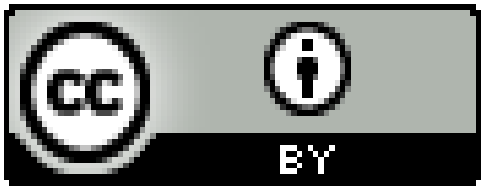
Python

Browsing Directories



We can use Python to

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- Save data to files

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- Save data to files
- Read data from files

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But we might also want to

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- Save data to files
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But we might also want to

- See what files we have

We can use Python to

- Save data to files
- Read data from files

But we might also want to

- See what files we have
- Delete files

We can use Python to

- Save data to files
- Read data from files

But we might also want to

- See what files we have
- Delete files
- Group these into directories

We can use Python to

- Save data to files
- Read data from files

But we might also want to

- See what files we have
- Delete files
- Group these into directories
- Structure these directories into a tree

We could use the shell

We could use the shell

Our program will be a mixture of

- Python

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- Shell commands

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This is not portable

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This is not portable

Do it all in Python

```
>>> from os import getcwd
```

Import getcwd
from the os module

```
>>> from os import getcwd

>>> getcwd()
```

```
>>> from os import getcwd

>>> getcwd()
'/users/vlad'
```


Current working directory

```
>>> from os import getcwd

>>> getcwd()
'/users/vlad'

>>> originaldir = getcwd()
```

Save the current working directory in a variable

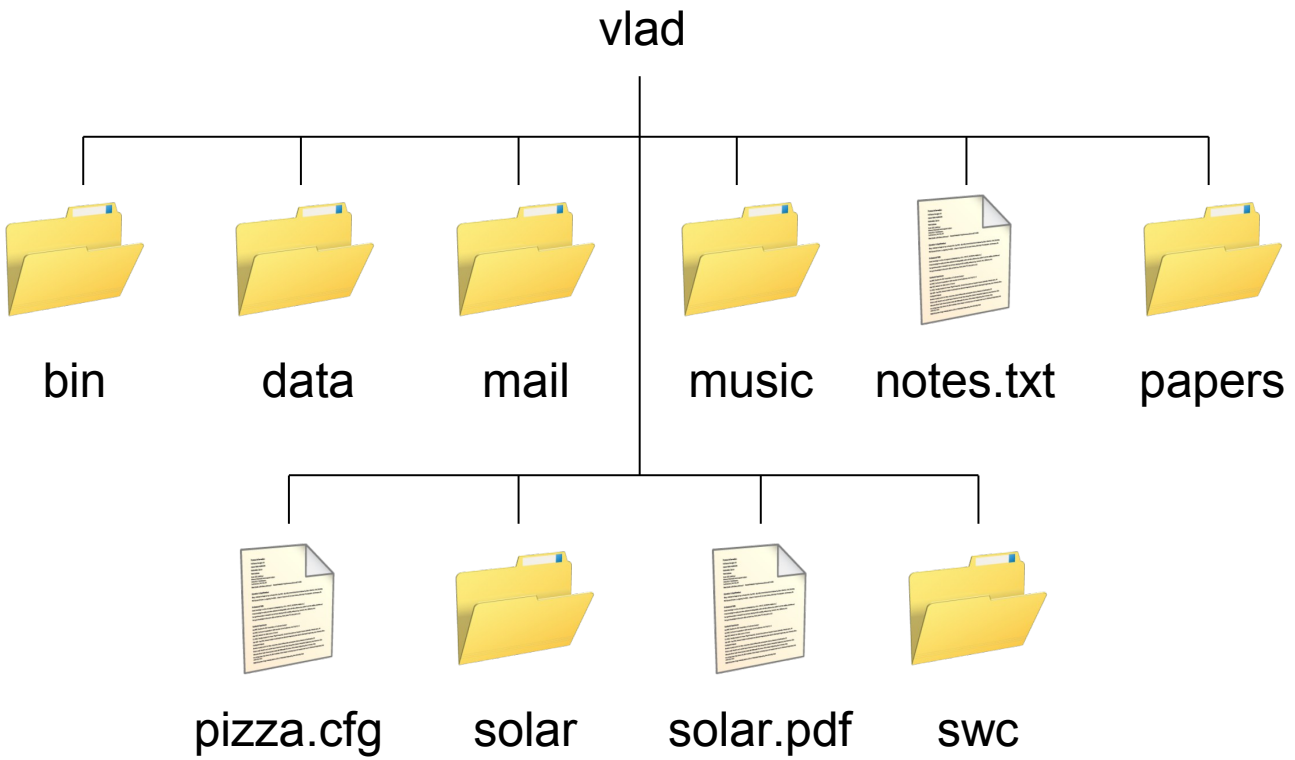
```
>>> from os import getcwd

>>> getcwd()
'/users/vlad'

>>> originaldir = getcwd()

>>> print originaldir
```


