Operating System and System Administration IT2060

Year two Semester one 2021

Online Examination

Sri Lanka Institute of Information Technology

Time: 20 minutes only.

Paper number 2:

a) Consider the following program in writing the answer for the following questions.

```
#include <stdio.h>
#include <pthread.h>
#include <stdlib.h>
void * thread1()
{
     printf("Hello World!!\n");
}
int main()
{
     pthread_t tid1;
     pthread_create(&tid1,NULL,……… ,NULL);
     pthread_join(tid1,NULL);
     return 0;
}
```

b) Modify the program to read an integer number (n) from user.
c) Modify the program to create two child threads.
d) Modify the program where each thread prints all even numbers from 1 to 101.
e) Modify the program where main thread prints all numbers from 0 to n.

Grading Sheet:
1) Program is compiling. **(Yes / No)**
2)
3) Program is running successfully. **(Yes / No)**
4) Program is working with thread. **(Yes / No)**
5) Correct use of function/ variables. **(Yes / No)**
6) Include the indentation to the code. **(Yes / No)**
7) Plagiarism similarity value…………………

> **<u>Comment</u>**

Solution………….

```c
#include <stdio.h>
#include <pthread.h>
#include <stdlib.h>
#define Num_threds 2
void * thread1(int x)
{       int num = 0 ;
        while (num<101){
                printf ("%d \n",num);
                num = num + 2 ;
        }

}
int main()
{
        pthread_t tid[Num_threds];
        for(int x = 0 ; x<Num_threds ; x++){
                pthread_create(&tid[x],NULL,(void *)thread1 ,(void *)x);
                printf("I'm thread id is %d:\n",x);
        }
        for(int x = 0 ; x<Num_threds ; x++){
                pthread_join(tid[x],NULL);
        }

}
```