

Homework: Operating Systems

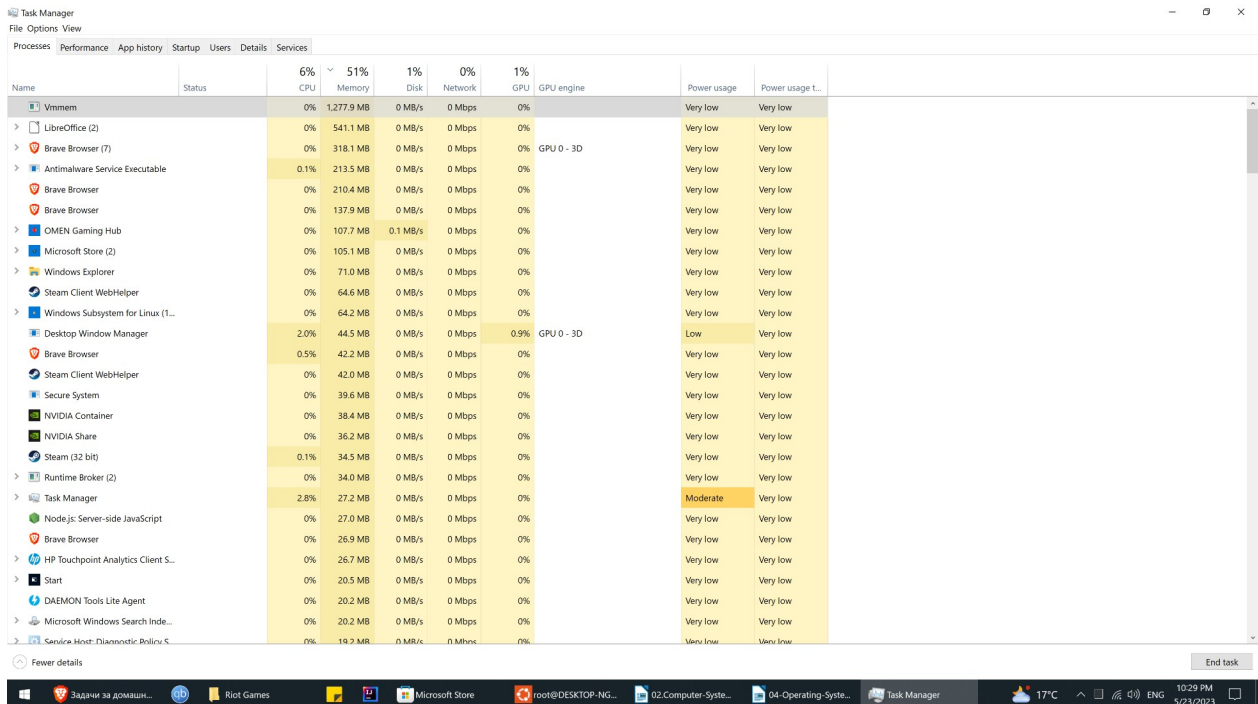
Problems for homework for the ["Software Technologies" course @ Software University.](#)

Submit this document as your homework.