Use the variable

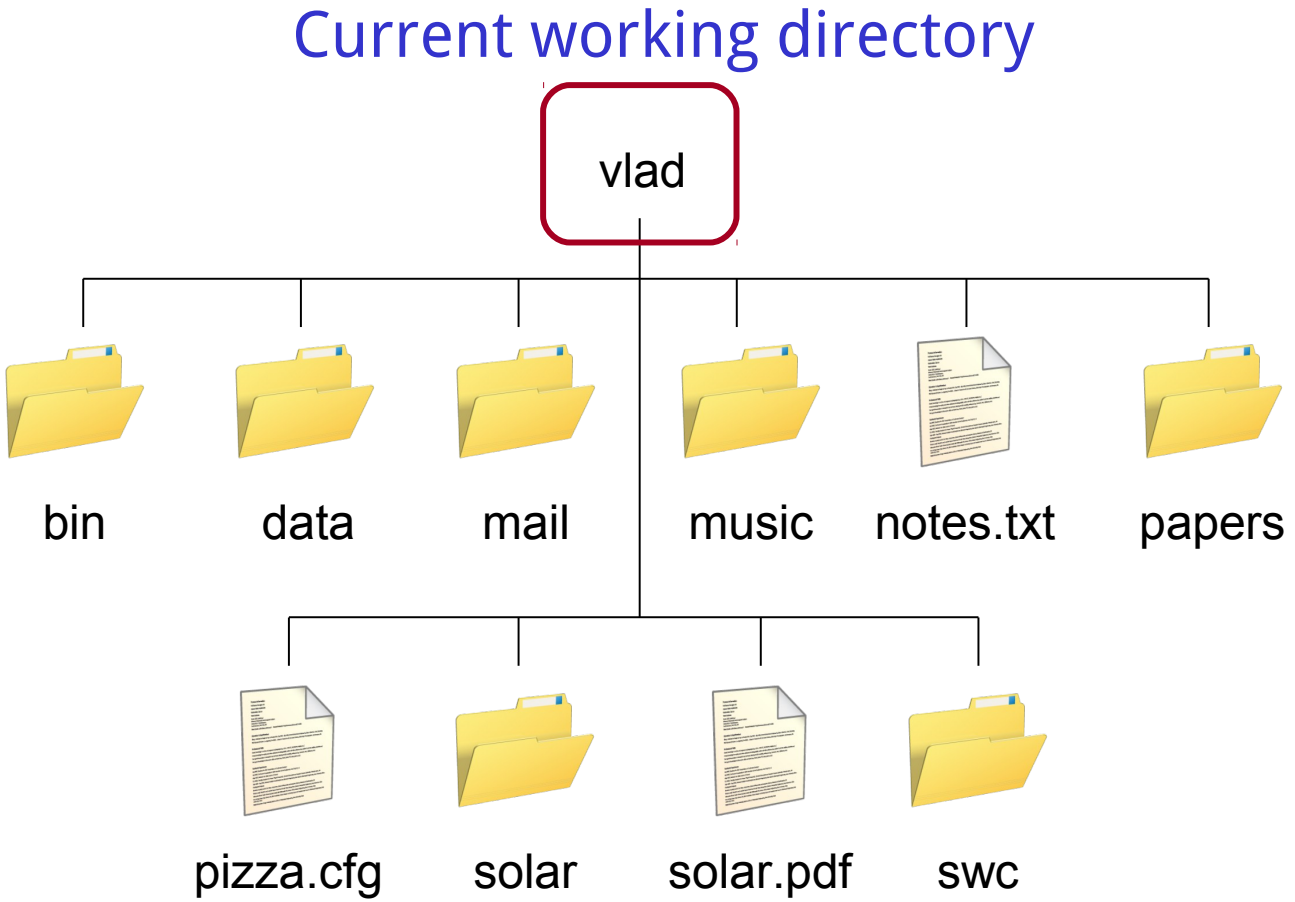
```
>>> from os import getcwd

>>> getcwd()
'/users/vlad'

>>> originaldir = getcwd()

>>> print originaldir
/users/vlad
```

```
>>> from os import listdir
```

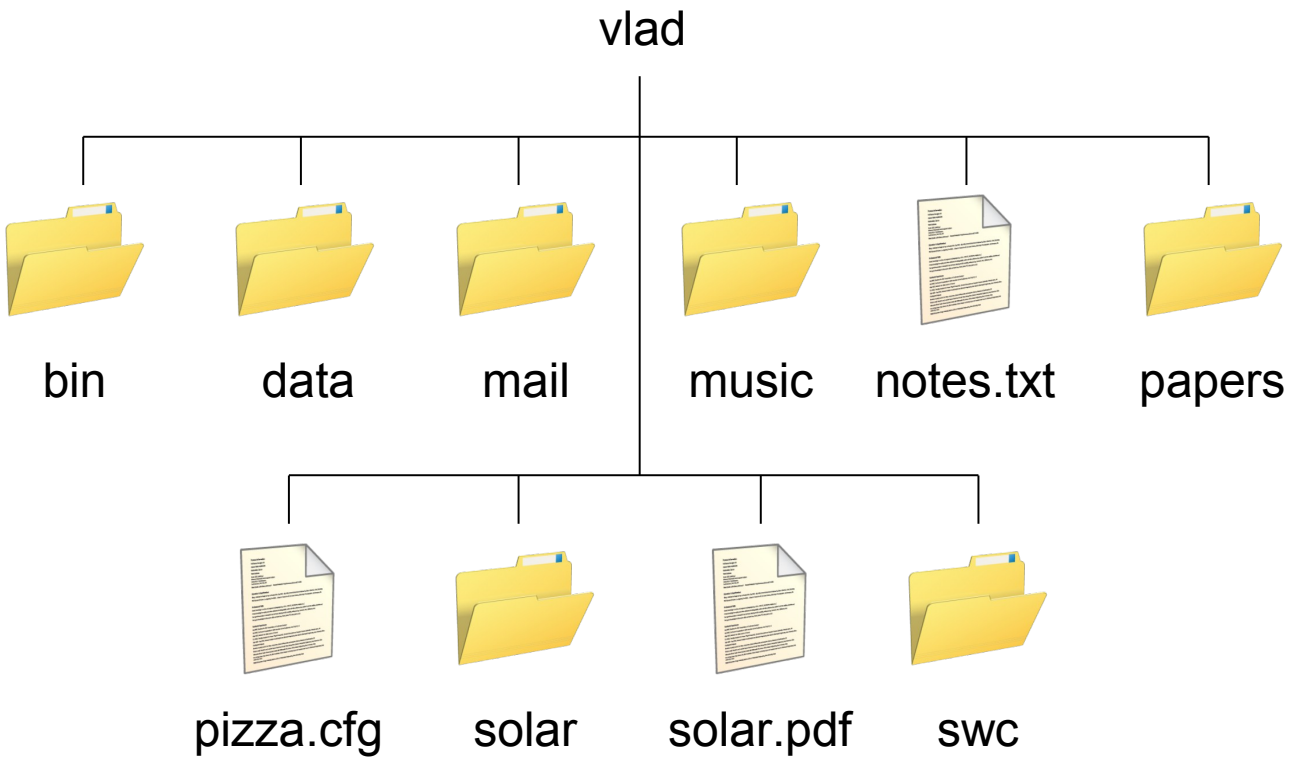
```
>>> from os import listdir
>>> listdir('.')
```



