

# ASSIGNMENT REPORT 1: PROCESS AND THREAD IMPLEMENTATION

CENG2034, OPERATING SYSTEMS

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## Abstract

In this assignment, one of our goal is learning how to use python os, requests, threading and platform libraries. Learning operating system basics, remember python and linux skills and how threads works is another goals. I assume using threads while getting url status codes will make our job faster before assignment. It happened.

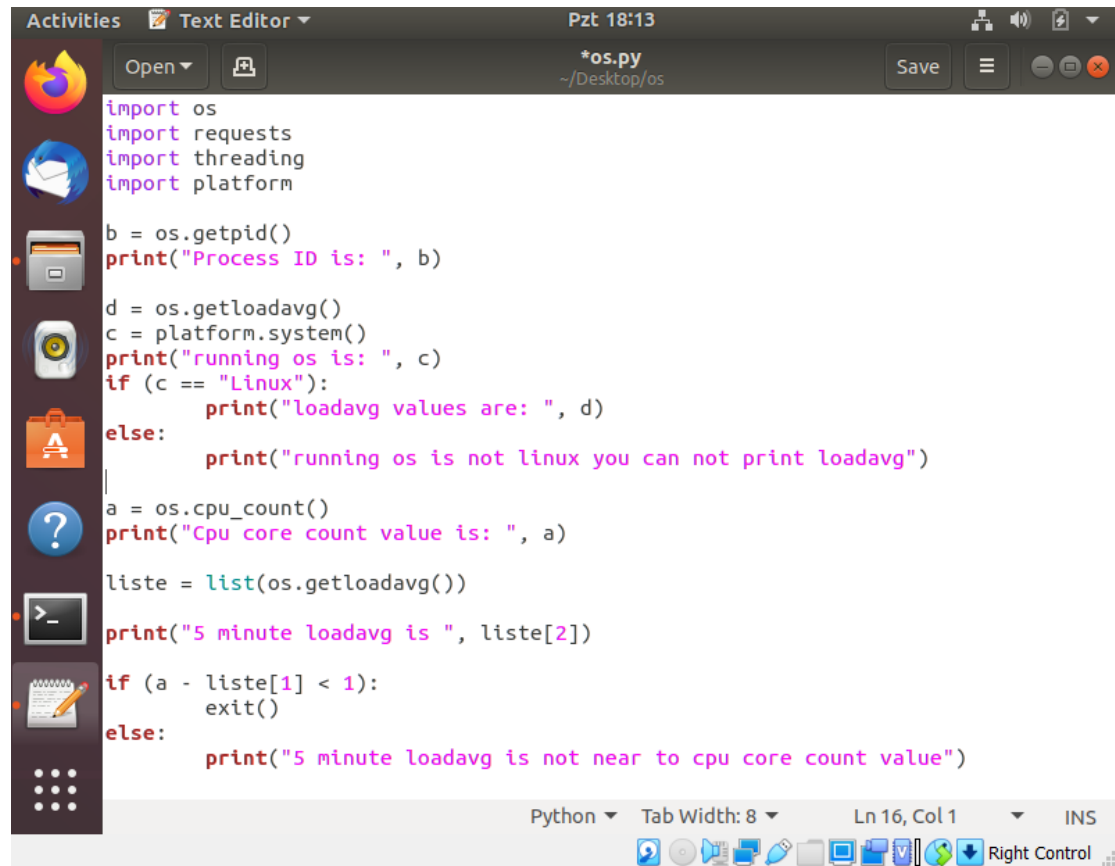
## 1 Introduction

This assignment is important because I practice and learned how operating systems works, specially linux. I used python and linux for this assignment.

## 2 Assignments

At fourth question, I could not write urls in threads. Then I write urls in an array and give indexes to threads. Printing 5 minute loadavg value is not possible with one line code like `os.getloadavg()`. I also print it with using an arrays first index.