1. Work with Task Manager in Windows

1. View processes:

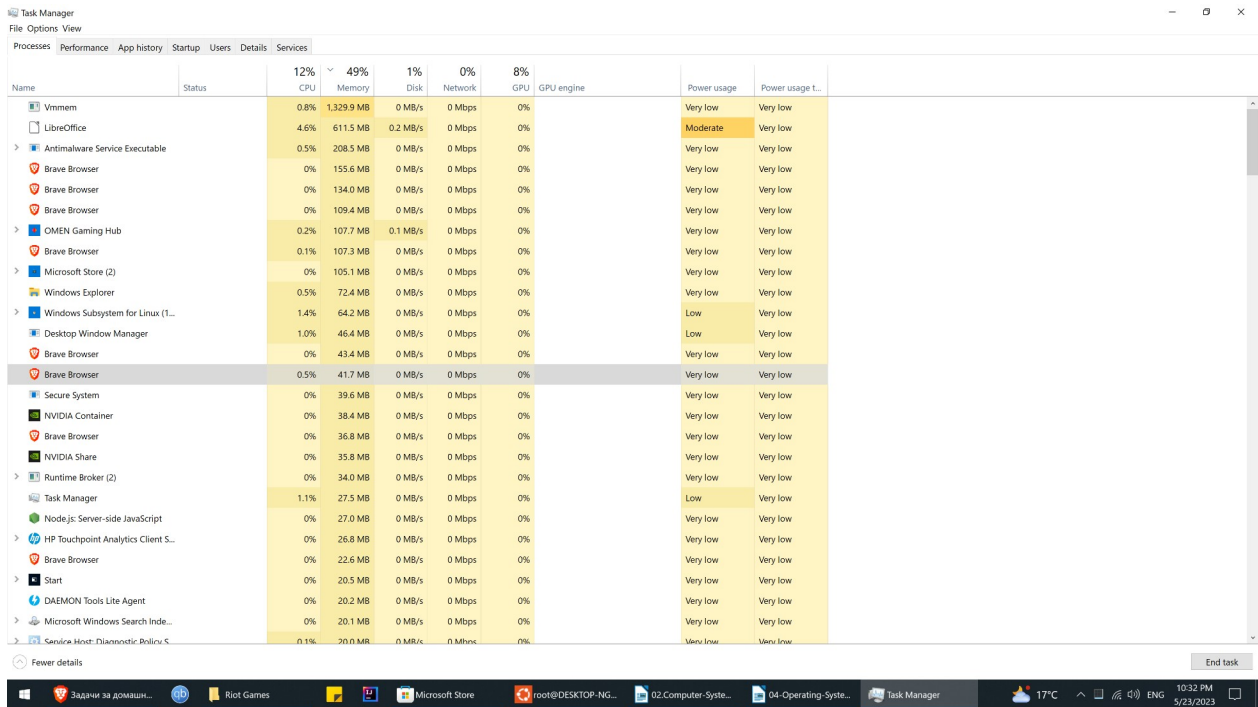
- Open Task Manager and view the list of running processes.
- Identify any processes that are using a high amount of CPU or RAM.



Name	Status	6% CPU	51% Memory	1% Disk	0% Network	1% GPU	GPU engine	Power usage	Power usage limit
Vmmem		0%	1,277.9 MB	0 MB/s	0 Mbps	0%		Very low	Very low
LibreOffice (2)		0%	541.1 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Brave Browser (7)		0%	318.1 MB	0 MB/s	0 Mbps	0%	GPU 0 - 3D	Very low	Very low
Antimalware Service Executable		0.1%	213.5 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Brave Browser		0%	210.4 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Brave Browser		0%	137.9 MB	0 MB/s	0 Mbps	0%		Very low	Very low
OMEN Gaming Hub		0%	107.7 MB	0.1 MB/s	0 Mbps	0%		Very low	Very low
Microsoft Store (2)		0%	105.1 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Windows Explorer		0%	71.0 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Steam Client WebHelper		0%	64.6 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Windows Subsystem for Linux (1...)		0%	64.2 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Desktop Window Manager		2.0%	44.5 MB	0 MB/s	0 Mbps	0.9%	GPU 0 - 3D	Low	Very low
Brave Browser		0.5%	42.2 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Steam Client WebHelper		0%	42.0 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Secure System		0%	39.6 MB	0 MB/s	0 Mbps	0%		Very low	Very low
NVIDIA Container		0%	38.4 MB	0 MB/s	0 Mbps	0%		Very low	Very low
NVIDIA Share		0%	36.2 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Steam (32 bit)		0.1%	34.5 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Runtime Broker (2)		0%	34.0 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Task Manager		2.8%	27.2 MB	0 MB/s	0 Mbps	0%		Moderate	Very low
Node.js: Server-side JavaScript		0%	27.0 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Brave Browser		0%	26.9 MB	0 MB/s	0 Mbps	0%		Very low	Very low
HP Touchpoint Analytics Client S...		0%	26.7 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Start		0%	20.5 MB	0 MB/s	0 Mbps	0%		Very low	Very low
DAEMON Tools Lite Agent		0%	20.2 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Microsoft Windows Search Inde...		0%	20.2 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Service Host: Diagnostic Policy S...		0%	19.7 MB	0 MB/s	0 Mbps	0%		Very low	Very low

