Important Goals Report

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The important goals for the design are as follows:

The program MUST calculate the determinant of a 3x3 matrix (M) and find the largest element in the matrix M and display the results on screen to the user.

The program will create three child processes P1, P2, and P3. The computation of the determinant is broken into three tasks and each task is assigned to P1, P2, and P3 respectively.

$$M = \begin{matrix} a & b & c \\ d & e & f \\ g & h & i \end{matrix}$$

R = a(ei-fh) – b(fg-di) + c(dh-eg)

D1 = a(ei-fh)
D2 = -b(fg-di)
D3 = c(dh-eg)

P1 is in charge of calculating D1 and finding the largest element in row 1 of M.
P2 is in charge of calculating D2 and finding the largest element in row 2 of M.
P3 is in charge of calculating D3 and finding the largest element in row 3 of M.

The Parent process is in charge of taking the results of the children processes and calculating the determinant R and the largest element L.

The Parent must wait for all the child processes to finish before calculating the results.
The time it takes for each process to finish must be calculated and displayed.

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