

Askin' Questions

Software Design for Data Science

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Asking questions



Not asking questions:



When to ask questions

- Trick question! Always ask questions.
- Especially for projects
- However, for questions related to homeworks:
 - Class discussion forum only (don't make a post on Stack Overflow)
 - Don't provide direct code from your homework in your questions
 - Don't provide direct code from your homework in your answers

Who to ask questions

In order of preference:



1. Your teammates



3. Office hours



2. The class discussion board

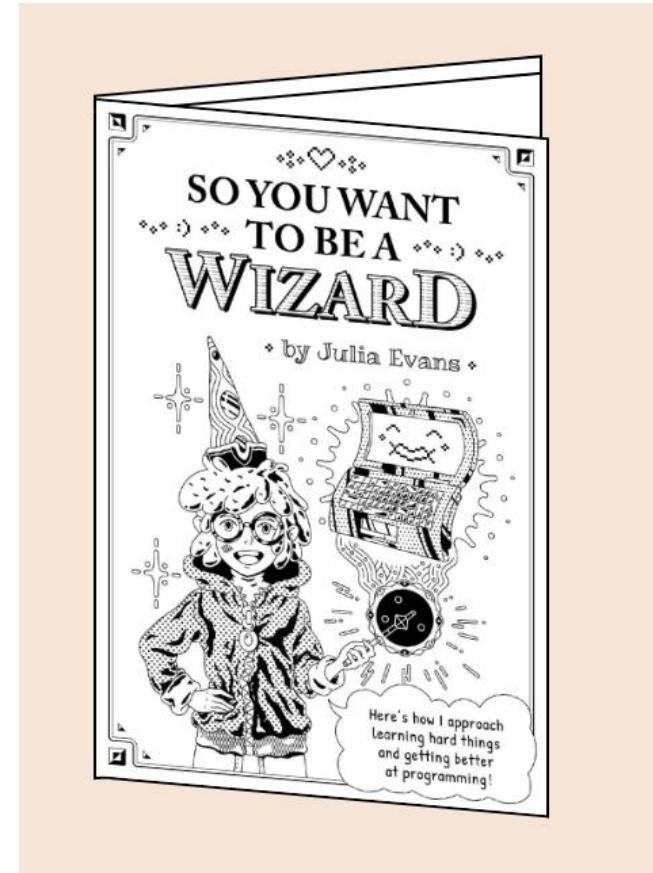


4. The internet

Take advice from your wizards

Tech learner and teacher Julia Evans published a ~~100~~ tip-top ~~100~~ free zine about asking questions (among other difficult engineering basics):

<https://wizardzines.com/zines/wizard/>



Asking a good question

1. Research
2. Give context
3. Be specific
4. Be clear
5. Be concise
6. Proofread
7. Follow up with answers

1. Research

Put in a good faith effort



Search engine (Google, etc)



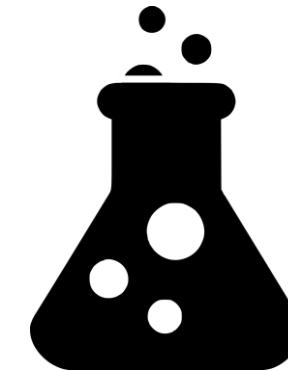
README or FAQ



Manual/documentation

```
504     if not hasattr(self, '_headers_buffer'):
505         self._headers_buffer = []
506     self._headers_buffer.append("%s %d %s\r\n" %
507         (self.protocol_version, code, message)).encode(
508             'latin-1', 'strict')
509
510     def send_header(self, keyword, value):
511         """Send a HTTP header to the headers buffer."""
512         if self.request_version != 'HTTP/1.1':
513             self._headers_buffer.append("\r\n");
514         self._headers_buffer.append(keyword)
515         self._headers_buffer.append(": ")
516         self._headers_buffer.append("%s\r\n" % (keyword, value)).encode('latin-1', 'strict')
517
518     if keyword.lower() == 'connection':
519         if value.lower() == 'close':
520             self.close_connection = True
521         elif value.lower() == 'keep-alive':
522             self.close_connection = False
523
524
```

Source code



“Timeboxing”: set a short deadline to try on your own (like half an hour). If stuck longer than that, ask a question

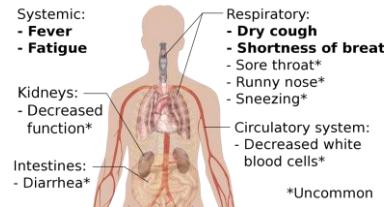
Experiment with solutions

2. Give context



3. Be specific

Symptoms of COVID-19 (coronavirus disease 2019)



The symptoms - what do you expect, what is happening



Tools/environment you're using
(including version numbers)



What you've already searched for or tried
(and what happened)

```

584     if not bheaders(self, "headers_buffer"):
585         self._headers_buffer = []
586     self._headers_buffer.append("\r\n".join([
587         (self.protocol_version, code, message).encode(
588             "latin-1", "strict")
589     ) + "\r\n")
590
591     def send_headers(self, keyword, value):
592         """Send a HTTP header to the headers buffer."""
593         if keyword == "Content-Type":
594             self._headers_buffer[0] += "\r\n"
595         if not bheaders(self, "headers_buffer"):
596             self._headers_buffer = []
597         self._headers_buffer.append(
598             ("{}: {}".format(keyword, value)).encode("latin-1", "strict"))
599
600     if keyword.lower() == "connection":
601         if value.lower() == "keep-alive":
602             self.close_connection = True
603         elif value.lower() == "keep-alive":
604             self.close_connection = False
605

```

Relevant code*



Any error messages*

* see Step 5: be concise

4. Be clear

Title

Summary of the problem or **object deviation**

The thing having
the problem

Difference between
expectation and reality

Context context context context context context context
context context context context context context context
context context context context context context context.
**Clear question in
question words with a question mark at the end?** Other stuff
including code samples or things you've tried

**Bold question
(NOT open-ended)**

Bad title: Why doesn't this work? Please help!