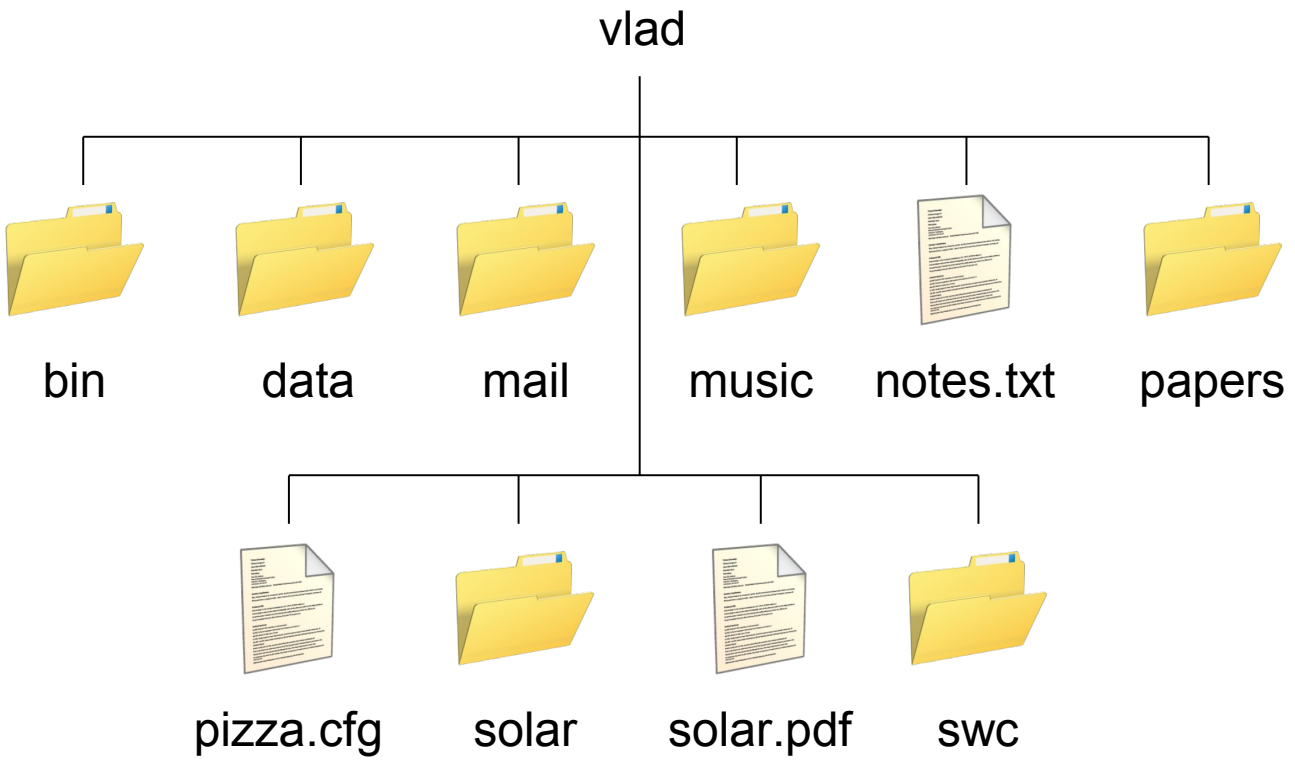
```
>>> from os import listdir
>>> listdir('.')
```



```
>>> from os import listdir
>>> listdir('.')
['solar', 'mail', 'pizza.cfg', 'notes.txt',
 'swc', 'data', 'papers', 'solar.pdf',
 'bin', 'music']
```



```
>>> from os import listdir
>>> listdir('.')
['solar', 'mail', 'pizza.cfg', 'notes.txt',
 'swc', 'data', 'papers', 'solar.pdf',
 'bin', 'music']
```



```
>>> listdir('.')
```

```
>>> listdir(getcwd())
```

Use the result of getcwd as the input directory to listdir

```
>>> listdir(getcwd())
['solar', 'mail', 'pizza.cfg', 'notes.txt',
 'swc', 'data', 'papers', 'solar.pdf',
 'bin', 'music']
```

```
>>> listdir(originaldir)
```

Use a variable as the input directory to listdir

```
>>> listdir(originaldir)
['solar', 'mail', 'pizza.cfg', 'notes.txt',
 'swc', 'data', 'papers', 'solar.pdf',
 'bin', 'music']
```

Use a variable as the input directory to listdir

```
>>> listdir(originaldir)
['solar', 'mail', 'pizza.cfg', 'notes.txt',
 'swc', 'data', 'papers', 'solar.pdf',
 'bin', 'music']

>>> files = listdir(originaldir)
```

```
>>> listdir(originaldir)
['solar', 'mail', 'pizza.cfg', 'notes.txt',
 'swc', 'data', 'papers', 'solar.pdf',
 'bin', 'music']

>>> files = listdir(originaldir)
>>> print files
```

