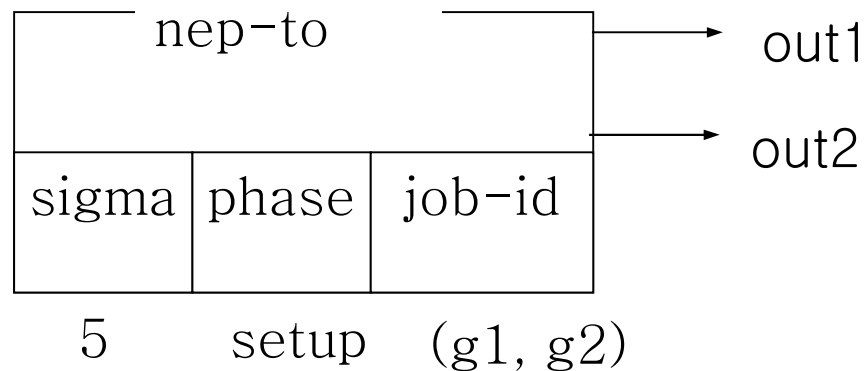# Midterm project
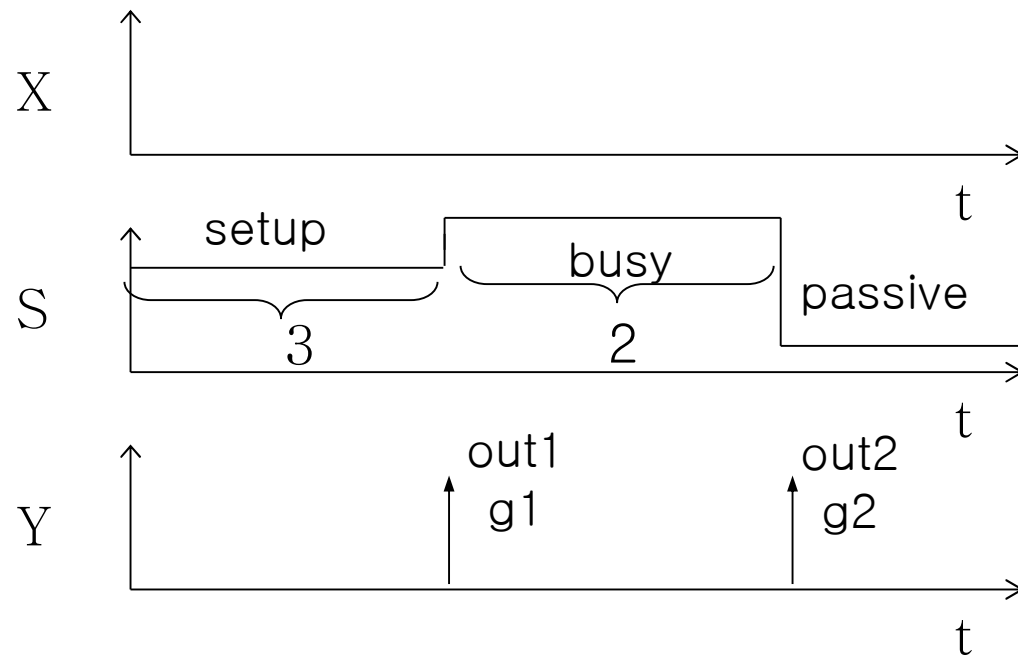
Due date: 5:00PM, May 14 (Thursday), 2020