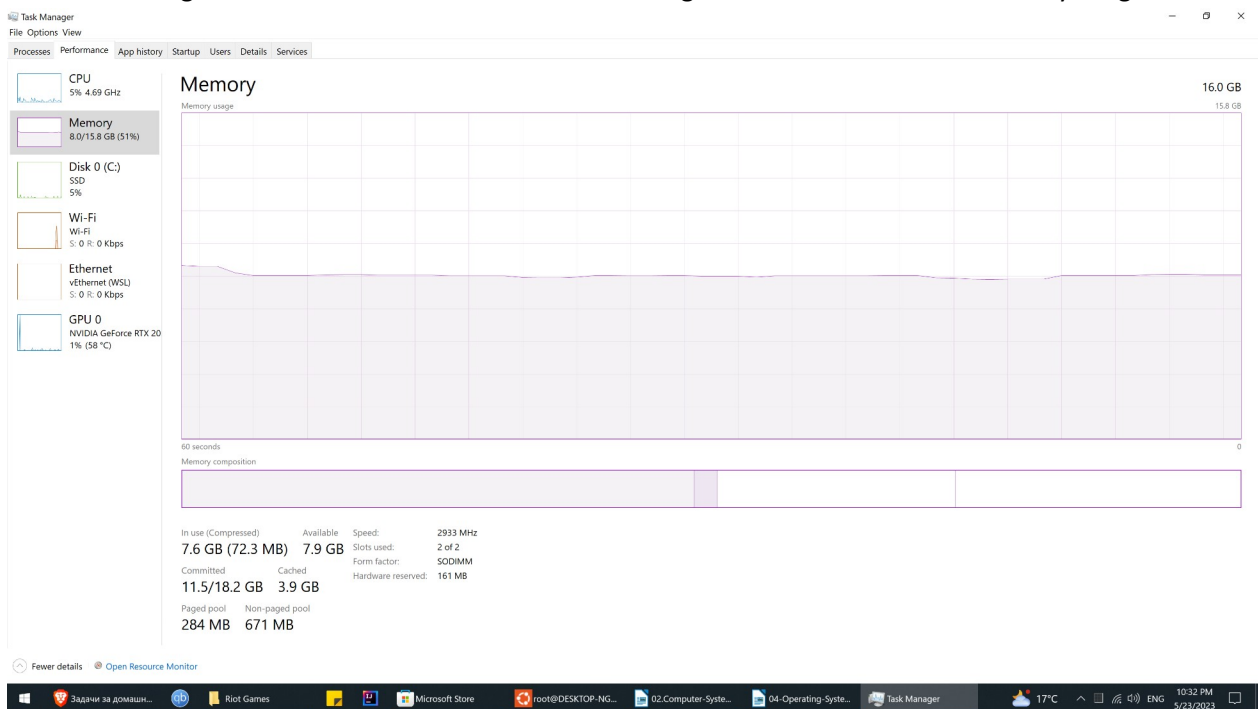
2. Kill a process:

