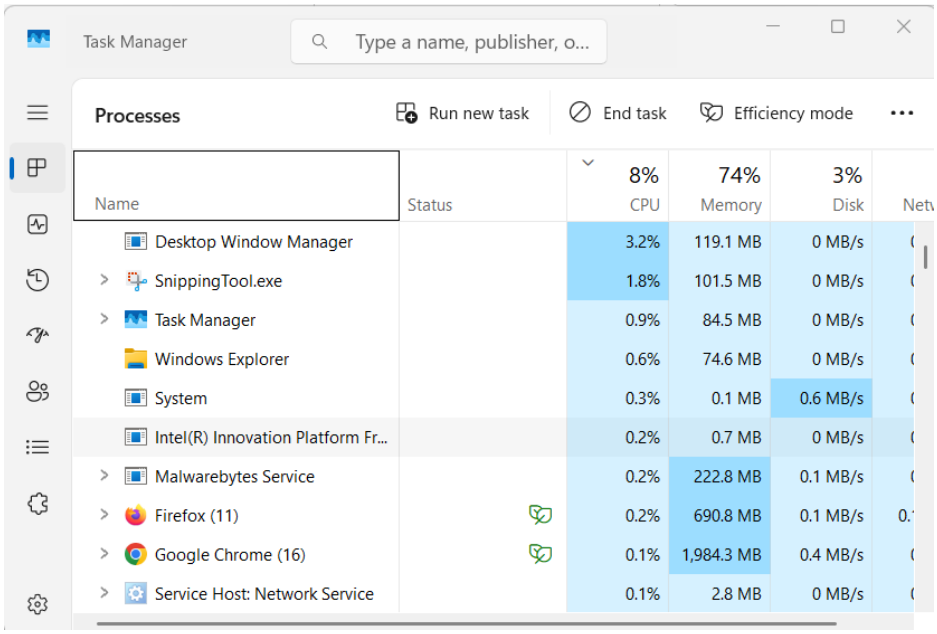
# Homework: Operating Systems

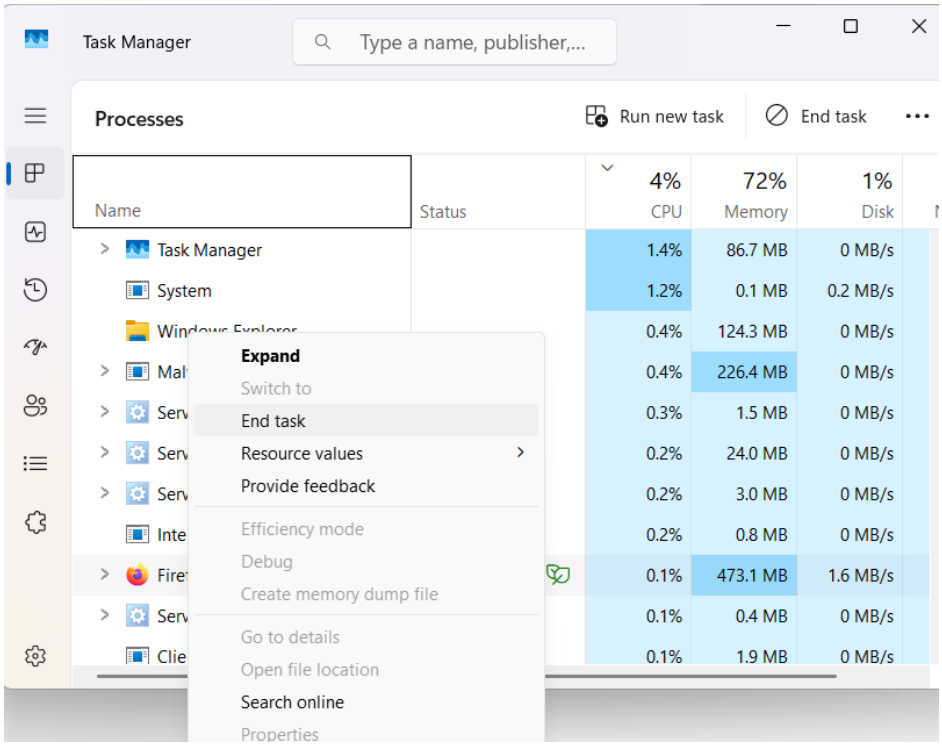
Problems for homework for the **"Software Technologies" course @ Software University**
Submit this document as your homework.

