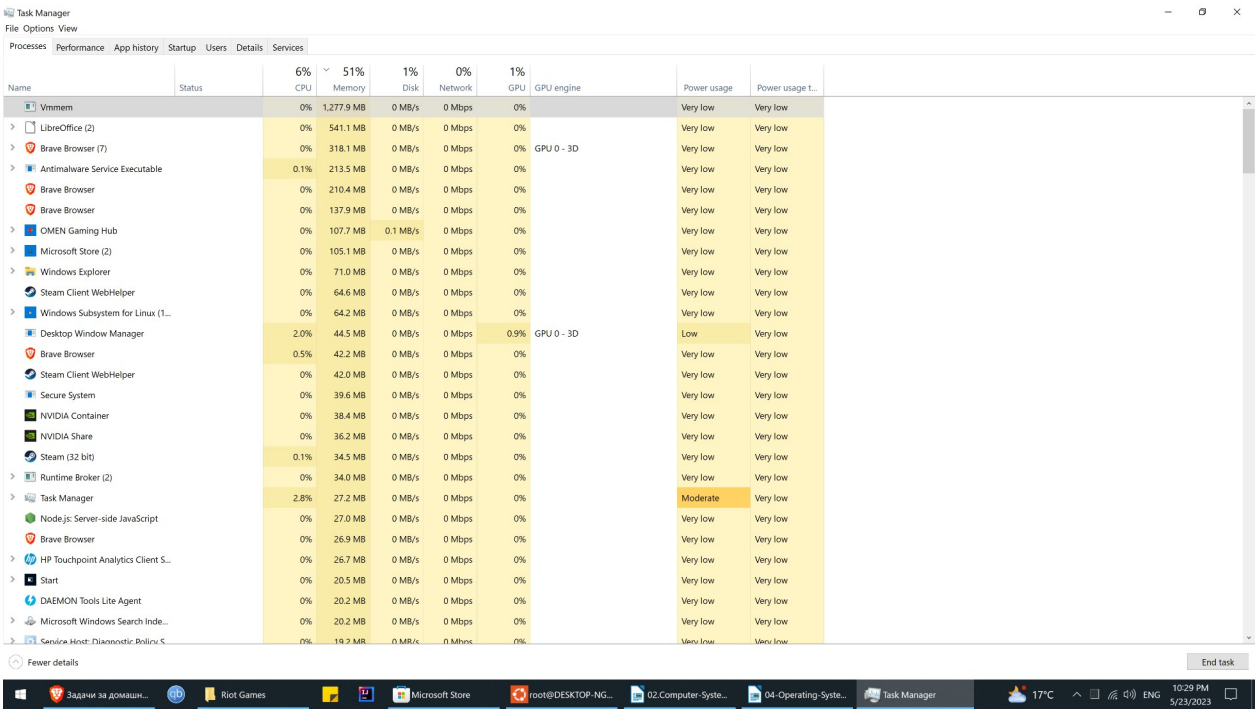
Homework: Operating Systems

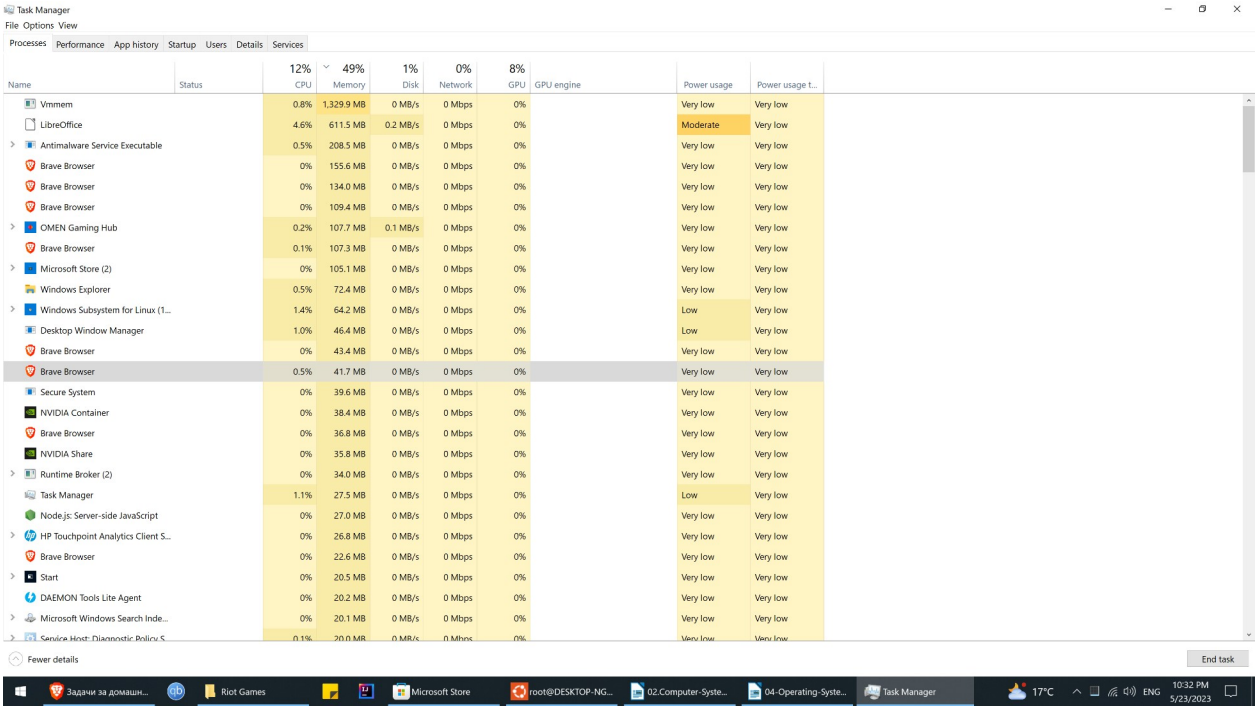
Problems for homework for the "Software Technologies" course @ Software University.
Submit this document as your homework.