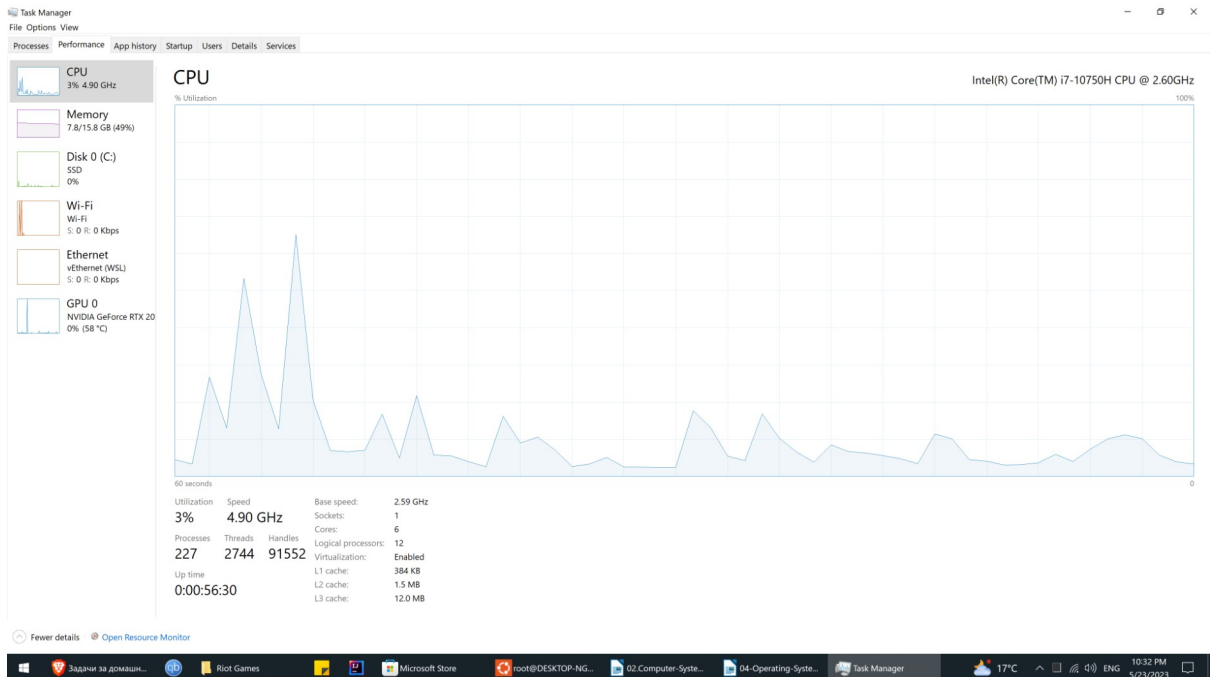
- Select a process from the list and end the task.



3. View CPU & RAM usage:

- Navigate to the Performance tab in Task Manager and view the CPU & Memory usage.





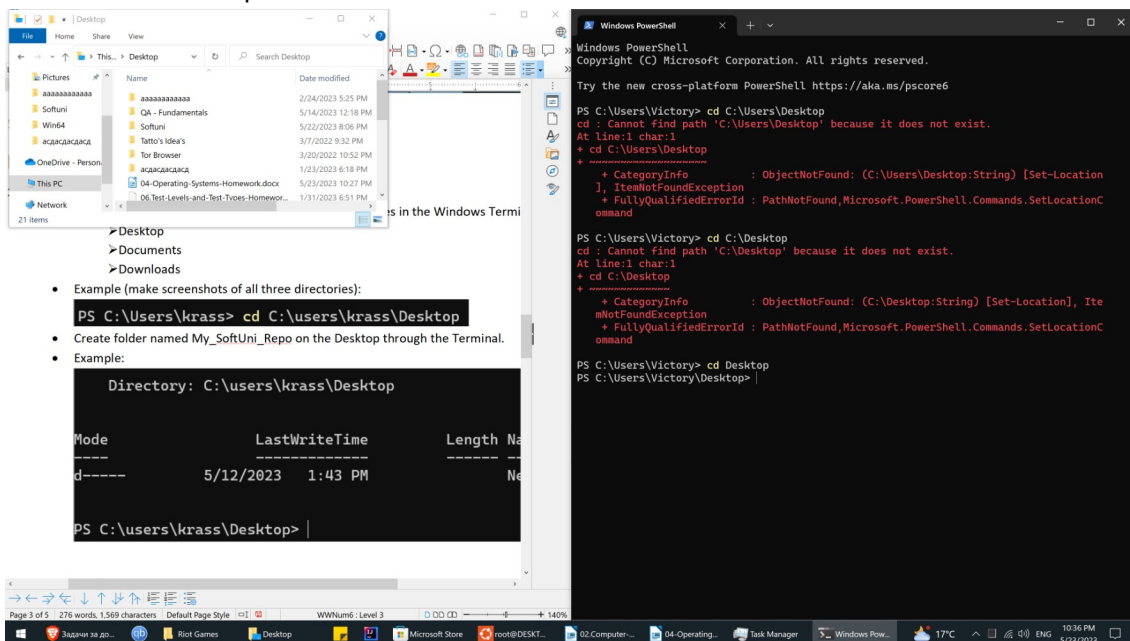
! Replace all pictures with screenshots from your PC.

