UNIVERSITY of WASHINGTON

Software Design for Data Science

Asking Questions

Melissa Winstanley
University of Washington
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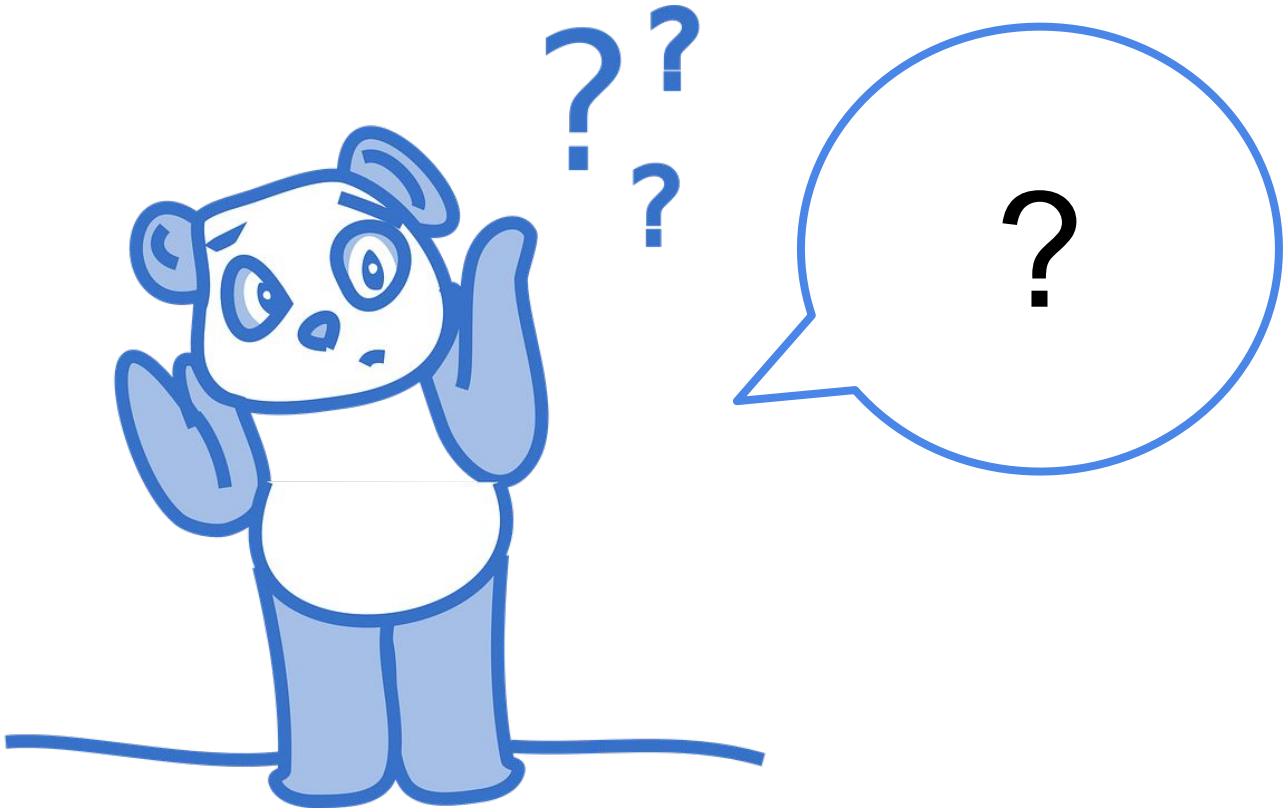
Asking questions



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

2. The class Canvas discussion board

3. Office hours

4. The internet

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

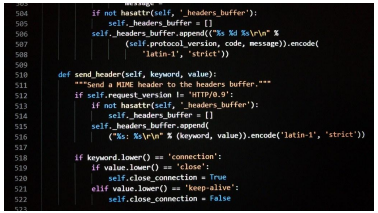
Put in a good faith effort

README or FAQ

Manual/documentation

Google

Search engine (Google, etc)



```
            if not hasattr(self, '_headers_buffer'):
                self._headers_buffer = []
            self._headers_buffer.append(("%s %d %s\r\n" %
                    (self.protocol_version, code, message)).encode(
                        'latin-1', 'strict'))

    def send_header(self, keyword, value):
        """Send a MIME header to the headers buffer."""
        if self.request_version != 'HTTP/0.9':
            if not hasattr(self, '_headers_buffer'):
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        if keyword.lower() == 'connection':
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```
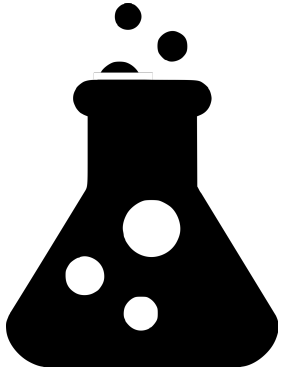

Source code

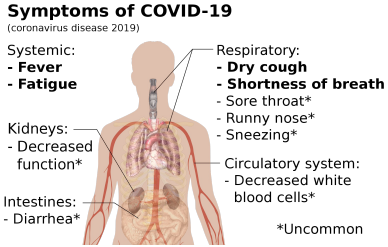


Experiment with solutions

Rule of thumb: if stuck for 1 hour, ask a question

2. Give context

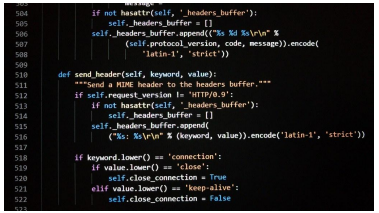
3. Be specific



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)



Relevant code*

Any error messages*

** see Step 5: be concise*

4. Be clear

Title

The thing having the problem

Difference between expectation and reality

Summary of the problem or object deviation

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?

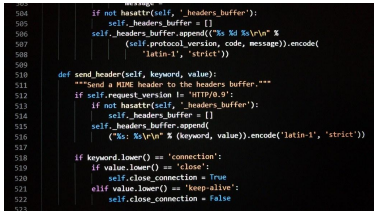
BETTER: **How to find Foo Bar library information?**

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:



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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.

More guidance on asking questions

How to ask programming questions (ProPublica)

How do I ask a good question? (Stack Overflow)

How To Ask Questions The Smart Way (Eric Raymond)*

How to ask good questions (Julia Evans)

Rubber duck debugging (Wikipedia)

** a bit heavy-handed but very comprehensive*