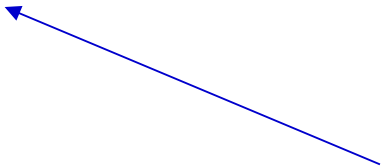
```
>>> listdir(originaldir)
['solar', 'mail', 'pizza.cfg', 'notes.txt',
 'swc', 'data', 'papers', 'solar.pdf',
 'bin', 'music']

>>> files = listdir(originaldir)
>>> print files
['solar', 'mail', 'pizza.cfg', 'notes.txt',
 'swc', 'data', 'papers', 'solar.pdf',
 'bin', 'music']
```

```
>>> for file in files:
```

Remember the colon

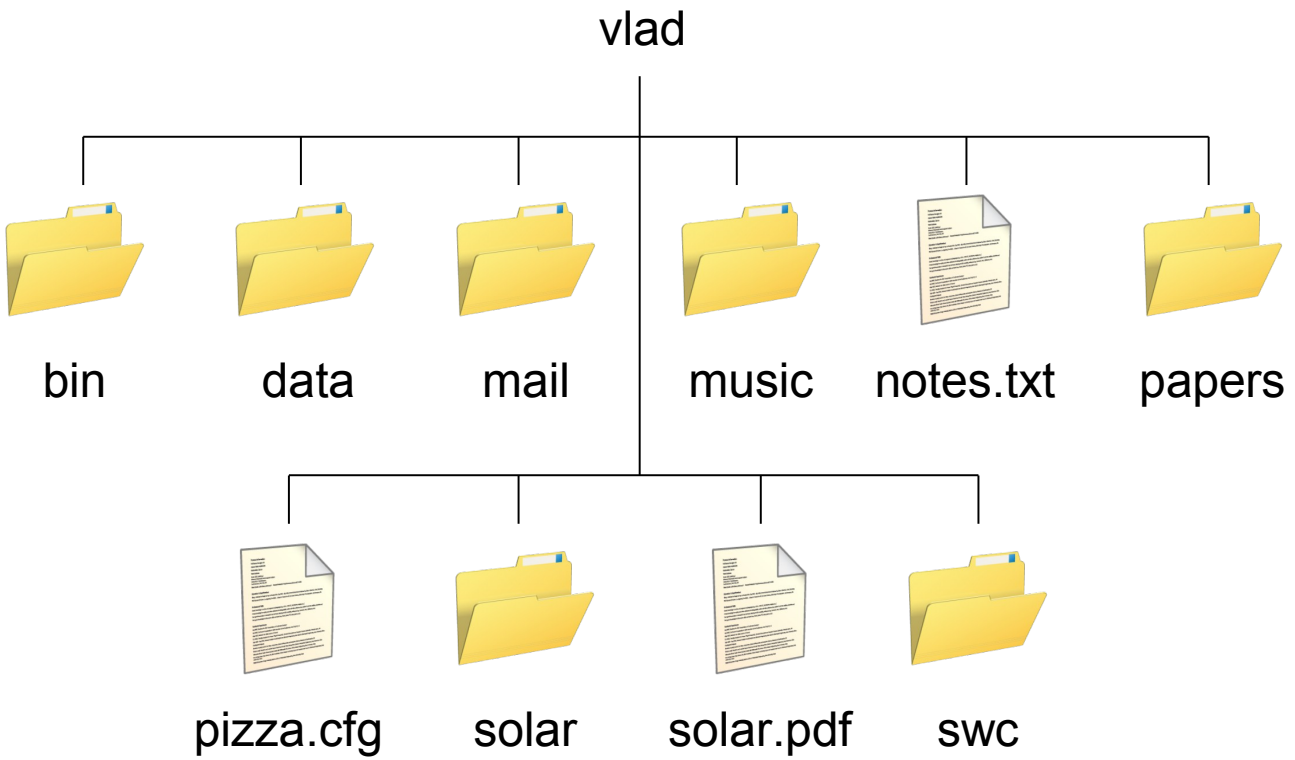
```
>>> for file in files:
...     print file
```

```
>>> for file in files:
...     print file
...
```



Remember RETURN to close the loop

```
>>> for file in files:
...     print file
...
solar
mail
pizza.cfg
notes.txt
swc
data
papers
solar.pdf
bin
music
```



```
>>> getcwd()
'/users/vlad'
>>> from os import chdir
```

```
>>> getcwd()
'/users/vlad'
>>> from os import chdir
>>> chdir('data')
```

```
>>> getcwd()
'/users/vlad'
>>> from os import chdir
>>> chdir('data')
>>> getcwd()
```

```
>>> getcwd()
'/users/vlad'
>>> from os import chdir
>>> chdir('data')
>>> getcwd()
'/users/vlad/data'
```

chdir changes the current working directory

```
>>> getcwd()
'/users/vlad'
>>> from os import chdir
>>> chdir('data')
>>> getcwd()
'/users/vlad/data'
>>> listdir(getcwd())
```