2. Play with Windows Terminal

1. Navigate Directories:

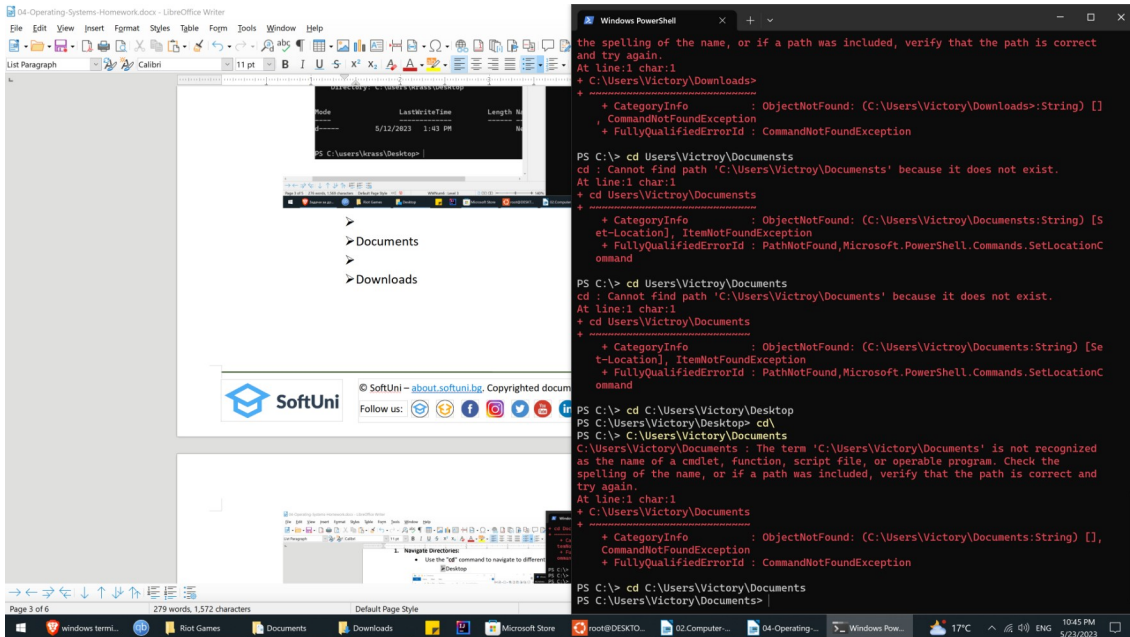
- Use the "cd" command to navigate to different directories in the Windows Terminal:

