Objective:
To provide deeper understanding of Multi Threading using CPU- OS Simulator.

Multi-Threading

Consider the following source code

```
program ThreadTest
        total = 0
        sub thread1 as thread
            for i = 1 to5
                total = total +i+35 * 40
            next
        end sub
        sub thread2 as thread
            for i = 6 to 9
                total = total + i
            next
        end sub
        call thread1
        call thread2
        wait
        writeln  ("Total  =", total)
end
```

Compile the above source code and load it in the main memory. Create a single process, choose RR scheduling algorithm with time quantum of 3 ticks. Run the Process.

Answer the following questions:

a) What is the value of "Total"?

   Total value is 2800

b) How many processes and how many threads are created? Total processes created is 1

Total threads created is 2

c) Identify the name of the processes and threads. Process name: THREADTEST

Thread name: P1T0 & P1T1

d) What is the PID and PPID of the processes and threads created? Process:

PID=1

PPID=0

Thread:

For P1T0,

PID=2

PPID=1

For P1T1,

PID=3

PPID=1

e) Represent the parent and child relationship using tree representation

Root Process

|_____THREADTEST

|_____P1T0

|_____P2T1