re-execute any command that you'd like.

What to Do

1. Implement either of:

- [Initials \(../../problems/initials/less/initials.html\)](#), less comfortable
- [Initials \(../../problems/initials/more/initials.html\)](#), more comfortable

2. Implement any two (2) of:

- [Caesar \(../../problems/caesar/caesar.html\)](#), less comfortable
 - [Vigenere \(../../problems/vigenere/vigenere.html\)](#), less comfortable
 - [Crack \(../../problems/crack/crack.html\)](#), more comfortable
-

FAQs

Not a directory

If you execute, e.g.,

```
cd ~/workspace/pset2/initials/
```

and see

```
bash: cd: /home/ubuntu/workspace/pset2/initials/: Not a directory
```

odds are you don't have a `pset2/` directory inside of `~/workspace/` and/or you don't have an `initials/` directory inside of `~/workspace/pset2/`. Check as much using `ls` (remember how?) or poke around your IDE's file browser at left. Make sure that:

- you have a `pset2/` directory inside of `~/workspace/`,
 - you have an `initials/` directory inside of `~/workspace/pset2/`, inside of which is `initials.c`,
 - you have an `caesar/` directory inside of `~/workspace/pset2/`, inside of which is `caesar.c`,
 - you have an `vigenere/` directory inside of `~/workspace/pset2/`, inside of which is `vigenere.c`, and/or
 - you have an `crack/` directory inside of `~/workspace/pset2/`, inside of which is `crack.c`.
-

How to Submit

Be sure you've signed up for a [GitHub account \(https://github.com/join\)](https://github.com/join), per Problem Set 0, and that you've logged into and authorized [CS50.me \(https://cs50.me/\)](https://cs50.me/) at least once, per Problem Set 1!

Step 1 of 4

Execute `update50` again to ensure that your IDE is up-to-date.

Step 2 of 4

- Recall that you were asked to implement the less-comfortable or more-comfortable version of `initials`.
 - Be sure that `initials.c` is in `~/workspace/pset2/initials/`, as with:

```
cd ~/workspace/pset2/initials/
ls
```
- Recall that you were asked to implement any two (2) of `caesar`, `vigenere`, and `crack`.
 - If you implemented `caesar`, be sure that `caesar.c` is in `~/workspace/pset2/caesar/`.
 - If you implemented `vigenere`, be sure that `vigenere.c` is in `~/workspace/pset2/vigenere/`.
 - If you implemented `crack`, be sure that `crack.c` is in `~/workspace/pset2/crack/`.

Step 3 of 4

- To submit the less-comfortable version of `initials` (if you implemented it), execute

```
cd ~/workspace/pset2/initials/  
submit50 2017/x/initials/less
```

inputting your GitHub username and GitHub password as prompted.

- To submit the more-comfortable version of `initials` (if you implemented it), execute

```
cd ~/workspace/pset2/initials/  
submit50 2017/x/initials/more
```

inputting your GitHub username and GitHub password as prompted.

- To submit `caesar` (if you implemented it), execute:

```
cd ~/workspace/pset2/caesar/  
submit50 2017/x/caesar
```

- To submit `vigenere` (if you implemented it), execute:

```
cd ~/workspace/pset2/vigenere/  
submit50 2017/x/vigenere
```

- To submit `crack` (if you implemented it), execute:

```
cd ~/workspace/pset2/crack/  
submit50 2017/x/crack
```

If you run into any trouble, email sysadmins@cs50.harvard.edu (<mailto:sysadmins@cs50.harvard.edu>)!

You may resubmit any problem as many times as you'd like.

Step 4 of 4

Submit [this form \(https://forms.cs50.net/2017/x/psets/2\)](https://forms.cs50.net/2017/x/psets/2)!

Your submission should be graded within 2 weeks, at which point your score will appear at cs50.me (<https://cs50.me/>)!

This was Problem Set 2.

