Report 2
System Programming

Baran Hasan Bozduman
171044036

April 13, 2021

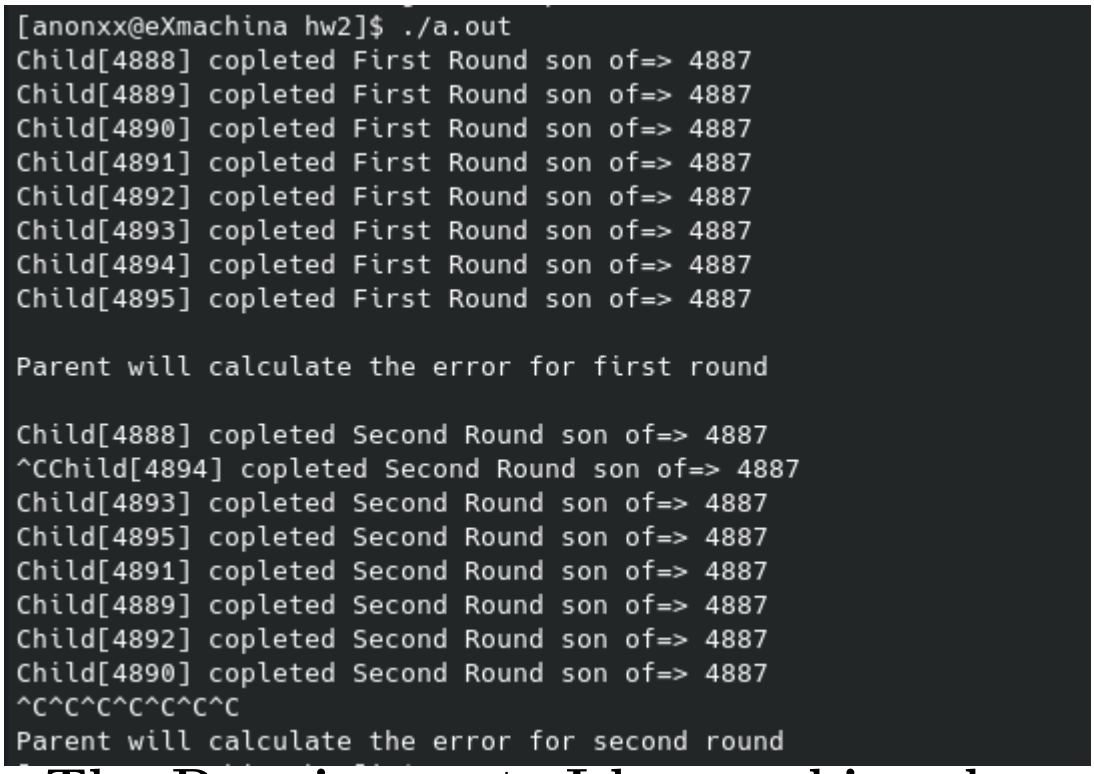
Problem Definition

The problem was implementing a calculation program with child processes each child will be responsible for different calculations)

Design Decision

I calculated Lagrange by using online resources one of them is gfg other one was a javascript code so I struggle it into c language and i can find all values correctly.
For the synchronization I tried to implement a flag similar structure firstly it creates children of the parent processes then execute it for first round then it waits signal from his parent and after parent say them you can continue it starts to run second round and make the calculations for rest of them. Parent and children send signals to each other to determine when they should continue or when they should stop but I implement it but it is not working correctly for second round it stops working somehow(probably because of sigint the child can not take the some signals I could not merge because of other lessons) and it waits for the signal to continue other parts so i send them separately

```
[anonxx@eXmachina hw2]$ make
gcc processM.c -Wall -o processM
[anonxx@eXmachina hw2]$ ./processM example
Error of polynomial of degree 5: 23.3
Error of polynomial of degree 6: 9.7
Polynomial 0: -491.0 917.6 -547.1 153.0 -22.2 1.6 -0.0
Polynomial 1: -13.0 37.5 -26.5 9.9 -2.0 0.2 -0.0
Polynomial 2: 16.6 -8.4 -1.7 2.0 -0.4 0.0 -0.0
Polynomial 3: 799.0 -1125.8 615.2 -167.8 24.3 -1.8 0.1
Polynomial 4: -109.8 211.1 -134.7 40.1 -6.0 0.4 -0.0
Polynomial 5: -51.7 89.3 -48.3 12.1 -1.5 0.1 -0.0
Polynomial 6: -1836.3 1791.3 -688.6 134.7 -14.2 0.8 -0.0
Polynomial 7: 70.6 -113.3 69.4 -20.6 3.2 -0.3 0.0
[anonxx@eXmachina hw2]$
```



The Requirements I have achieved

I tried the rules below and they worked properly on my computer

1. No compilation error
2. No compilation warning
3. $Make\check{f}ile$
4. $ReportinLa\check{t}exformat$
5. Printed usage information in case of missing or invalid argument
6. Program did not crashed
7. No memory leaks
8. Submitted on time
9. Informed user in case of system errors
10. It opens file and creates children in second file!

The Requirements I have failed

For second round Synchronization is not completed so I send it in another file