Question 1:

Parent-Child IPC program

Summary:

Write a program of 10 children and 1 parent where the parent sends messages and the children read the messages and write them to each individual file owned by the child. The message the parent sends is preferred to be computationally expensive. Please make the rate of messages sending customizable.

Tools:

Please use C programming and IPC on Linux OS preferably CentOS 5.x version.

Detail:

Say parent P creates children C1, C2….C10 each with file handles F1,F2….F10. Parent sends a message (say couple of random numbers), the child picks the numbers and computes the sum and writes them to their individual file. The message type and result are given as an example please feel free to use a computationally intensive message and operation. The "rate of messages" refer to number of individual messages per second per child.

Please experiment using a high rate of messages and computationally intensive message.

Deliverables:

Please provide the C code files along with the Makefile in a compressed format (i.e tar.gz)

Question 2:

Please use either bash/perl/python to write a script on linux.

Description:

The script is a cron job in linux and will make sure that **only one instance** of it is running at any given time. It outputs the memory, cpu, filesystem partition information and also lists the files that have changed from its previous run. The files changed can be limited to one directory check. The cron could be run either hourly or in a lesser time interval.

Deliverables:

Please provide the script.