

Process Ring

Write a program that will create N threads/processes connected in a ring (see attached image). After forming a ring, these threads/processes should send M number of messages around the ring, measure the time taken for the whole operation and then terminate gracefully. The message can be anything. For ease of use, consider a simple string, say "Hello Ring World!".

You should be able to start the ring from the command line by supplying N and M values.

E.g.

```
$> processRing 10 50 # Should print the time taken to create a  
ring of 10 threads and sending a message 50 times around it.
```

A couple of strategies for tackling this exercise follows. The first one is to have a central thread that sets up the ring and initiates sending the message.

The second strategy consists of the new threads spawning the next threads in the ring. With this strategy, you have to find a method to connect the first thread to the second thread.

What is a good way to send messages between threads? What mechanism would you use and why? Try to find the limits - what is the maximum number of threads you can create in your machine? What is the maximum $N * M$ value supported by your machine?