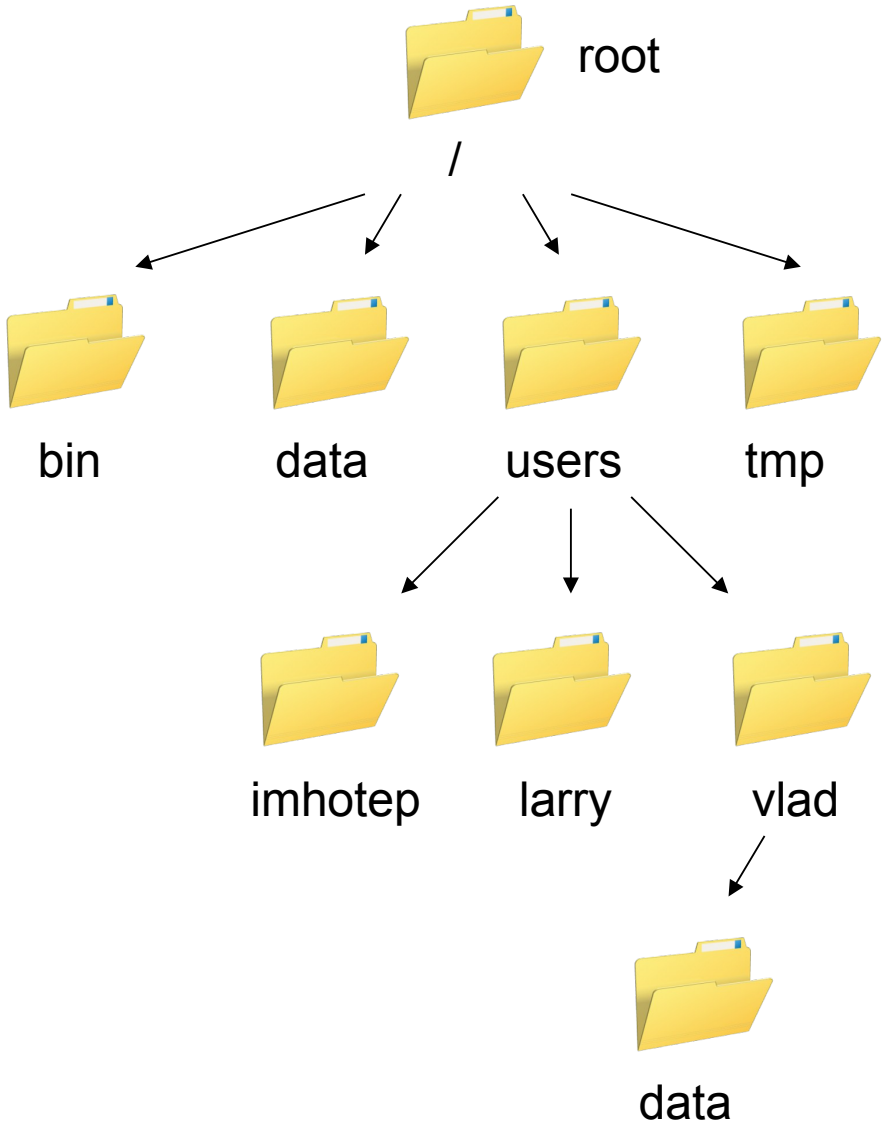
```
>>> getcwd()
'/users/vlad'
>>> from os import chdir
>>> chdir('data')
>>> getcwd()
'/users/vlad/data'
>>> listdir(getcwd())
['morse.txt', 'pdb', 'planets.txt',
'amino_acids.txt', 'elements', 'sunspot.txt']
```

```
>>> getcwd()
'/users/vlad'
>>> from os import chdir
>>> chdir('data')
>>> getcwd()
'/users/vlad/data'
>>> listdir(getcwd())
['morse.txt', 'pdb', 'planets.txt',
'amino_acids.txt', 'elements', 'sunspot.txt']
>>> chdir(originaldir)
```

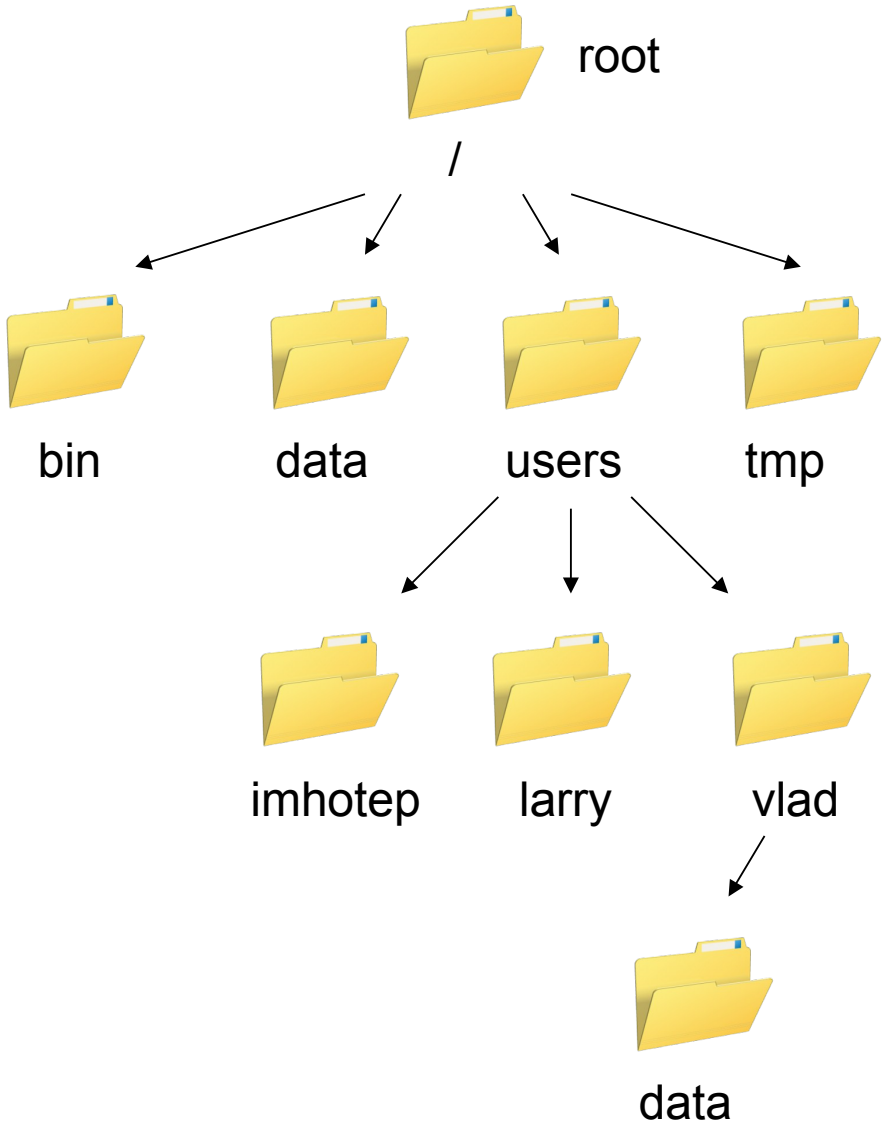
```
>>> getcwd()
'/users/vlad'
>>> from os import chdir
>>> chdir('data')
>>> getcwd()
'/users/vlad/data'
>>> listdir(getcwd())
['morse.txt', 'pdb', 'planets.txt',
'amino_acids.txt', 'elements', 'sunspot.txt']
>>> chdir(originaldir)
>>> getcwd()
```

```
>>> getcwd()
'/users/vlad'
>>> from os import chdir
>>> chdir('data')
>>> getcwd()
'/users/vlad/data'
>>> listdir(getcwd())
['morse.txt', 'pdb', 'planets.txt',
'amino_acids.txt', 'elements', 'sunspot.txt']
>>> chdir(originaldir)
>>> getcwd()
'/users/vlad'
```