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.



2. **Kill a process:**
    - Select a process from the list and end the task.



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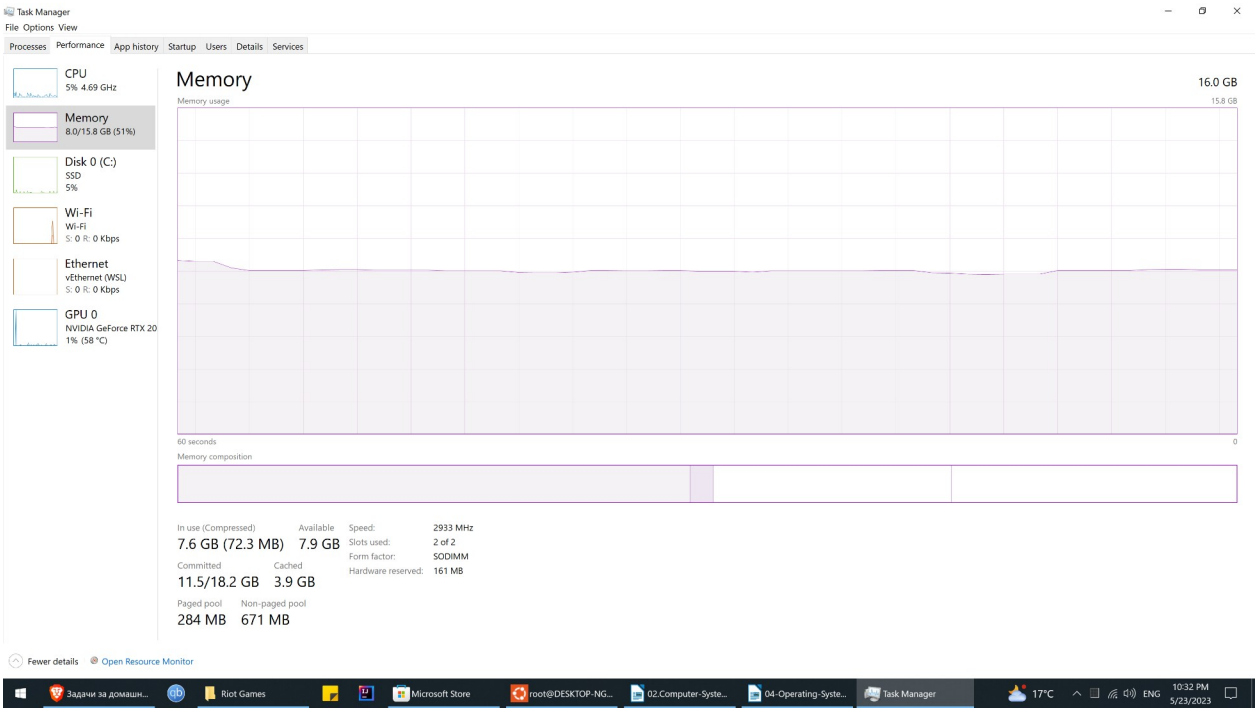
3. View CPU & RAM usage:

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



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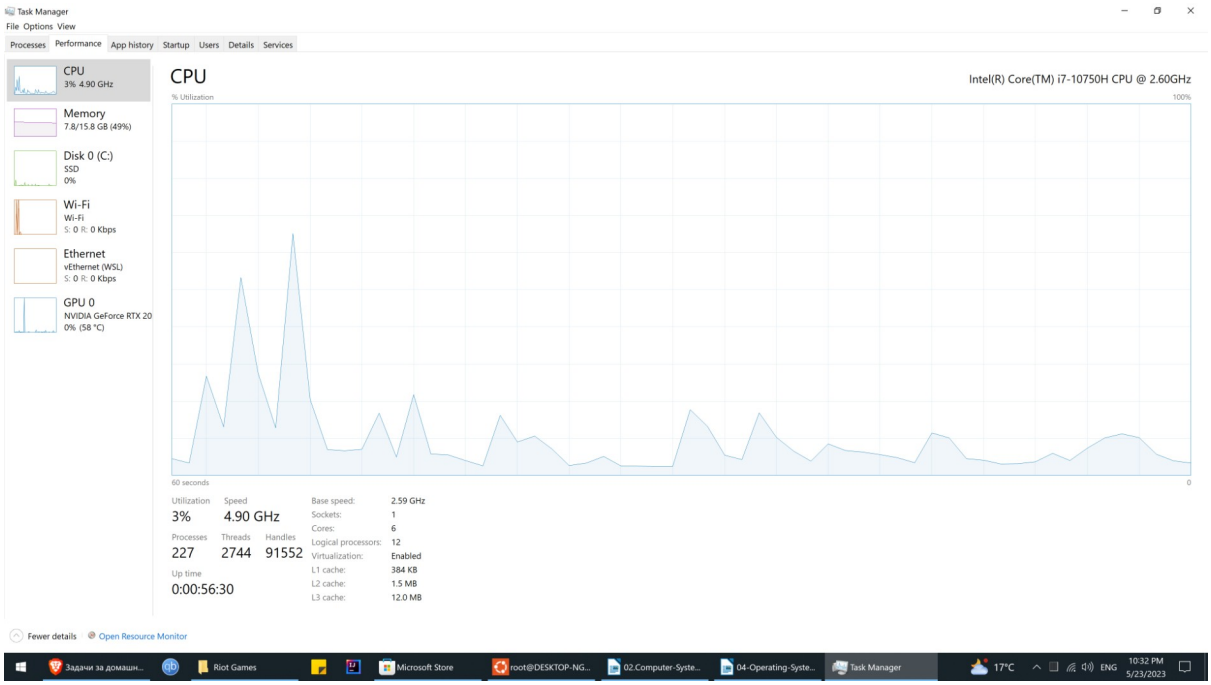
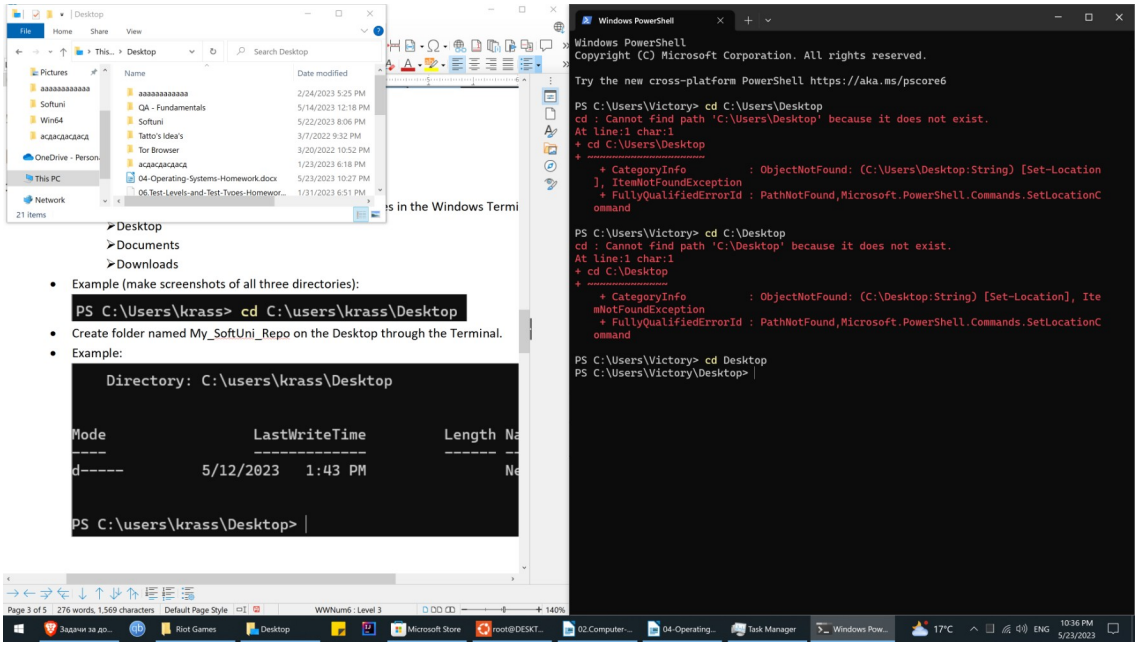


! **Replace all pictures with screenshots from your PC.**

2. Play with Windows Terminal

1. **Navigate Directories:**
   - Use the "**cd**" command to navigate to different directories in the Windows Terminal:
     - ➢Desktop



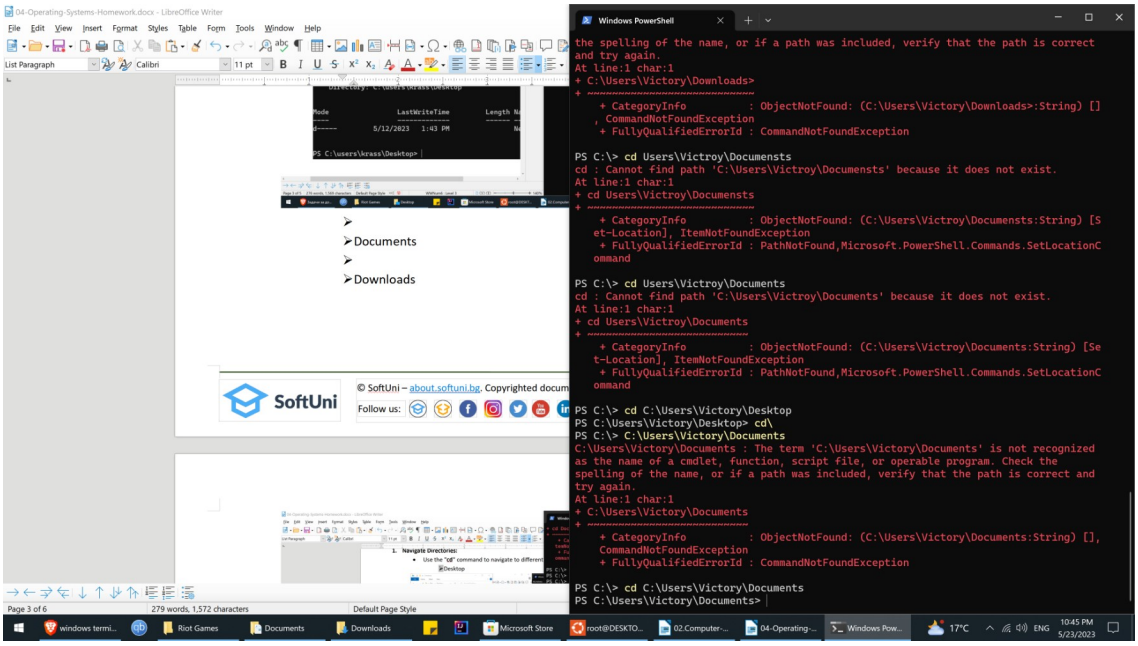
     - ➢Desktop
     - ➢Documents
     - ➢Downloads
   - Example (make screenshots of all three directories):