## 1. Work with Task Manager in Windows

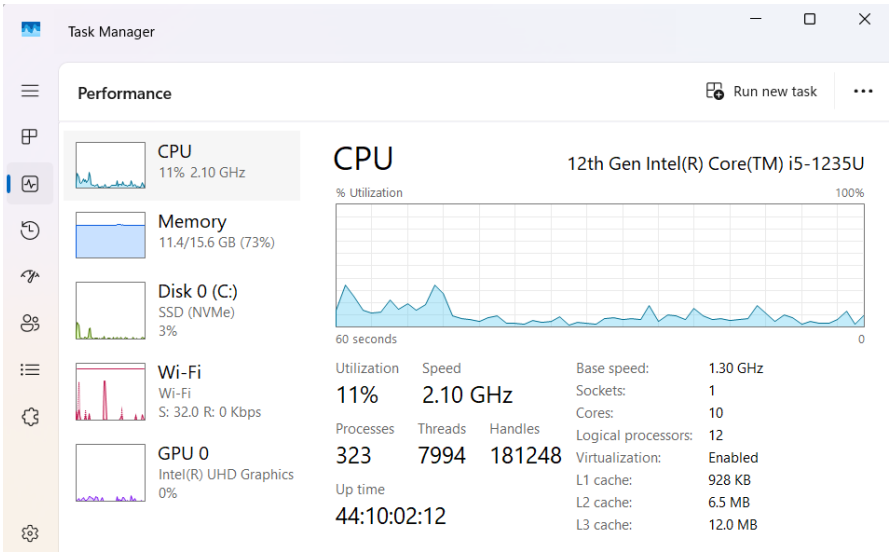
1. **View processes:**
   - Open Task Manager and view the list of running processes.
   - Identify any processes that are using a high amount of CPU or RAM.

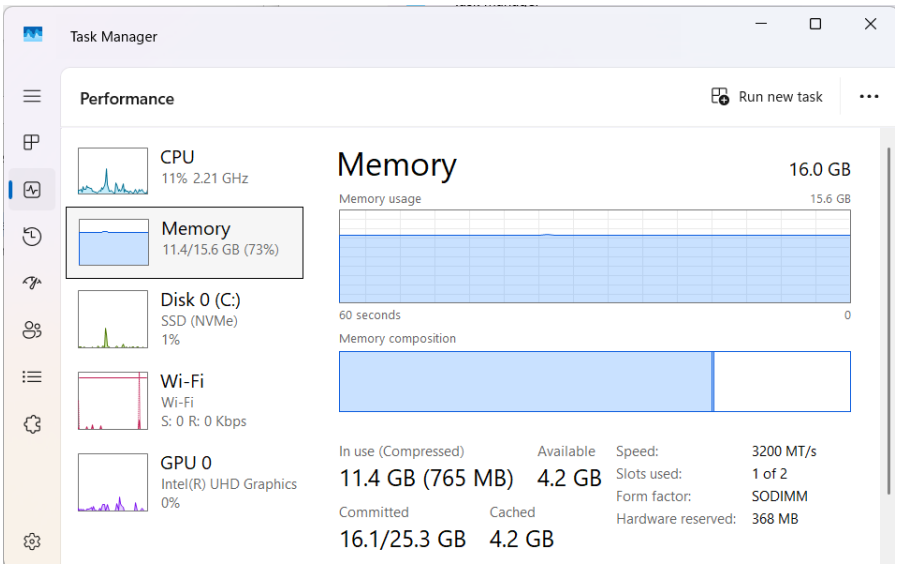



2. **Kill a process:**
   - Select a process from the list and end the task.




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\MaraE> cd C:\Users\MaraE\Desktop
PS C:\Users\MaraE\Desktop> cd C:\Users\MaraE\Documents
PS C:\Users\MaraE\Documents> cd C:\Users\MaraE\Downloads
```

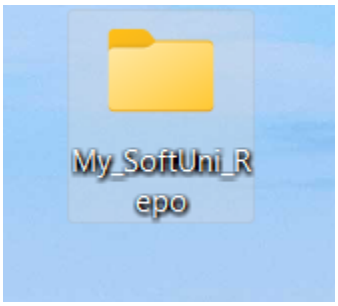
   - Create folder named My_SoftUni_Repo on the Desktop through the Terminal.
   - Example:

```
PS C:\Users\MaraE\Desktop> mkdir My_SoftUni_Repo


    Directory: C:\Users\MaraE\Desktop


Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
d-----        23/05/2025     13:40                My_SoftUni_Repo


PS C:\Users\MaraE\Desktop>
```




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

```
PS C:\Users\MaraE\Desktop> cd My_Softuni_Repo
PS C:\Users\MaraE\Desktop\My_Softuni_Repo>
```

! **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@192.168.0.28 ~
$ curl -s https://api.zippopotam.us/de/80331 | jq .
{
  "country": "Germany",
  "country abbreviation": "DE",
  "post code": "80331",
  "places": [
    {
      "place name": "München",
      "longitude": "11.571",
      "latitude": "48.1345",
      "state": "Bayern",
      "state abbreviation": "BY"
    }
  ]
}
```

```
[node1] (local) root@192.168.0.28 ~
$ curl -s https://api.zippopotam.us/de/60594 | jq .
{
  "country": "Germany",
  "country abbreviation": "DE",
  "post code": "60594",
  "places": [
    {
      "place name": "Frankfurt am Main",
      "longitude": "50.1026",
      "latitude": "06412",
      "state": "Hessen",
      "state abbreviation": "HE"
    }
  ]
}
```