Good title: Jupyter notebook crashes on startup

5. Be concise

- Text not images - no screenshots!
 - Unless you're asking about interface or graphical/chart-related issues
 - Format code if possible - use "code" under Format in Canvas or ``` in Markdown
- Don't just copy in your entire program/data/error message! Sample, simplify

BAD: Here's all my data:

431,10/13/2014 10:31:00 AM,10/13/2014 10:48:00 AM,SEA00298,985.935,2nd Ave & Spring St,Occidental Park / Occidental Ave S & S Washington St,CBD-06,PS-04,Member,Male,1960
432,10/13/2014 10:32:00 AM,10/13/2014 10:48:00 AM,SEA00195,926.375,2nd Ave & Spring St,Occidental Park / Occidental Ave S & S Washington St,CBD-06,PS-04,Member,Male,1970
433,10/13/2014 10:33:00 AM,10/13/2014 10:48:00 AM,SEA00486,883.831,2nd Ave & Spring St,Occidental Park / Occidental Ave S & S Washington St,CBD-06,PS-04,Member,Female,1988
434,10/13/2014 10:34:00 AM,10/13/2014 10:48:00 AM,SEA00333,865.937,2nd Ave & Spring St,Occidental Park / Occidental Ave S & S Washington St,CBD-06,PS-04,Member,Female,1977
435,10/13/2014 10:34:00 AM,10/13/2014 10:49:00 AM,SEA00202,923.923,2nd Ave & Spring St,Occidental Park / Occidental Ave S & S Washington St,CBD-06,PS-04,Member,Male,1971
436,10/13/2014 10:34:00 AM,10/13/2014 10:47:00 AM,SEA00337,808.805,2nd Ave & Spring St,Occidental Park / Occidental Ave S & S Washington St,CBD-06,PS-04,Member,Male,1974
...1000 more lines

BETTER: A sample row in my data looks like:

431,10/13/2014 10:31:00 AM,10/13/2014 10:48:00 AM,SEA00298,985.935,2nd Ave & Spring St,Occidental Park / Occidental Ave S & S Washington St,CBD-06,PS-04,Member,Male,1960

6. Proofread



Clear?

Concise?

Specific?

Enough context?



“Rubber ducking”

7. Follow up with answers

If an answer given doesn't work, post a comment:

- What your updated code looks like
- The new error message
- Anything else you were inspired to try since you posted your question

If a proposed solution does work:

- Respond so others with the same problem will know that the solution worked
- Thank the person for helping you!

Also helpful - ask how the person figured it out, or how you could figure it out on your own next time

Whoops! I asked a bad question

- It's ok! We all do it
- But you'll get far better answers with good questions
- Keep practicing!

Example 1

Foo Bar library help

Where can I find out stuff about the Foo Bar library?

BETTER: How to find Foo Bar library information?

I used Google to try to find the “Foo Bar” library, but I got no useful hits. Can I get a pointer to programming information on this library?

Example 2

Homework 2 debugging

Can anyone help me figure out why my Python code for Homework 2 doesn't work? Here's my code:

```
504         if not hasattr(self, '_headers_buffer'):
505             self._headers_buffer = []
506             self._headers_buffer.append((b"\r\n\r\n" + 
507                 (self.protocol_version, code, message)).encode(
508                     'latin-1', 'strict'))
509
510     def send_header(self, keyword, value):
511         """Send a HTTP header to the headers buffer."""
512         if self.request_version == "HTTP/0.9":
513             if not hasattr(self, '_headers_buffer'):
514                 self._headers_buffer = []
515             self._headers_buffer.append(
516                 (b": " + keyword + "\r\n" + value)).encode('latin-1', 'strict')
517
518         if keyword.lower() == "connection":
519             if value.lower() == "close":
520                 self.close_connection = True
521             elif value.lower() == "keep-alive":
522                 self.close_connection = False
523
524
```

BETTER: Allowing emails containing a single quote

When processing emails, I'm having trouble allowing the single quote character (') because that's the character that I use to start a string - I can't enclose a single quote in a string like ``''. Google doesn't help because it doesn't search for quotes themselves. **How do I express a single quote in Python?**

Example 3

Can't install Jupyter notebooks

How do I install Jupyter notebooks?

BETTER: **Conda command not found when installing Jupyter notebooks**

I'm following the instructions on [the course website](#) to install Jupyter notebooks on my Windows 11 computer. I successfully installed miniconda, but when I tried to run
`conda install jupyter notebook` I got this error message:

```
bash: conda: command not found
```

Why can't bash find conda? I already tried reinstalling miniconda.

Challenge!

Take a look at trending open source projects on GitHub:

<https://github.com/trending>

Go to the issues tab at the top of the project page:



Find the **best question** and the **worst question** that you can. Post them in EdStem chat.

More guidance on asking questions

[How to ask programming questions \(ProPublica\)](#)

[How do I ask a good question? \(Stack Overflow\)](#)

[How to ask good questions \(Julia Evans\)](#)

[Rubber duck debugging \(Wikipedia\)](#)