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

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

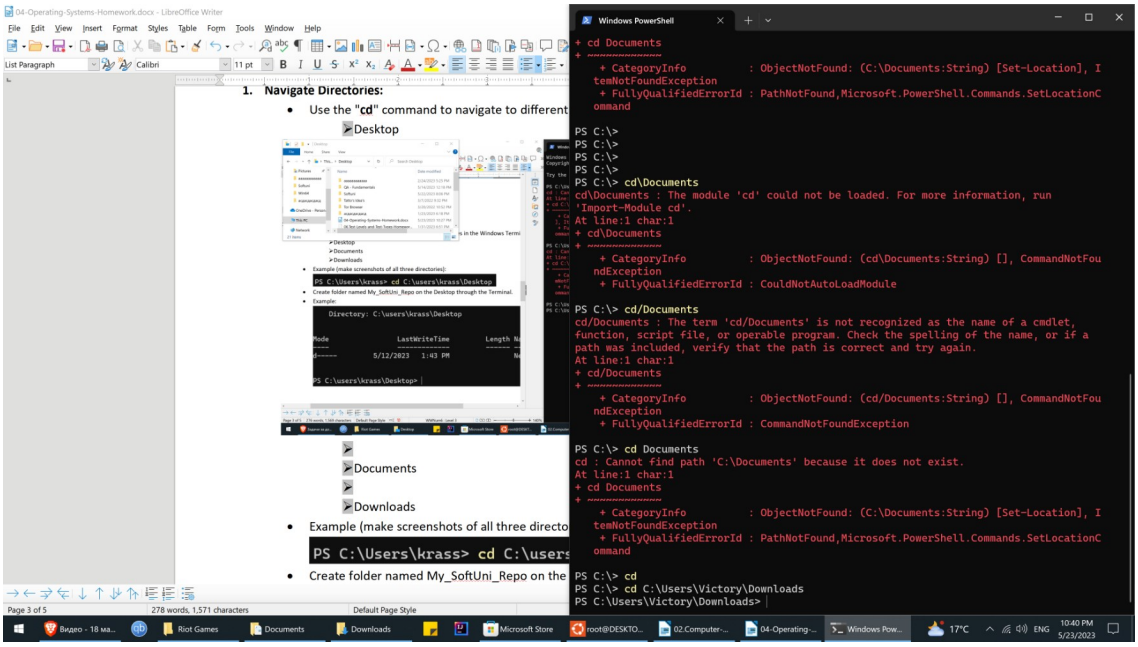
```
    Directory: C:\users\krass\Desktop


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


PS C:\users\krass\Desktop>
```

     - ➢
     - ➢Documents



➢

➢Downloads



➢

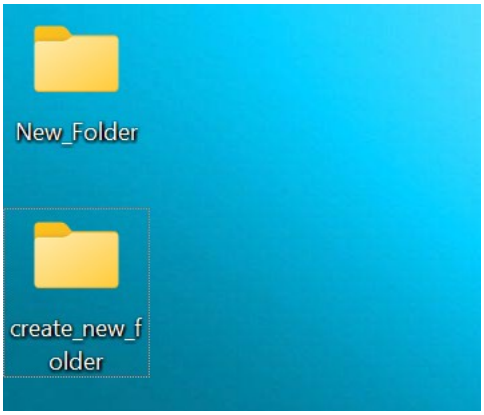
- Example (make screenshots of all three directories):

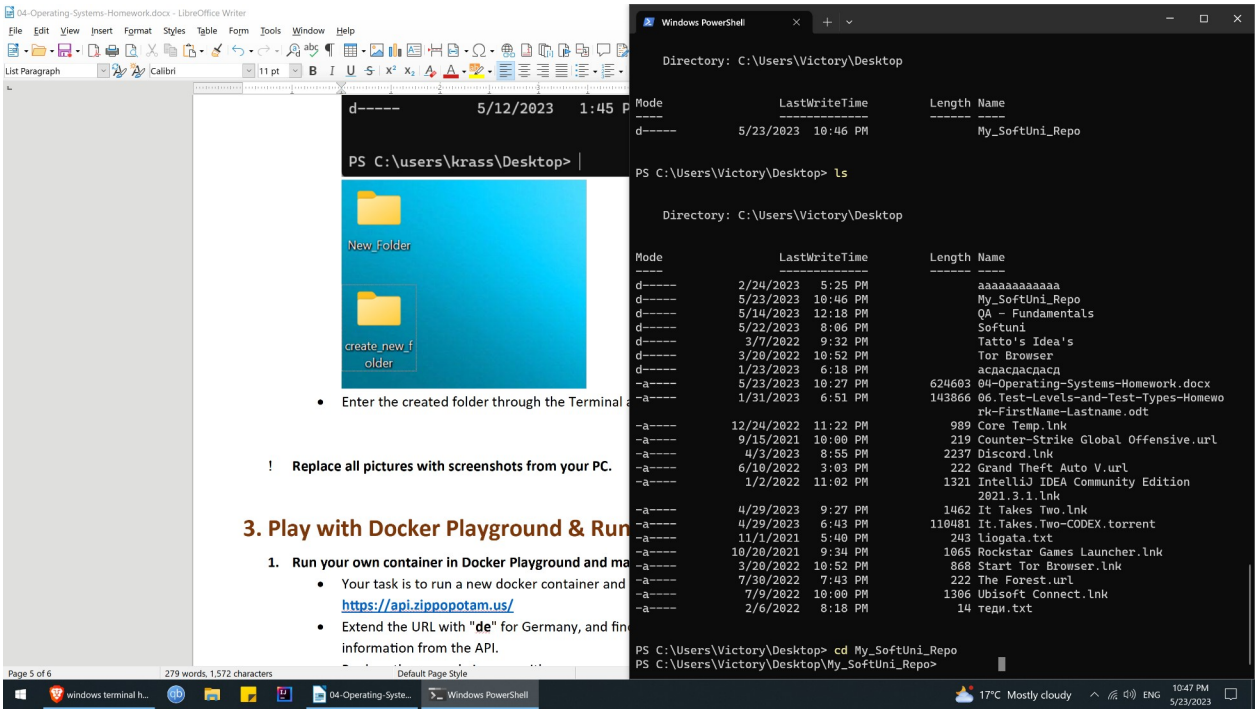
```
PS C:\Users\krass> cd C:\users\krass\Desktop
```