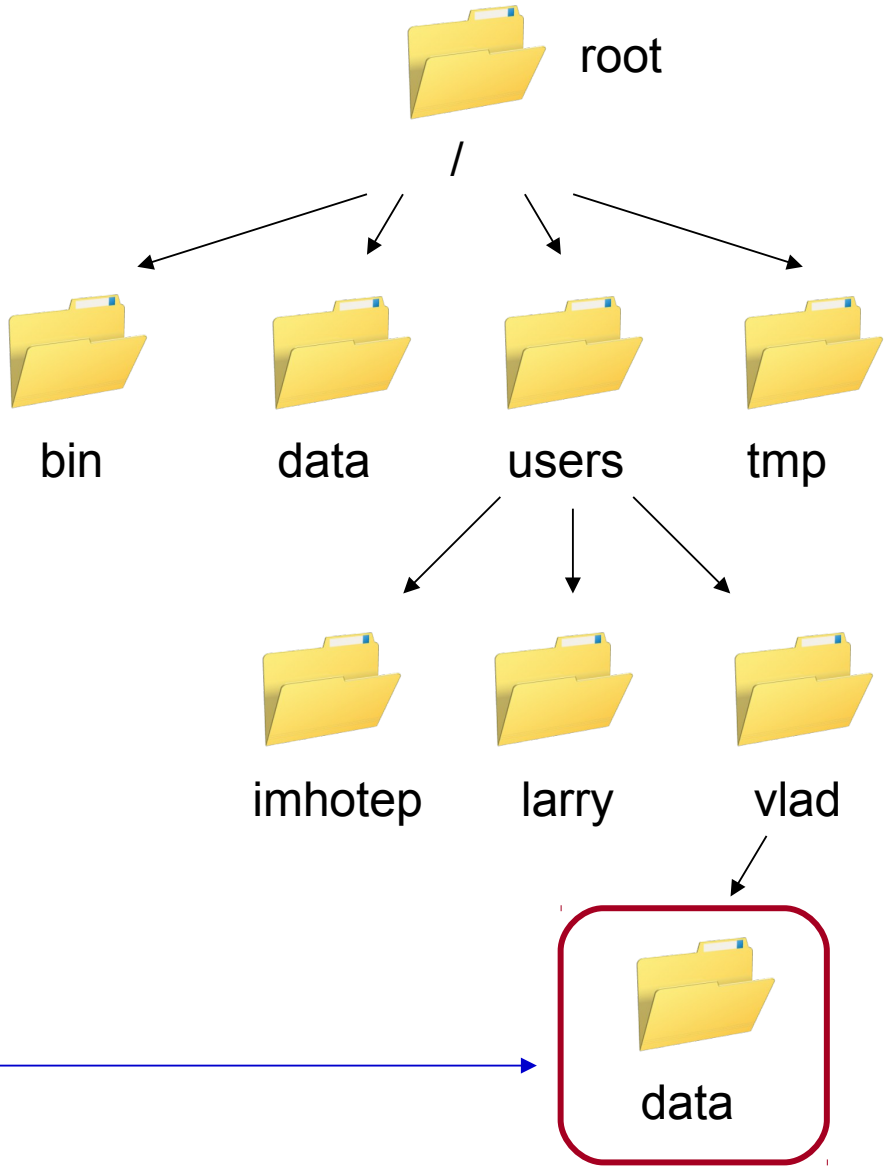
```
>>> chdir('data')
```



```
>>> chdir('data')
>>> getcwd()
```

