**Exercise 1 – Informational Commands**

This exercise introduces a set of basic Linux commands used to retrieve system and user information. These commands are essential for understanding the system environment and managing user sessions and resources.

**1.1 Display the Name of the Current User**

**Command:**

whoami

**Explanation:**  
Returns the currently logged-in user. In the Theia environment, this typically displays:

Theia

**1.2 Get Basic Information About the Operating System**

**Command:**

uname

**Explanation:**  
Displays the kernel name (usually “Linux”).

**Extended Version:**

uname -a

**Explanation:**  
Provides detailed system information in the following order:

* Kernel name
* Network node hostname
* Kernel release
* Kernel version
* Machine hardware name
* Hardware platform
* Operating system

**1.3 Obtain User and Group Identity Information**

**Command:**

Id

**Explanation:**  
Displays the current user’s UID (user ID), GID (group ID), and group memberships.

**1.4 Get Available Disk Space**

**Command:**

Df

**Explanation:**  
Shows disk space usage in 512-byte blocks.

**Human-Readable Format:**

df -h

**Explanation:**  
Displays disk space in easily readable units like MB or GB.

**1.5 View Currently Running Processes**

**Command:**

ps

**Explanation:**  
Lists processes belonging to the current user.

**All System Processes:**

ps -e

**Explanation:**  
Displays all processes currently running on the system, regardless of owner.

**1.6 Get Information on Running Processes and System Resources**

**Command:**

top

**Explanation:**  
Provides a real-time, dynamic view of system activity including:

* System uptime
* Load average
* Memory and CPU usage
* List of running processes

**To exit:** Press q or Ctrl + c.

**Limit to 10 refreshes:**

top -n 10

Sorting Options (while top is running):

| **Key** | **Sorts by** |
| --- | --- |
| m | Memory Usage |
| p | CPU Usage |
| n | Process ID (PID) |
| t | Running Time |

**1.7 Display Messages**

**Command:**

echo "Welcome to the linux lab"

Output:

Welcome to the linux lab

Using Special Characters:

echo -e "This will be printed \nin two lines"

Output:

This will be printed

in two lines

| **Special Character** | **Effect** |
| --- | --- |
| \n | New Line |
| \t | Tab Space |

**1.8 Display Date and Time**

**Command:**

Date

**Explanation:**  
Displays the current date and time.

**Formatted Output:**

date "+%D"

Output Example:

07/27/25

| **Specifier** | **Meaning** |
| --- | --- |
| %d | Day of the month (01–31) |
| %h | Abbreviated month (Jan–Dec) |
| %m | Month number (01–12) |
| %Y | Full year (e.g., 2025) |
| %T | Time in HH:MM:SS (24-hr format) |
| %H | Hour (00–23) |

**1.9 View the Reference Manual for a Command**

**Command:**

man <command>

Example:

man ls

**Explanation:**  
Displays the manual page for the command ls. Use the arrow keys to scroll and press q to quit.

**Search All Manual Pages:**

man -k .

**Explanation:**  
Lists all available manual pages with brief descriptions.