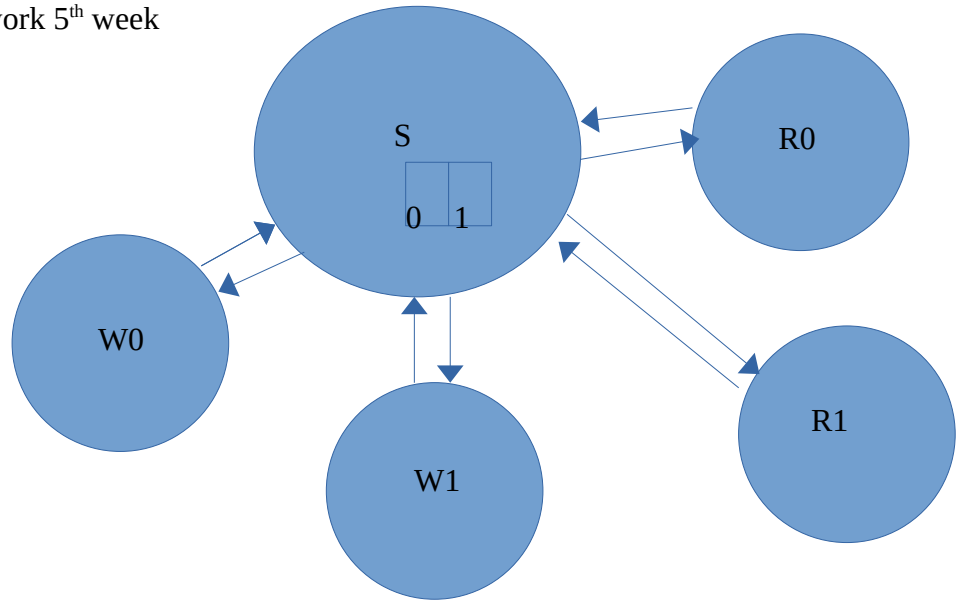
Homework 5th week



W0 generates random integers, asks to write in cell 0
W1 generates random integers, asks to write in cell 1
R0 asks reading cell 0 if its value has changed and writes into a logfile F0
R1 asks reading cell 1 if its value has changed and writes into a logfile F1

S is server connected through couples of unnamed pipes. One pipe is for asking, the other one for answering.

The code of S can be schematized as follow:

loop forever
    select all incoming pipes
    accept one of the queries *under condition**
    answer

conditions for W0, W1
if cell[0]==cell[1]==0 accept both
if cell[0]<=cell[1] accept W0
if cell[1]<=cell[0] accept W1

conditions for R0, R1
if cell[0] has changed accept R0
if cell[1] has changed accept R1

Hints:

- you can read random numbers from /*dev/random* (see slides)
- test separately the W and R processes
- use ascii characters instead of integer
- try different timeout values, including a zero value
- count how many numbers have been stored in S by W0 and W1 and compare with the logfiles lengths
- try to estimate the speed (when timeout is zero in particular).