nep-to : no external input, two-step processor

(1) model diagram
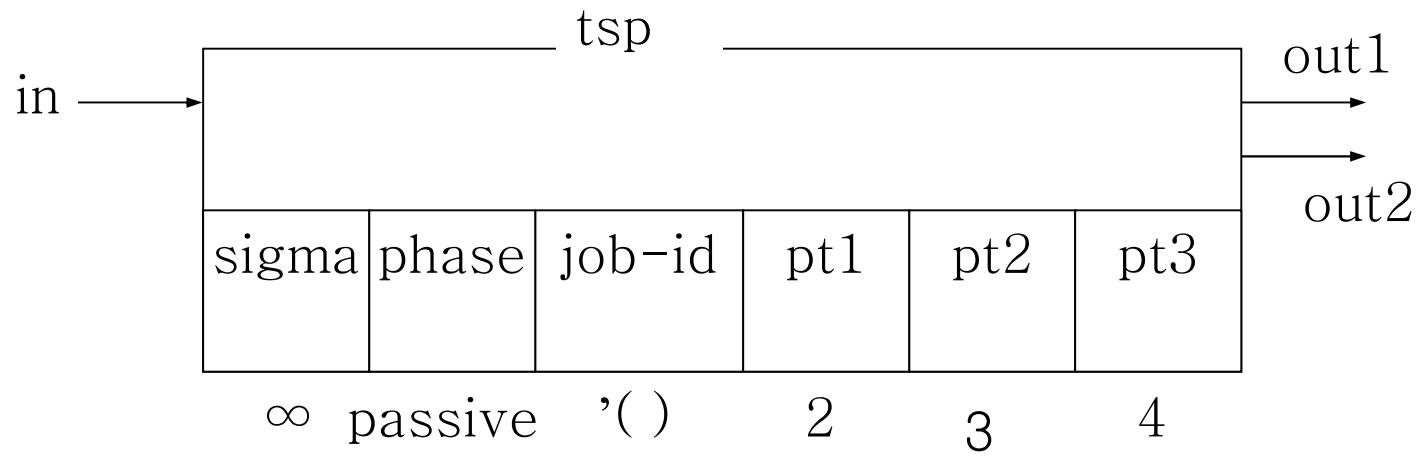
nep-to			→ out1
			→ out2
sigma	phase	job-id	
5	setup	(g1, g2)	

(2) timing diagram of nep-to

tsp : three step process

(1) model diagram

sigma	phase	job-id	pt1	pt2	pt3
∞	passive	'( )	2	3	4

(2) timing diagram (tsp)

ps

(1) model diagram

	sigma	phase	job-id	stack	p.t.
	∞	passive	'( )	'( )	10
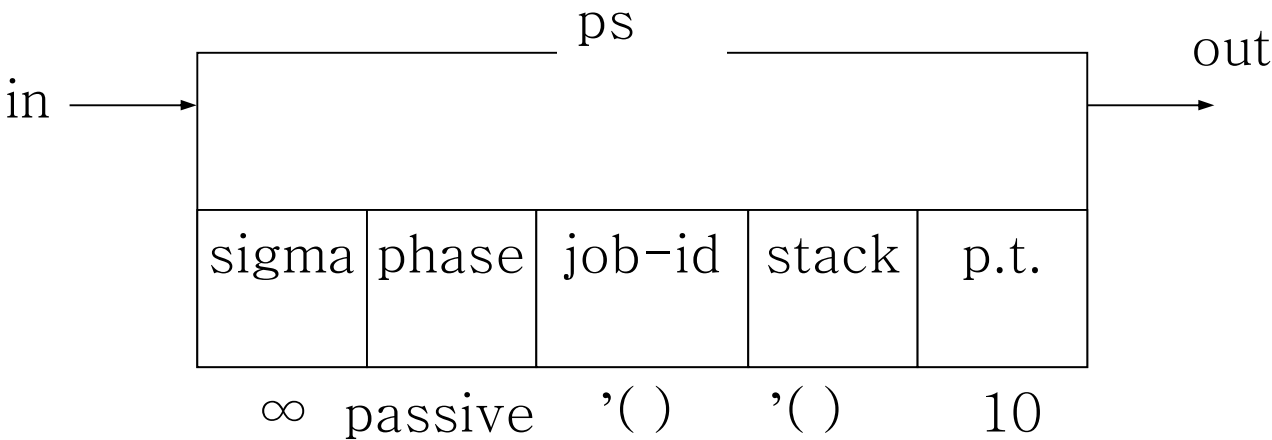
(2) timing diagram (ps)

