For this file, the program will contain the main function. This will essentially manage the whole process by calling all the methods to acquire shared memory, fork child processes, and display the shared memory once it has been updated by the children.

Initialize Main

If command line is not valid

terminate with error

Initialize shared memory pointer

Initialize memory ID variable

If number of command line arguments is not valid

terminate with error

Request shared memory

If request failed

Terminate with error

Attach shared memory

If attachment failed

Terminate with error

Fill shared memory

Display shared memory

Fork all the child processes

If Forking all children failed

Terminate with error

Wait for children to terminate and store their process IDs and exit codes

Display the shared memory again

Detach shared memory

Remove shared memory

Terminate parent