**Practical 03**

**Aim: Write a Program to demonstrate concept of threading and multitasking in Python**

**Threads:**

* A thread is the smallest unit of a program that executes on a system at a specific point in time.
* It can be considered as the smallest module scheduled in a computer system.
* A thread comprises all the information in the Thread Control Board(TCB).
* TCB consists of :

1. Thread Identifier
2. Stack Pointer
3. Program Counter
4. Thread State
5. Thread Register Set
6. Parent Process Pointer

**Types of Thread:**

1. Kernel threads
2. User threads

**Creating threads in Python:**

1. run()
2. start()
3. join()
4. isAlive()
5. Set and Get Thread Name
6. current\_thread()
7. getName()
8. setName(name)
9. name property

* The threading module provides high-level support for threads. This module has following methods:

1. threading.activeCount()
2. threading.currentThread()
3. threading.enumerate()

Threads can be created in numerous ways:

1. To create a thread without using thread class
2. To create a thread using thread class

**Multithreading**

* Multithreading is a model of program execution that allows for multiple threads to be created within a process, executing independently but concurrently sharing process resources.
* Depending on the hardware, threads can run fully parallel if they are distributed to their own CPU core.