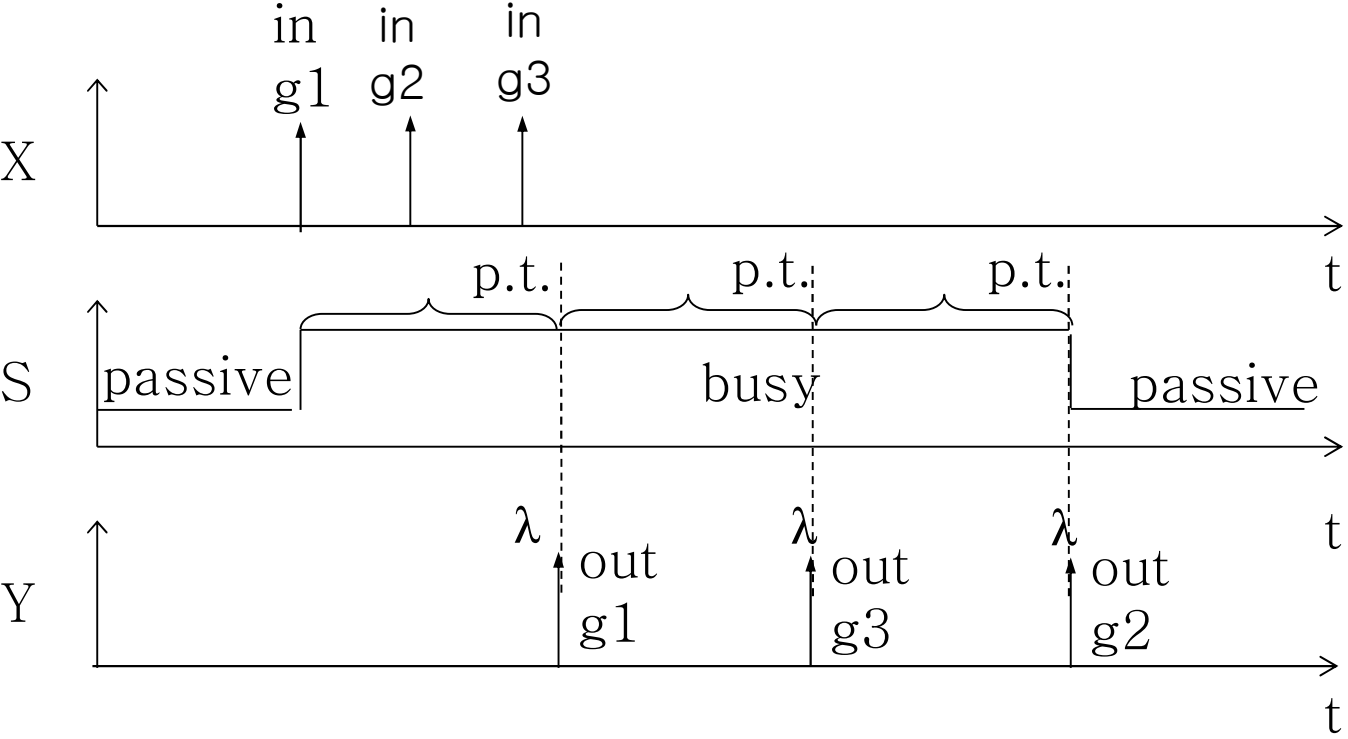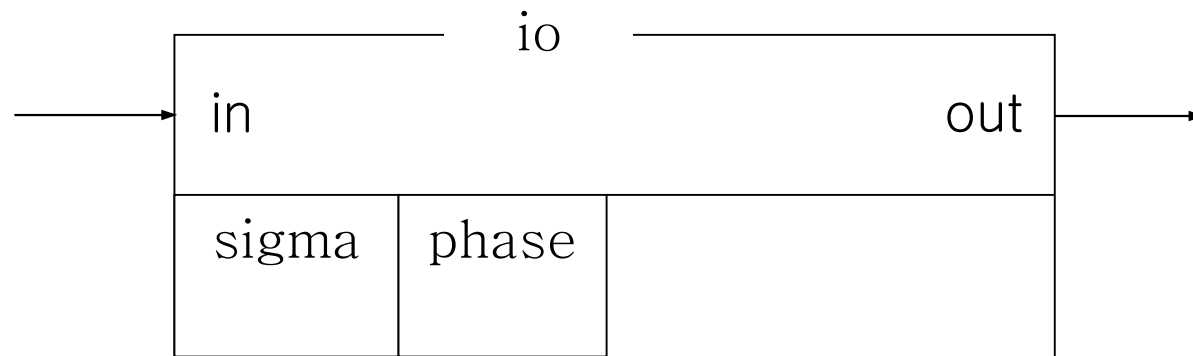