LAB 3: Introduction to C Programming and Managing of Linux Processes

Objective

- To learn how to write and compile C programs in Linux.
- To manage processes using commands in Linux.

Instructions

1. Please do the following exercises and for each question produce a file for the code and screen shot of the output.
2. Show your work to your TA.
3. Collect the screen shots in a PDF file and upload All code files and the PDF file on TEAMS before the end of the lab to get full marks.
4. Use the following file naming convention for the PDF file:

   LAB3_section_your-first-name_student-id

Note: 1 mark (out of 10) deducted per day late. 3 days late maximum.

Exercises

1. Modify program `code2.c` such that it will ask for two numbers and prints the summation of the two numbers (as shown below).

```
Enter two numbers:
23
6
The sum is: 29
```

2. Modify program `code3.c` so that it multiplies the content of two arrays, A[] and B[], and store in array C[]. The program reads the numbers to be multiplied from file `in_file.txt` into array A[] and B[]. Below is the format of the input file where the first number is the total number of multiplications followed by the numbers-pair to be multiplied.

in_file.txt

```
3
1 3
5 7
9 11
```

Output

```
1 * 3 = 3
5 * 7 = 35
9 * 11 = 99
```

3. Write a program `loop.c` which has an infinite loop as shown below.

```
for (;;);
```

(i) Compile and run the program. (use ctrl+c to quit the program)

(ii) Execute the loop program in the background.

```
./loop&
```

(iii) List all current processes and their process id. Write down the process id of the loop program.