

Variable Naming Guide

(a python-10 cohort guide)

Choosing Specific Words

Bad Example:

```
def get_page(url):  
    ...
```

Good Example:

```
def fetch_page(url):  
    ...
```

Explanation:

- Since this function is retrieving from a URL, examples of more specific names are:
 - `fetch_page()`
 - `download_page()`
- 'Get' is very generic and doesn't describe the purpose of the function well, since the method can be to retrieve from a local cache, a database or any where from the internet

Avoid Generic Names (Usually)

Bad Example:

```
def euclidian_norm(v):  
    retval = 0.0;  
    for i in v:  
        retval += i * i  
    return retval**(0.5)
```

Good Example:

```
def euclidian_norm(v):  
    sum_squares = 0.0;  
    for i in v:  
        sum_squares += i * i  
    return sum_squares**(0.5)
```

Explanation:

- tmp, retval, and foo are used when you can't think of a proper name
- Instead of using an empty names like tmp, retval, and foo, use a variable name that describes the variable's value or purpose

Use Concrete Names (not abstract ones)

Bad Example:

```
def server_can_start():  
    ...
```

- tests whether server can listen on given TCP/IP port
- name is somewhat abstract

Good Example:

```
def can_listen_on_port():  
    ...
```

- function name directly describes what it does

Explanation:

- describe function name, variable name or any other element concretely
 - rather than abstractly

Use Suffix/Prefix To Attach Extra Info

Bad Example:

```
def euclidian_norm(v):  
    retval = 0.0;  
    for i in v:  
        retval += i * i  
    return retval**(0.5)
```

Good Example:

```
def euclidian_norm(v):  
    sum_squares = 0.0;  
    for i in v:  
        sum_squares += i * i  
    return sum_squares**(0.5)
```

Explanation:

- tmp, retval, and foo are used when you can't think of a proper name
- Instead of using an empty names like tmp, retval, and foo, use a variable name that describes the variable's value or purpose

Deciding Length Of A Variable Name

Bad Example:

`be_manager()`

instead of

`backend_manager()`

Good Example:

`str`

instead of

`string`

Explanation:

- a variable/function name is a tiny comment by itself
- Even though there isn't much room,
 - any extra info squeezed into name will be absorbed every time it will be seen

Use Name Formatting to Pack Extra Info

Bad Example:

`k_constant_name`

Good Example:

`CONSTANT_NAME`

Explanation:

- the way underscores, hyphens and capitalizations are used
 - can also pack more info in a variable/function name