



Prashant Lakhera

Follow

May 9, 2019 · 3 min read ·  Listen



100 Days of DevOps — Day 89-Python Files I/O

To view the updated DevOps course(101DaysofDevOps)

Course Registration link: <https://www.101daysofdevops.com/register/>

Course Link: <https://www.101daysofdevops.com/courses/101-days-of-devops/>

YouTube link: <https://www.youtube.com/user/laprashant/videos>

Welcome to Day 89 of 100 Days of DevOps, Focus for today is Python Files I/O

To open a file in Python we use a built-in `open()` function which accepts a number of arguments

```
open(file,mode,encoding)
```

- **file:** the path to file(required)
- **mode:** read/write/append,binary/text
- **encoding:** text encoding to use(it depend upon system to system)

```
>>> import sys
>>> sys.getdefaultencoding()
'utf-8'
```

Python File Mode

```
r for reading
w for writing
r+ opens for reading and writing (cannot truncate a file)
w+ for writing and reading (can truncate a file)
rb+ reading or writing a binary file
wb+ writing a binary file
a+ opens for appending
```

Writing to the first file

```
>>> f = open("testfile","w")
>>> f.write("This is our first test file")
27
>>> f.close()
```

Output

```
ls -l testfile
-rw-rw-r-- 1 plakhera wheel 27 Apr 20 17:17 testfile
cat testfile
This is our first test file
```

To read a file

```
>>> a = open('testfile','r')
>>> a.read()
'This is our first test file'
# To read the first 5 characters
>>> a.read(5)
'This '
# Now if we try to read the rest of file
>>> a.read()
'is our first test file'
```

Now if the file has multiple lines and we want to read line by line

```
>>> x.readline()
'My new file \n'
>>> x.readline()
'Ok one more line'
```

Now if we want to append to an existing file use **append(a) mode**

```
>>> f = open("myfile","a")
>>> f.write("Testing append mode")
19
>>> f.close()
>>>
>>>
>>> g = open("myfile","r")
>>> g.read()
'My new file \nOk one more lineTesting append mode'
```

Now let's take a look at one more example

```
import sys
def readfile(filename):
    f = open(filename,'rt')
    for i in f:
        print(i)
    f.close()

if __name__ == '__main__':
    readfile(sys.argv[1])
```

Output

```
python3 exception.py testfile
this is a test file
One more line to read
```

As you can see we have a problem here, each line is already terminated by a **newline** and then print adds it own

To fix that we can strip the newline

```
import sys
def readfile(filename):
    f = open(filename,'rt')
    for i in f:
        i = i.strip() <---
        print(i)
    f.close()

if __name__ == '__main__':
    readfile(sys.argv[1])
```

OR we can use the write method of **standard out stream**

```
import sys
def readfile(filename):
    f = open(filename,'rt')
    for i in f:
        sys.stdout.write(i) <--
    f.close()

if __name__ == '__main__':
    readfile(sys.argv[1])
```

As you see in all the above examples we are using `close` to close the file. `close` is important as we are telling the underlying the OS that we are done with it, if we are not closing the file then there is a possibility that we might lose the data. There may be pending writes that buffered up which might not get written completely. Also if we are opening lots of files we might run out of **system resources**.

So might need some way that we always remember to close a file. Python implements a resource cleanup called **with-block**.

So now our code will look like this

```
import sys
def readfile(filename):
    with open(filename,'rt') as f: <--
        for i in f:
            sys.stdout.write(i)

if __name__ == '__main__':
    readfile(sys.argv[1])
```

We don't need to call `close` explicitly, as `with` will take care of it whenever execution exits the block.

Looking forward from you guys to join this journey and spend a minimum an hour every day for the next 100 days on DevOps work and post your progress using any of the below medium.

- Twitter: [@100daysofdevops](#) OR [@lakhera2015](#)
- Facebook: <https://www.facebook.com/groups/795382630808645/>
- Medium: <https://medium.com/@devopslearning>
- Slack: <https://devops-myworld.slack.com/messages/CF41EFG49/>
- GitHub Link:<https://github.com/100daysofdevops>