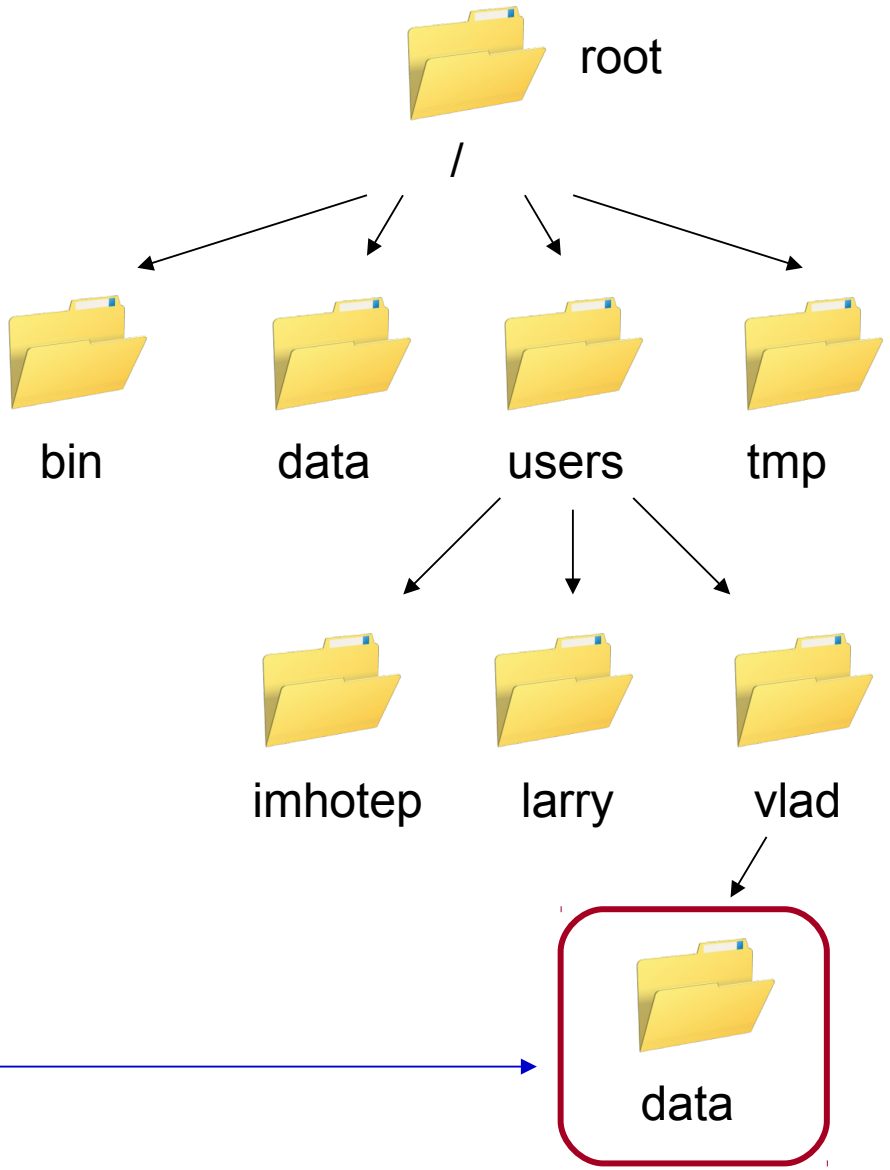


```
>>> chdir('data')
>>> getcwd()
'/users/vlad/data'
```



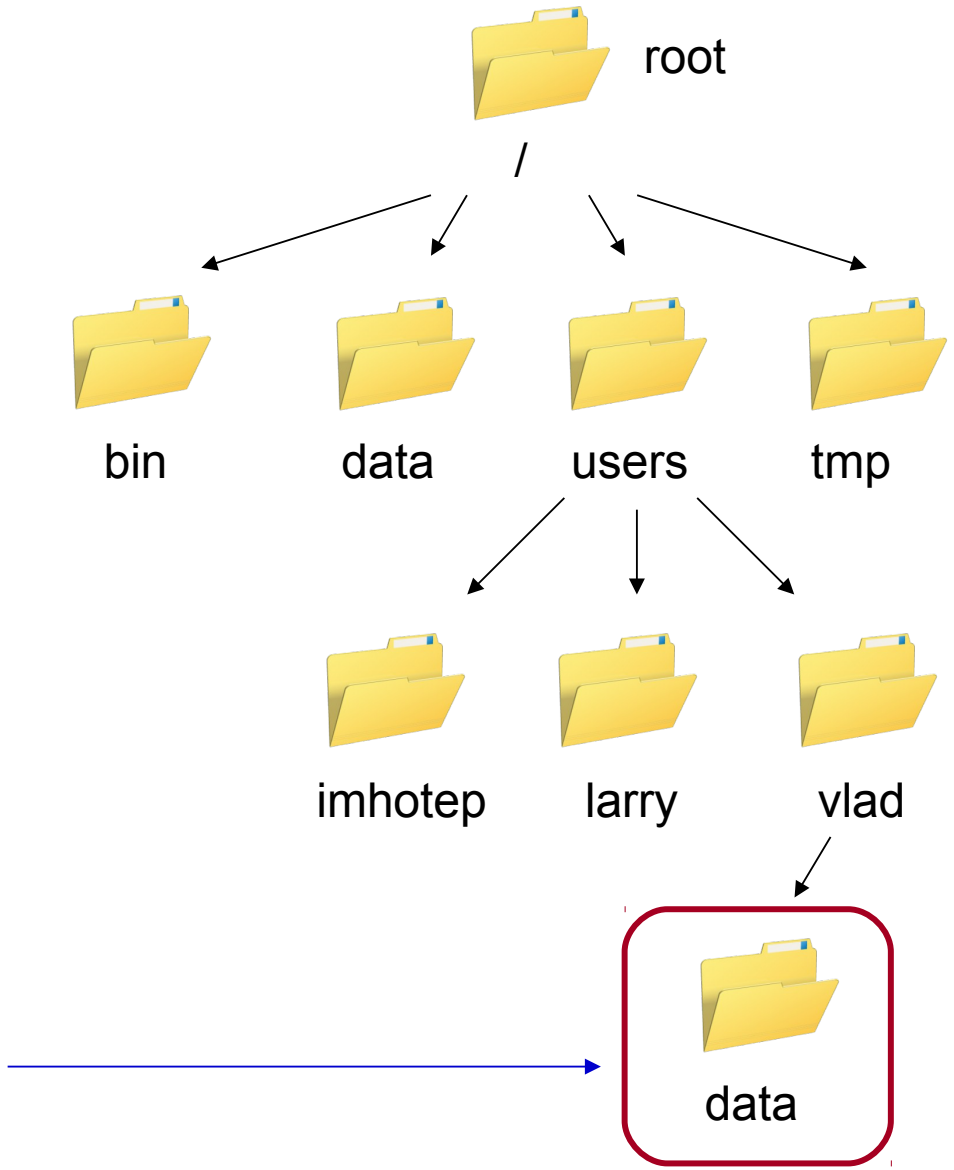
What Python considers to be the current working directory

```
>>> chdir('data')
>>> getcwd()
'/users/vlad/data'
>>> CTRL-D
```



