



## **Assignment - 06**

### **ENH 1301 - Application Laboratory**

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**Instructions :**

**Time: 40 minutes**

- **Instructions**
- **Students are not allowed to use the internet or mobile phones during the assignment.**
- **Follow the instructions given in the activities and do the relevant tasks exactly as described in the provided instructions.**
- **Take the screenshots of the commands and outputs according to the questions**
- **Create a pdf file, rename it with your index number and upload it to the Submission link.**
- **All work must be your own; collaboration is not allowed.**

#### **Activity 1**

Task 1: Script setup\_services.sh

Your script must:

1. Create a directory /var/monitoring (or ~/monitoring for practice).
2. Inside it, create three subdirectories: http\_services, database\_services, storage\_services.
3. Within each service folder, create three empty log files: service1.log, service2.log, service3.log.
4. Insert the following header into each log file:  

```
# Service Monitoring Log  
# Host: <current_hostname>  
# Created on: <current_date>
```

Task 2: Script archive\_logs.sh

Your script must:

1. Navigate to the /var/monitoring (or ~/monitoring) directory.
2. Create a new directory called archive\_<current\_date\_in\_YYYYMMDD\_format>.
3. Find all files ending in .log from the service subdirectories.
4. Copy these log files into the new archive directory.

5. Change permissions of every file in the archive directory to be read-only for the owner (no permissions for group or others).
6. Print a message stating how many files were successfully archived.

Task 3: Script audit\_services.sh

Your script must:

1. Check the ~/monitoring directory structure created in Task 1.
2. Create a report file service\_audit.txt.
3. Count the number of log files in each service subdirectory (http, database, storage).
4. Append a line to the report for each service type: [Service Type]: [Number of Log Files] files found.

Task 4: Script cleanup\_old\_data.sh

Your script must:

1. List all directories within ~/monitoring that start with the name archive\_.
2. Move any archive directory that was created more than 2 days ago into a new directory called ~/monitoring/old\_archives. (For testing, you can simulate this by creating an archive folder with an old date in its name).
3. Delete any file within the main service directories (http\_services, etc.) that is exactly 0 bytes in size.
4. Print a summary message: "Cleanup completed. Moved [X] archives and deleted [Y] empty logs."