SCR2043 OPERATING SYSTEMS

This lab assessment is designed to test your understanding and skills on some basic concepts and tools related to process monitoring and management in operating system. Please follow the instruc

Essential Steps Before Starting Lab Assessment 2:

1. Download necessary source codes:

Use the wget command to retrieve the following source code files to your Linux (or WSL or MacOS) env

2. Compile the source files:

Run all the dummy processes

Press enter two times.

Lab Assessment 2 : Linux Process Monitoring and Management

Instructions:

1. Carefully execute each command as instructed in the questions. ■2. Write down the exact command

3. Capture a screenshot of the command's output.

Question 1

Use the ps command with the appropriate option to display a complete list of all running processes with

Command

ps -e

Question 2

Employ the ps command with necessary options to unveil comprehensive details about each running process.

Question 3 ■Use the ps command with some tools to only list processes named "subprocess" and show

Question 4

Execute the ps command, specifying options that reveal only the following columns:

Process ID (pid) ■Owner of the process (user) ■CPU percentage (pcpu) ■■ Memory percentage (pme

Question 5 ■Building on the ps command used in Question 4, can you add an option to sort the listed p

Command

Question 6 ■Construct a command using ps, suitable options, and any additional tools to visualize the
■ "mainprocess"
Command ■ps -ef --forest | grep -E 'mainprocess|subprocess1|subprocess2'
Question 7

Question 8

Question 9 ■Terminate all running processes with the name “mainprocess”.

Question 10 ■Write a short C or Python code (choose only one language) demonstrating multiprocessi
Source Code:
Nano process.py
import multiprocessing ■import os ■def child_process():

Output: