Lab4 Objectives:

1. create script to list all files in /var/log every 5 seconds and append the list to /tmp/list.log file

    - command:

        - touch script.sh

        - nano script.sh

        - bash script.sh

    - screen shot:

    ```
    mariam@mariam-VirtualBox:~/Documents/sys-admin-labs/lab4$ touch script.sh
    mariam@mariam-VirtualBox:~/Documents/sys-admin-labs/lab4$ nano script.sh
    ```

    ```
    mariam@mariam-VirtualBox:~/Documents/sys-admin-labs/lab4$ cat  script.sh
    #!/bin/bash

    while true; do
      ls /var/log >> /tmp/list.log
      sleep 5;
    done
    ```

    ```
    mariam@mariam-VirtualBox:~/Documents/sys-admin-labs/lab4$ bash script.sh
    ```

    ```
    mariam@mariam-VirtualBox:/tmp$ cat list.log
    alternatives.log
    apache2
    apport.log
    apport.log.1
    apport.log.2.gz
    apt
    auth.log
    auth.log.1
    auth.log.2.gz
    boot.log
    boot.log.1
    boot.log.2
    boot.log.3
    boot.log.4
    boot.log.5
    boot.log.6
    boot.log.7
    bootstrap.log
    btmp
    cups
    dist-upgrade
    dmesg
    dmesg.0
    dmesg.1.gz
    dmesg.2.gz
    dmesg.3.gz
    dmesg.4.gz
    dpkg.log
    faillog
    fontconfig.log
    gdm3
    gpu-manager.log
    hp
    installer
    journal
    ```

2. **copy the script to /usr/local/bin directory and set the execution attribute to it**

    - commands:

        - sudo cp script.sh   /usr/local/bin

        - cd /usr/local/bin

        - sudo chmod +x script.sh

        - sudo cat script.sh

        - ./script.sh

    - screen shot:

```
mariam@mariam-VirtualBox:~/Documents/sys-admin-labs/lab4$ sudo cp script.sh /usr/local/b
[sudo] password for mariam:
mariam@mariam-VirtualBox:~/Documents/sys-admin-labs/lab4$ cd /usr/local/bin
mariam@mariam-VirtualBox:/usr/local/bin$ ls
script.sh
mariam@mariam-VirtualBox:/usr/local/bin$ sudo chmod +x script.sh
mariam@mariam-VirtualBox:/usr/local/bin$ sudo cat script.sh
#!/bin/bash

while true; do
  ls /var/log >> /tmp/list.log
  sleep 5;
done
mariam@mariam-VirtualBox:/usr/local/bin$ ./script.sh
```

3. <u>create systemd service file to execute the the script as background service</u>

- commands:

  ➢ sudo touch myBg_process.service

  ➢ sudo vim myBg_process.service

  ➢ sudo systemctl daemon-reload

  ➢ sudo systemctl enable myBg_process.service

  ➢ sudo systemctl is-enabled myBg_process.service

  ➢ sudo systemctl start myBg_process.service

  ➢ sudo systemctl status myBg_process.service

- screen shot:

```
mariam@mariam-VirtualBox:/etc/systemd/system$ sudo touch myBg_process.service
mariam@mariam-VirtualBox:/etc/systemd/system$ sudo vim myBg_process.service
mariam@mariam-VirtualBox:/etc/systemd/system$ sudo systemctl daemon-reload
mariam@mariam-VirtualBox:/etc/systemd/system$ sudo systemctl enable myBg_process.service
Created symlink /etc/systemd/system/multi-user.target.wants/myBg_process.service → /etc/systemd/system/myBg_process.service
mariam@mariam-VirtualBox:/etc/systemd/system$ sudo systemctl is-enabled myBg_process.service
enabled
mariam@mariam-VirtualBox:/etc/systemd/system$ sudo systemctl start myBg_process.service
mariam@mariam-VirtualBox:/etc/systemd/system$ sudo systemctl status myBg_process.service
● myBg_process.service - my backGround process
     Loaded: loaded (/etc/systemd/system/myBg_process.service; enabled; vendor preset: enabled)
     Active: active (running) since Sat 2023-02-25 02:17:07 EET; 24s ago
   Main PID: 20635 (script.sh)
      Tasks: 2 (limit: 9437)
     Memory: 552.0K
        CPU: 35ms
     CGroup: /system.slice/myBg_process.service
             ├─20635 /bin/bash /usr/local/bin/script.sh
             └─20645 sleep 5

02:17:07 25 يبر 9 mariam-VirtualBox systemd[1]: Started my backGround process.
```

```
[Unit]
Description=Keeping my sources fresher than Arch Linux
After=multi-user.target

[Service]
ExecStart=/usr/bin/bash /usr/local/bin/script.sh
Type=simple

[Install]
WantedBy=multi-user.target
```

4. using `cron`, schedule a job every 5 minutes to copy `/tmp/list.log` file to `/tmp/list.log.1` and compress the file using `zip` command
    - commands:
        - crontab -e
    - screen shot:

```
*/5 * * * * zip -r /tmp/list.log.1.zip /tmp/list.log
```