Reference

100 Days of DevOps — Day 0

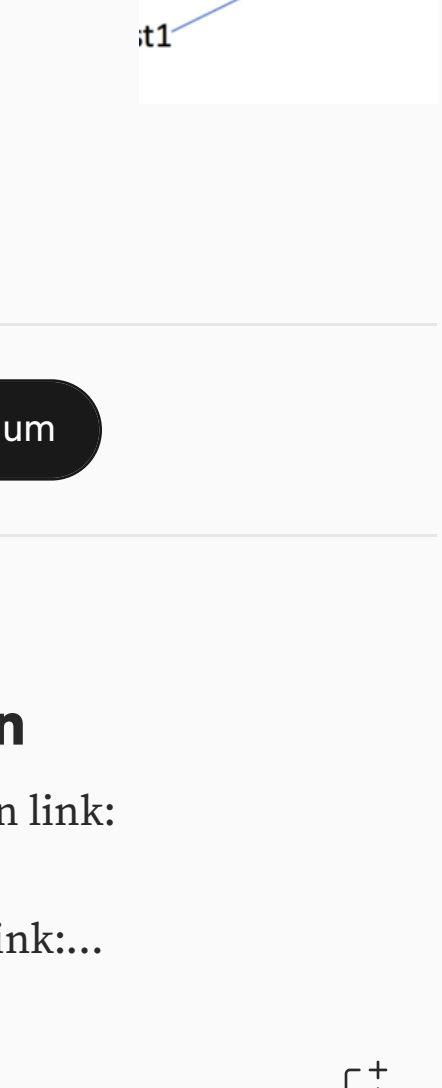
D-day is just one day away and finally, this is a continuation of the post(I posted a month earlier)


medium.com


100 Days of DevOps — Day 88-Lists in Python


Welcome to Day 88 of 100 Days of DevOps, Focus for today is Lists in Python


medium.com




 52








Get an email whenever Prashant Lakhera publishes.

 Subscribe

By signing up, you will create a Medium account if you don't already have one. Review our [Privacy Policy](#) for more information about our privacy practices.

More from Prashant Lakhera

Follow



AWS Community Builder, Ex-Redhat, Author, Blogger, YouTuber, RHCA, RHADS, RHCE, Docker Certified,4XAWS, CCNA, MCP, Certified Jenkins, Terraform Certified, 1XGCP


May 9, 2019


100 Days of DevOps — Day 88-Lists in Python

To view the updated DevOps course(101DaysofDevOps) Course Registration link: <https://www.101daysofdevops.com/register/> Course Link: <https://www.101daysofdevops.com/courses/101-days-of-devops/>...

Programming

5 min read





Share your ideas with millions of readers.

Write on Medium


May 8, 2019


100 Days of DevOps — Day 87-While/For Loop Python

To view the updated DevOps course(101DaysofDevOps) Course Registration link: <https://www.101daysofdevops.com/register/> Course Link: <https://www.101daysofdevops.com/courses/101-days-of-devops/> YouTube link:...

Programming

4 min read






May 7, 2019


100 Days of DevOps — Day 86-Python Flow Control(if-else statement)

To view the updated DevOps course(101DaysofDevOps) Course Registration link: <https://www.101daysofdevops.com/register/> Course Link: <https://www.101daysofdevops.com/courses/101-days-of-devops/> YouTube link:...

Programming

3 min read






May 6, 2019


100 Days of DevOps — Day 85- Shell Script to find the failed login

To view the updated DevOps course(101DaysofDevOps) Course Registration link: <https://www.101daysofdevops.com/register/> Course Link: <https://www.101daysofdevops.com/courses/101-days-of-devops/> YouTube link:...

Linux

2 min read






May 5, 2019


100 Days of DevOps — Day 84-Introduction to Elasticsearch

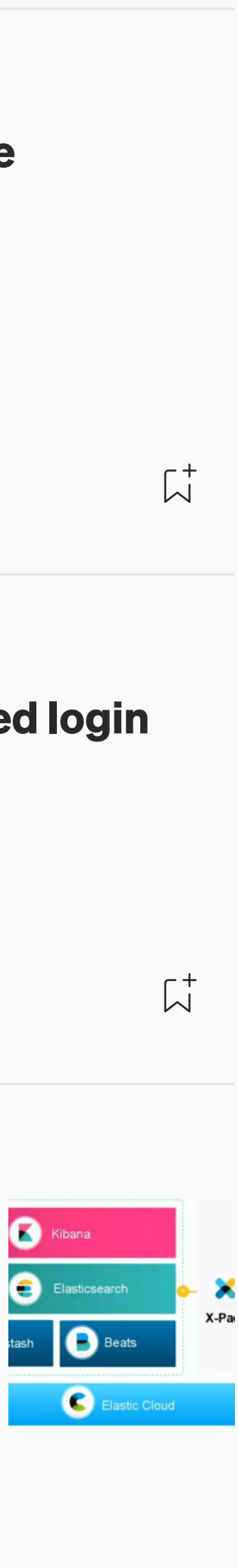
To view the updated DevOps course(101DaysofDevOps) Course Registration link: <https://www.101daysofdevops.com/register/> Course...

Elasticsearch

7 min read








Love podcasts or audiobooks? Learn on the go with our new app.

Try Knowable



About Help Terms Privacy