- 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>
```



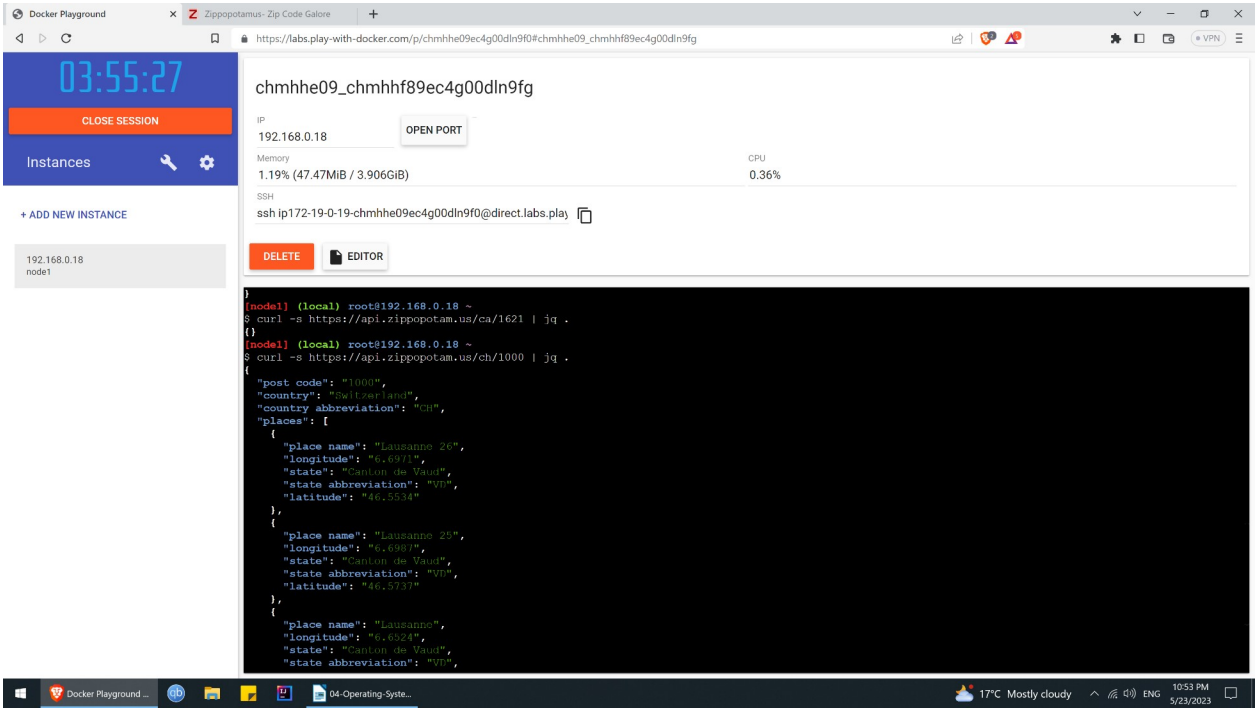


- Enter the created folder through the Terminal and make a screenshot:

! **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.



- 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": "05315"
    }
  ]
}
```