[05] Write two separate programs that communicate via POSIX shared memory.

- Producer process initializes POSIX shared memory and forks a child. Then,
  - parent calls insert to write a list of distinct positive integers either to shared memory S1 (even elements) or to shared memory S2 (odd elements).
  - child calls insert to write a list of distinct negative integers either to shared memory S1 (all even elements) or to shared memory S2 (all odd elements).

If during insertion to S1 or S2, parent, or child discover an integer with the same absolute value, the new number is not inserted, and the number that exists is erased.

- Consumer starts after producer exits. It creates a virtual pointer to shared memory S1 & S2 (how to guess size?), calls a function to average a) all even numbers in S1, and b) all odd elements in S2, and finally deletes S1 & S2
  - For example, if consumer finds S1 = {2, -4}, and S2 = {1, -3, -7} then it prints averages -1 and -3.
- Question: Is the insert function of producer thread-safe?
  What if one of the producers is killed?

ΠΡΟΣΟΧΗ
Ανεβάστε την λύση στο φάκελο Εργασίες/Εργασίες 5 στο ECLASS, π.χ.05_xxxx.c αν ο Αριθμός Μητρώου σας είναι xxxx.

Η προθεσμία **είναι η Δευτέρα 23/11/2020 και ώρα 18:00. Γενικά δεν γίνονται δεκτές εκπρόθεσμες υποβολές.**