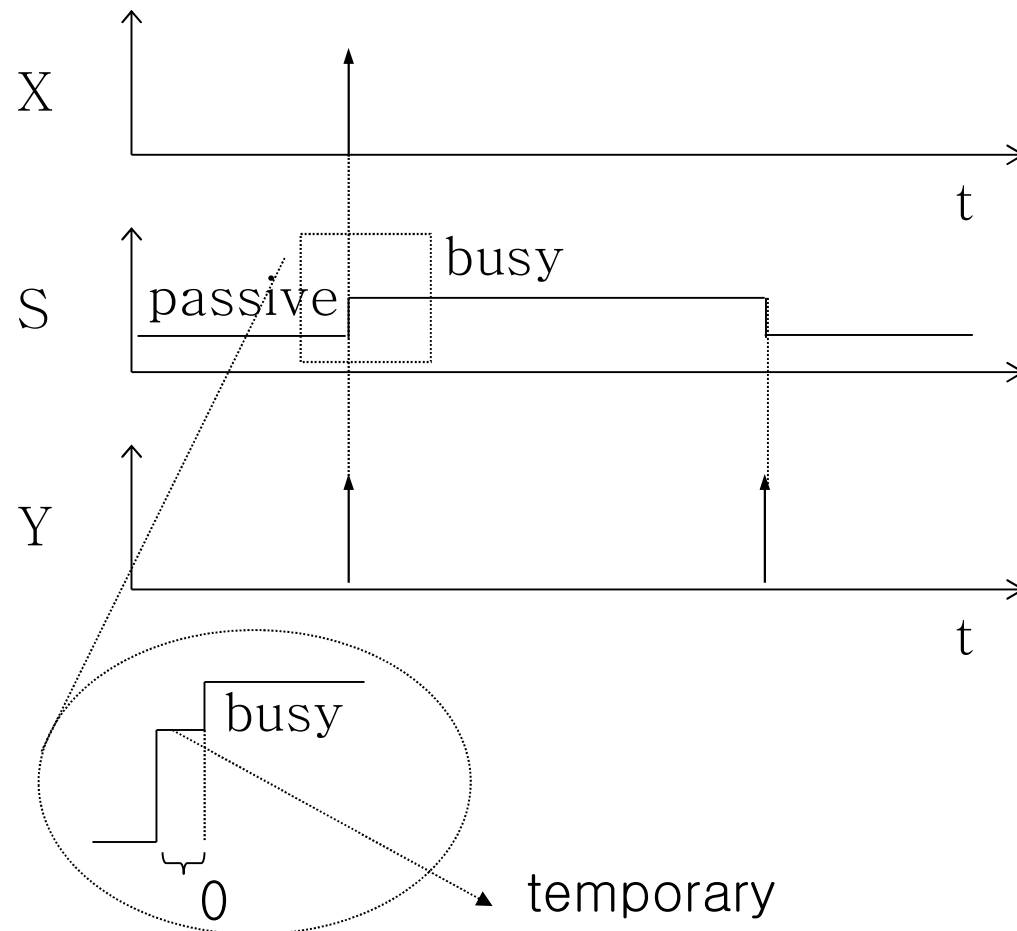io : immediate output

