1) For each of the following process state transition, say whether the transition is legal and how the transition occurs or why it cannot.

   a) Change from thread state WAIT to thread state RUNNING
      i) Transition is illegal because the CPU scheduler decides which process is ready to run next. A process cannot transition from wait to running. It has to be wait -> ready -> running

   b) Change from thread state RUNNING to thread state WAIT
      i) Transition is legal because the process might be waiting for another action to be completed before it can start running again.

   c) Change from thread state READY to thread state WAIT
      i) Transition is illegal because the process cannot go from Ready to Wait. Only a running process can be set to wait but when the process is Ready then the CPU has to execute it and can't switch to wait. Ready -> running -> wait.

   5) 3 children will be made and 1 parent process.