**THREADS**

**What is a thread?**

A thread is a path of execution in a process.

**How to verify that threads of same process share a common data segment?**

In the program we have both global and local variables. It is observed that the global variables have the same virtual memory address throughout the program hence there is a possibility of them pointing the same physical address.

For all the three threads we shall be changing the global variables values and observe them.

We observe that all the values are same hence we conclude that the threads of same process share a common data segment.

**Verification of the fact that each thread of same process has a unique stack:**

As we know that the temporary variables in each thread do not have same virtual memory address which gives arise to the probability of the pointing to different address.

To verify the above fact we shall be changing the temporary variables in oe of the threads and print them in another thread.

The observations made were that they all are not same.

So we infer that each thread of same process has a its own unique stack.

**Synchronization and its importance among threads**

Thread synchronization is the parallel execution of two or more threads that share critical resources.

First we tried to used semaphore signals to control the program and as a result we were able to interpret the results.

But when we removed the semaphore signal,it became difficult to interpret the results as the program was uncontrollable as well as unpredictable.