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1. General

Aim

Read temperature values from sensors to 20 sensor descriptors. After that read all 20 sensor descriptors at same time. Deal with the data reading from sensor descriptors and calculate the maximum, minimum and average delay.

Project Plan

Step 1

According to the project requirement, trying to read 5 temperature values from sensor to sensor descriptors and printing 1 measurement values and time values from the first file descriptor

Step 2

Trying to print delay time from two time values

Step 3

Build structure of whole processes. Trying to use system call fork() build 20 processes. The relationship between father and child will be like following graphics.

Step 4

Combine step2 and step3 .Put the function startread() which receive sensor descriptors as parameter into child and parent processes.

Step 5

In order to get the total sum of delay time, we have to let parent process and child process communicate. So using system call pipe() make to processes communication.

Step 6

Finally, write function compare and put it in the parent process so that we can have the value of maximum delay time and minimum delay time.

Programming language: C programing language.

Team division

We decided to do the pair programming and try to finish it in 3 days (3 hours per day). There is no particular task division, we will work like one person writing the code for 1.5 hours, another sitting beside him navigate and supervise. After 1.5 hours the role exchanges.

1. Function specification