What Python considers to be the current working directory

```
>>> chdir('data')
>>> getcwd()
'/users/vlad/data'
>>> CTRL-D
$ pwd
```

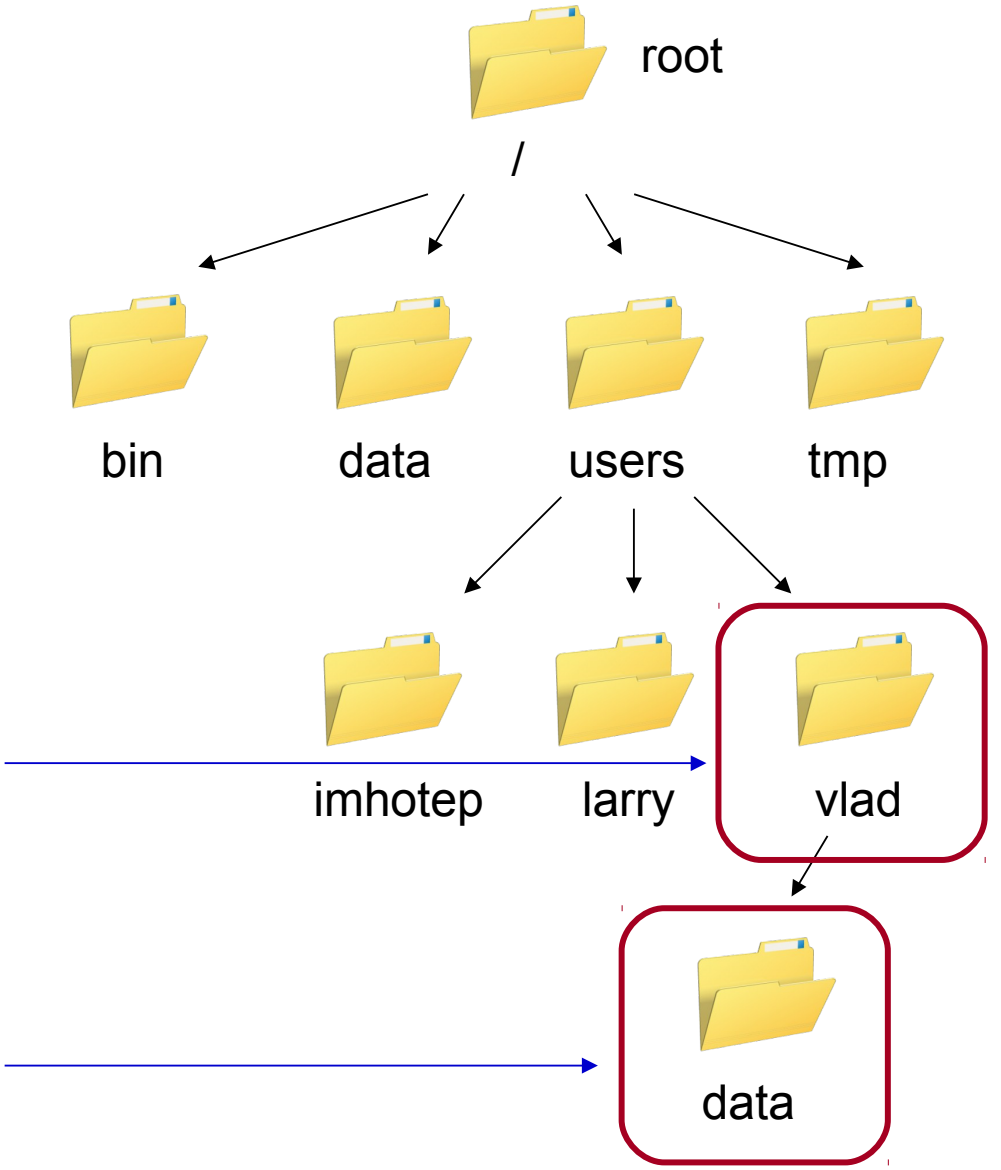


What Python considers to be the current working directory

```
>>> chdir('data')
>>> getcwd()
'/users/vlad/data'
>>> CTRL-D
$ pwd
'/users/vlad'
```

What the shell considers to be the current working directory

What Python considers to be the current working directory



os	Miscellaneous operating system interfaces
`getcwd`	Get current working directory
`listdir`	List directory contents
`chdir`	Change directory

created by

Mike Jackson and Greg Wilson

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