Student Name:Amarakota Himakailash

Student id:11612843

Email address:amarakotahimakailash@gmail.com

Github Link:https://github.com/himakailash/create-a-thread-using-function

1. Explain the problem in terms of operating system concept?

Creation of single thread (T1), which is running the function f1(). f1() calls pthread\_create to create a new thread, T2, to run function f2() concurrently with T1. These two threads and the functions they execute are illustrated . As illustrated in the figure, thread T1 calls function fb(), and thread T2 calls functions fa() and fc(). Your task is to synchronize the calls to fa(), fb(), and fc() so that the following synchronization rules are enforced:

(1) function fa() finishes before function fb() is called, and

(2) function fb() finishes before function fc() is called.

code:

#include<pthread.h>

#include<stdio.h>

#include<semaphore.h>

void \*fun1();

void \*fun2();

int shared=1;

sem\_t s;

int main()

{

sem\_init(&s,0,1);

pthread\_t thread1, thread2;

pthread\_create(&thread1, NULL, fun1, NULL);

pthread\_create(&thread2, NULL, fun2, NULL);

pthread\_join(thread1, NULL);

pthread\_join(thread2,NULL);

printf("Final value of shared is %d\n",shared);

}

void \*fun1()

{

int x;

sem\_wait(&s);

x=shared;

x++;

sleep(1);

shared=x;

sem\_post(&s);

}

void \*fun2()

{

int y;

sem\_wait(&s);

y=shared;

y--;

sleep(1);

shared=y;

sem\_post(&s);

}