➤ Desktop

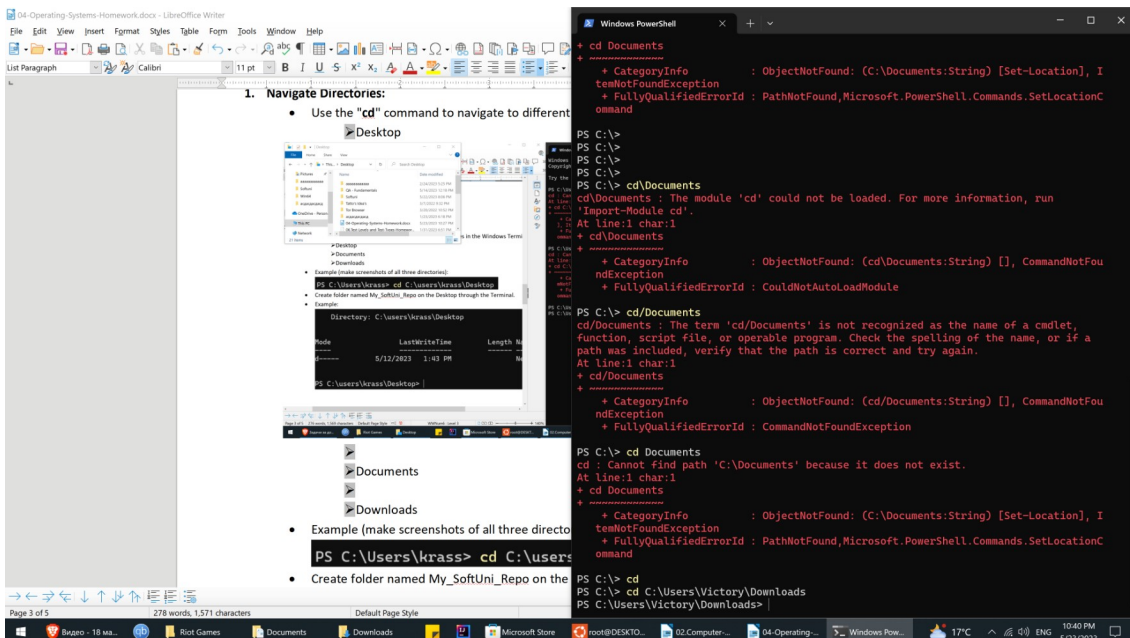


➤

➤ Documents



➤ ➤ Downloads



- Example (make screenshots of all three directories):

```
PS C:\Users\krass> cd C:\Users\krass\Desktop
```