### 3 Results



The screenshot shows a Linux desktop environment. On the left is a vertical dock with icons for Firefox, a mail client, a file manager, a terminal, and a help icon. The main window is a text editor titled "Text Editor" with a subtitle "Pzt 18:13". The editor is open to a file named "\*os.py" located at "~/Desktop/os". The code in the editor is as follows:

```
import os
import requests
import threading
import platform

b = os.getpid()
print("Process ID is: ", b)

d = os.getloadavg()
c = platform.system()
print("running os is: ", c)
if (c == "Linux"):
    print("loadavg values are: ", d)
else:
    print("running os is not linux you can not print loadavg")

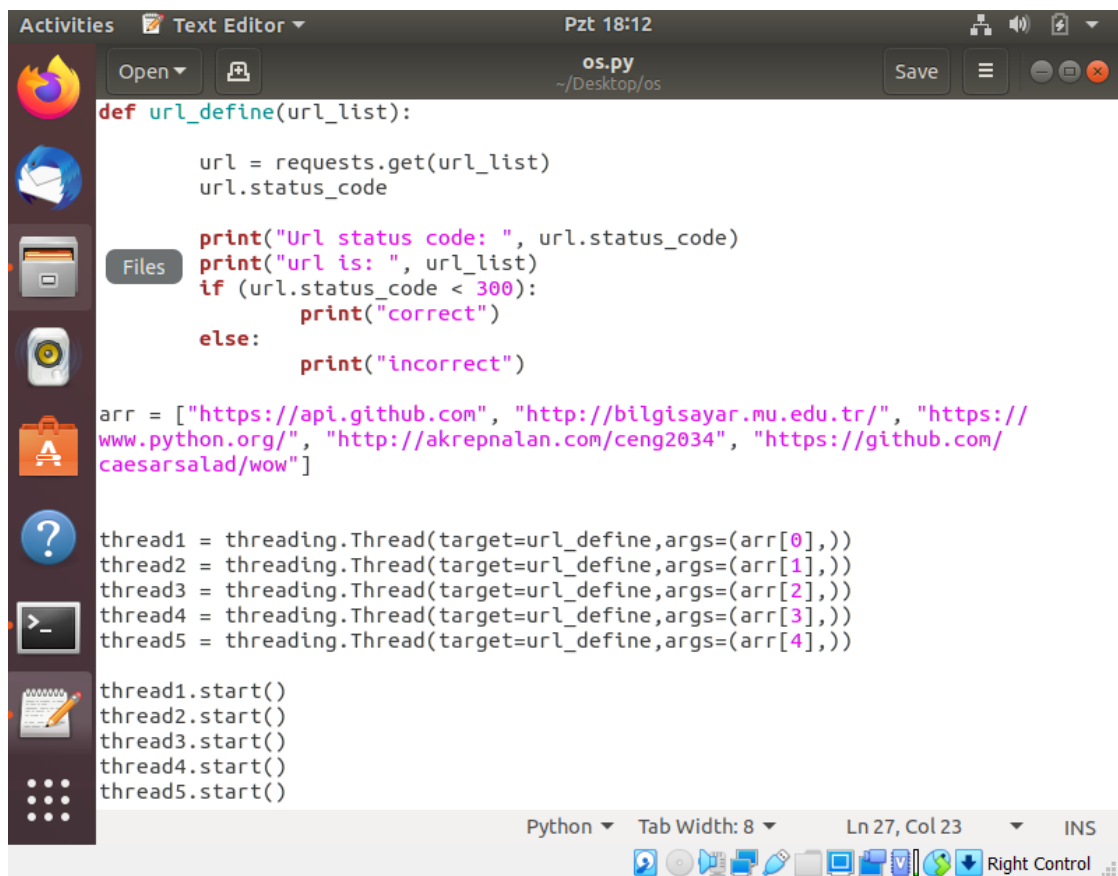
a = os.cpu_count()
print("Cpu core count value is: ", a)

liste = list(os.getloadavg())
print("5 minute loadavg is ", liste[2])

if (a - liste[1] < 1):
    exit()
else:
    print("5 minute loadavg is not near to cpu core count value")
```

The status bar at the bottom of the text editor shows "Python", "Tab Width: 8", "Ln 16, Col 1", and "INS". Below the status bar is a system tray with various icons including a network icon, a volume icon, a power icon, and a "Right Control" button.

Code of Question 1-2-3



```
def url_define(url_list):  
    url = requests.get(url_list)  
    url.status_code  
  
    print("Url status code: ", url.status_code)  
    print("url is: ", url_list)  
    if (url.status_code < 300):  
        print("correct")  
    else:  
        print("incorrect")  
  
arr = ["https://api.github.com", "http://bilgisayar.mu.edu.tr/", "https://  
www.python.org/", "http://akrepnalan.com/ceng2034", "https://github.com/  
caesarsalad/wow"]  
  
thread1 = threading.Thread(target=url_define,args=(arr[0],))  
thread2 = threading.Thread(target=url_define,args=(arr[1],))  
thread3 = threading.Thread(target=url_define,args=(arr[2],))  
thread4 = threading.Thread(target=url_define,args=(arr[3],))  
thread5 = threading.Thread(target=url_define,args=(arr[4],))  
  
thread1.start()  
thread2.start()  
thread3.start()  
thread4.start()  
thread5.start()
```

Code of Question 4

## 4 Conclusion

Every computer scientist should know operation system basics. It will make our softwares more efficiently.