Please submit the following Exercises below as follows

Send to jkuatnotes5@gmail.com with subject line as ICS2305:PR2: name and student number

In addition to pasting the codes on the writeup , Please share the codes as zipped file with each having your name and number on the first line comment

deadline is 13th October 2024 5pm EAT

Exercise 1: Consider the code snippet below

```
1     int c = 5;
2     pid_t pid = fork();
3     if (pid == 0) {
4         c += 5;
5     } else {
6         pid = fork();
7         c += 10;
8         if (pid) {
9             c += 10;
10        }
11    }
12    fork();
13    printf("%d\n", c);
```

a) How many processes are created by the initial running of this program including the initial program created by running this program
b) Show at least two possible outcomes of the program above after coding it in C and running it

Exercise 2

`The program uses fork()` and `printf()`. **How many `X`, `Y` and `Z` will be printed?**

```c
/* Exercise  */
#include <stdio.h>
#include <unistd.h>
int main(int argc,char *argv[]){
    printf("X\n");
    fork();
    printf("Y\n");
    fork();
    printf("Y\n");
    return 0;
}
```

Exercise 3:

Write another program using `fork()`. The child process need to print “Niko Juja” and the parent process to print “ ICS2305 ni softlife” . The child process should print first ---this can be done without calling **wait()** in the parent..

Hint : use of for loop and sleep

Exercise 4:

Write a C program that prints the process ID , priorities and parent ID of all programs currently in the RAM ----

Exercise 5:

Write program to illustrate the usage of execlp(),execle(),execv(),execvp(),exeve() system calls , ensure that in your program , there are enough comments explaining each of the working