- Create folder named My_SoftUni_Repo on the Desktop through the Terminal.
- Example:

```

Directory: C:\users\krass\Desktop

Mode                LastWriteTime         Length Name
----                -
d-----          5/12/2023   1:43 PM                New_Folder

PS C:\users\krass\Desktop> |

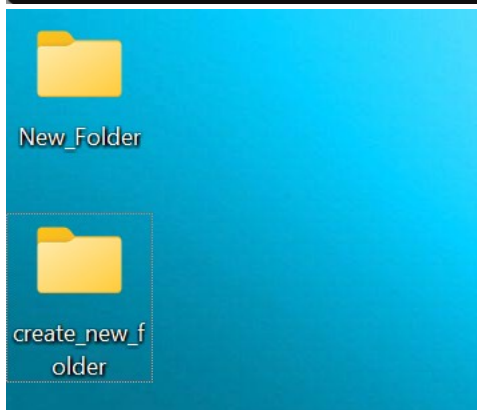
PS C:\users\krass\Desktop> mkdir create_new_folder

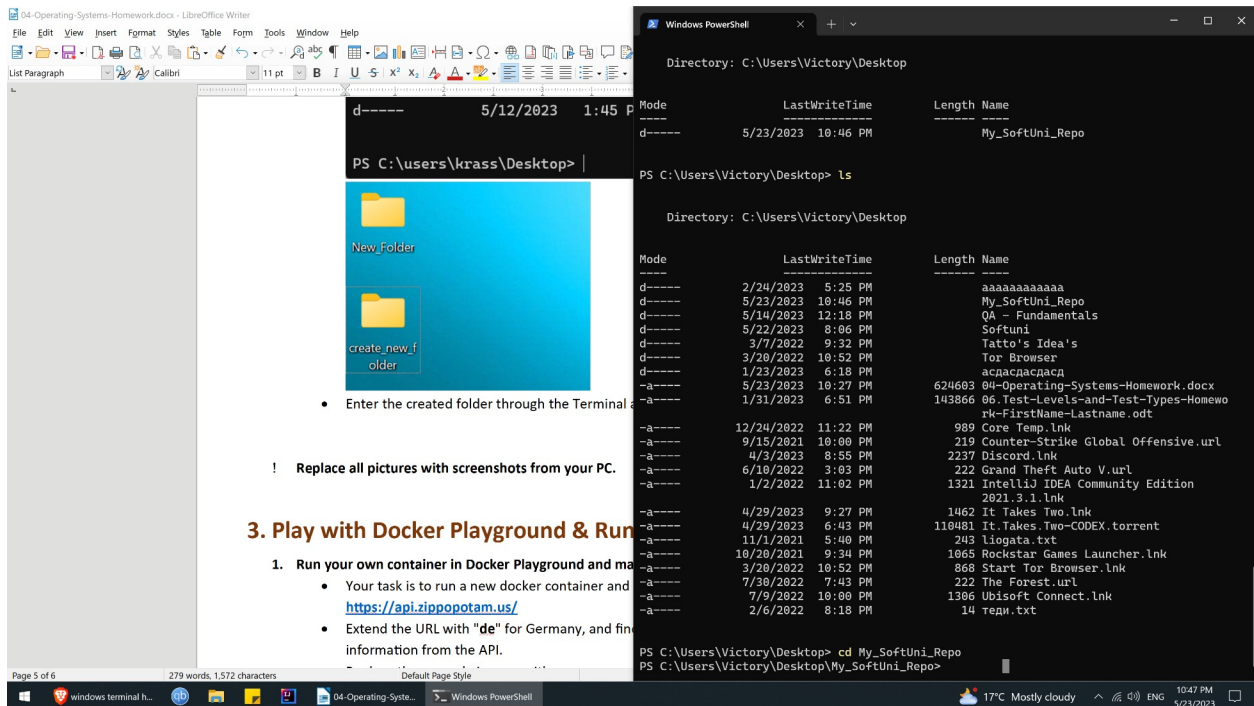
Directory: C:\users\krass\Desktop

Mode                LastWriteTime         Length Name
----                -
d-----          5/12/2023   1:45 PM                create_new_folder

PS C:\users\krass\Desktop> |

```





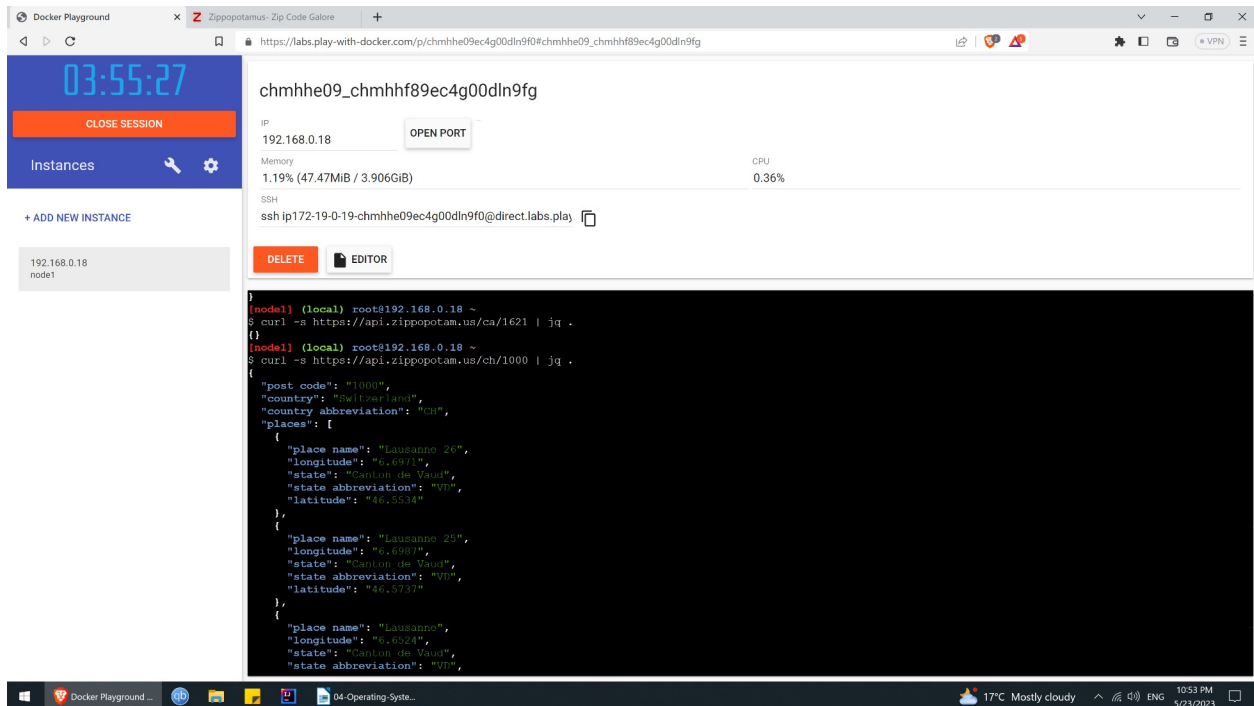
- Enter the created folder through the Terminal and make a screenshot:

! Replace all pictures with screenshots from your PC.

3. Play with Docker Playground & Run a Linux Shell inside

1. Run your own container in Docker Playground and make an HTTP request from Linux Shell:

- Your task is to run a new docker container and make an HTTP request to the following API:
<https://api.zippopotam.us/>
- Extend the URL with "de" for Germany, and find a valid postal code that you can use to extract information from the API.
- Replace the example images with your own screenshots.



03:55:27

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.18
node1

chmhhe09_chmhfh89ec4g00dln9fg

IP: 192.168.0.18 OPEN PORT

Memory: 1.19% (47.47MiB / 3.906GiB)

CPU: 0.36%

SSH: ssh ip172-19-0-19-chmhhe09ec4g00dln9f0@direct.labs.pla

DELETE EDITOR

```
[node1] (local) root@192.168.0.18 ~
$ curl -s https://api.zippopotam.us/ca/1621 | jq .
{}
[node1] (local) root@192.168.0.18 ~
$ curl -s https://api.zippopotam.us/ch/1000 | jq .
{
  "post code": "1000",
  "country": "Switzerland",
  "country abbreviation": "CH",
  "places": [
    {
      "place name": "Lausanne 26",
      "longitude": "6.6911",
      "state": "Canton de Vaud",
      "state abbreviation": "VD",
      "latitude": "46.5534"
    },
    {
      "place name": "Lausanne 25",
      "longitude": "6.6987",
      "state": "Canton de Vaud",
      "state abbreviation": "VD",
      "latitude": "46.5737"
    },
    {
      "place name": "Lausanne",
      "longitude": "6.6324",
      "state": "Canton de Vaud",
      "state abbreviation": "VD"
    }
  ]
}
```

- Examples:

```
[node1] (local) root@192.168.0.13 ~
$ curl -s https://api.zippopotam.us/de/10115 | jq .
{
  "post code": "10115",
  "country": "Germany",
  "country abbreviation": "DE",
  "places": [
    {
      "place name": "Berlin",
      "longitude": "13.3922",
      "state": "Berlin",
      "state abbreviation": "BE",
      "latitude": "52.532"
    }
  ]
}
```

```
[node1] (local) root@192.168.0.13 ~
$ curl -s https://api.zippopotam.us/de/50667 | jq .
{
  "post code": "50667",
  "country": "Germany",
  "country abbreviation": "DE",
  "places": [
    {
      "place name": "Köln",
      "longitude": "50.9384",
      "state": "Nordrhein-Westfalen",
      "state abbreviation": "NW",
      "latitude": "50.9315"
    }
  ]
}
```