(1) model diagram

(2) timing diagram (io)

cg2 (complex generator version 2)

(1) model diagram

cg2

'stop

| stop			out1 out2
sigma	phase1	pt1	pt2
5	active1	5	10
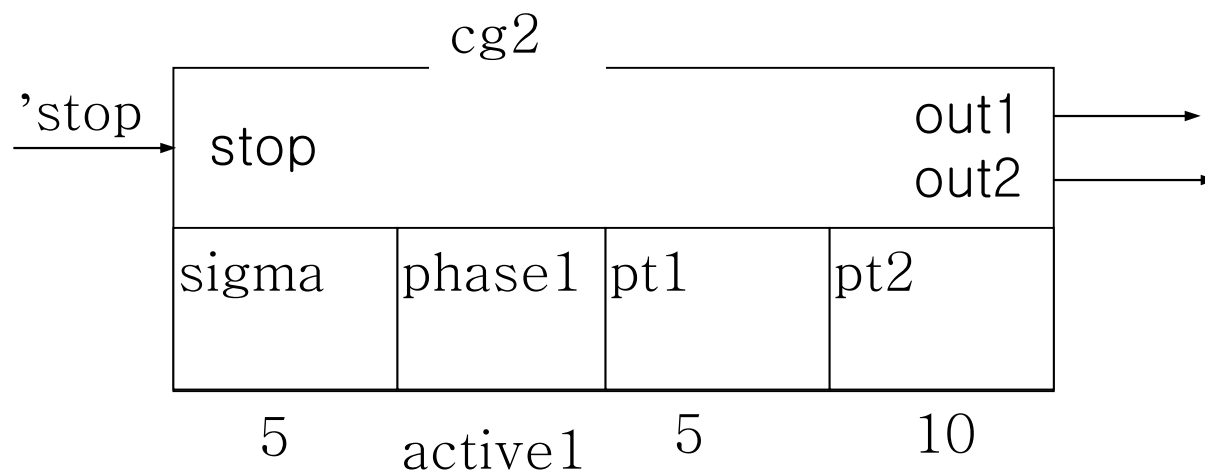
(2) timing diagram (cg2)
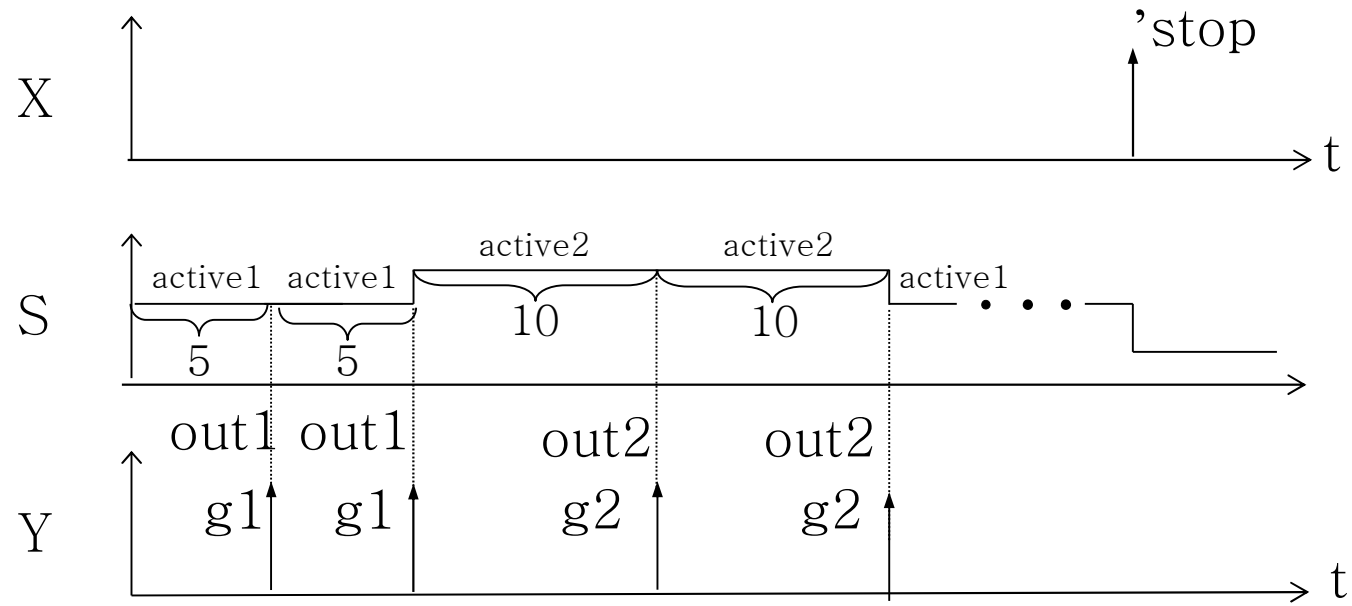
selp (selective processor):

Every input with the value less than 10 are ignored . The inputs arrived during busy phase are inserted into a queue if the input value is greater than 9. The processing time for each input is 5.

Draw the three diagrams (have to determine state variables and initial values).

timing diagram (selp)
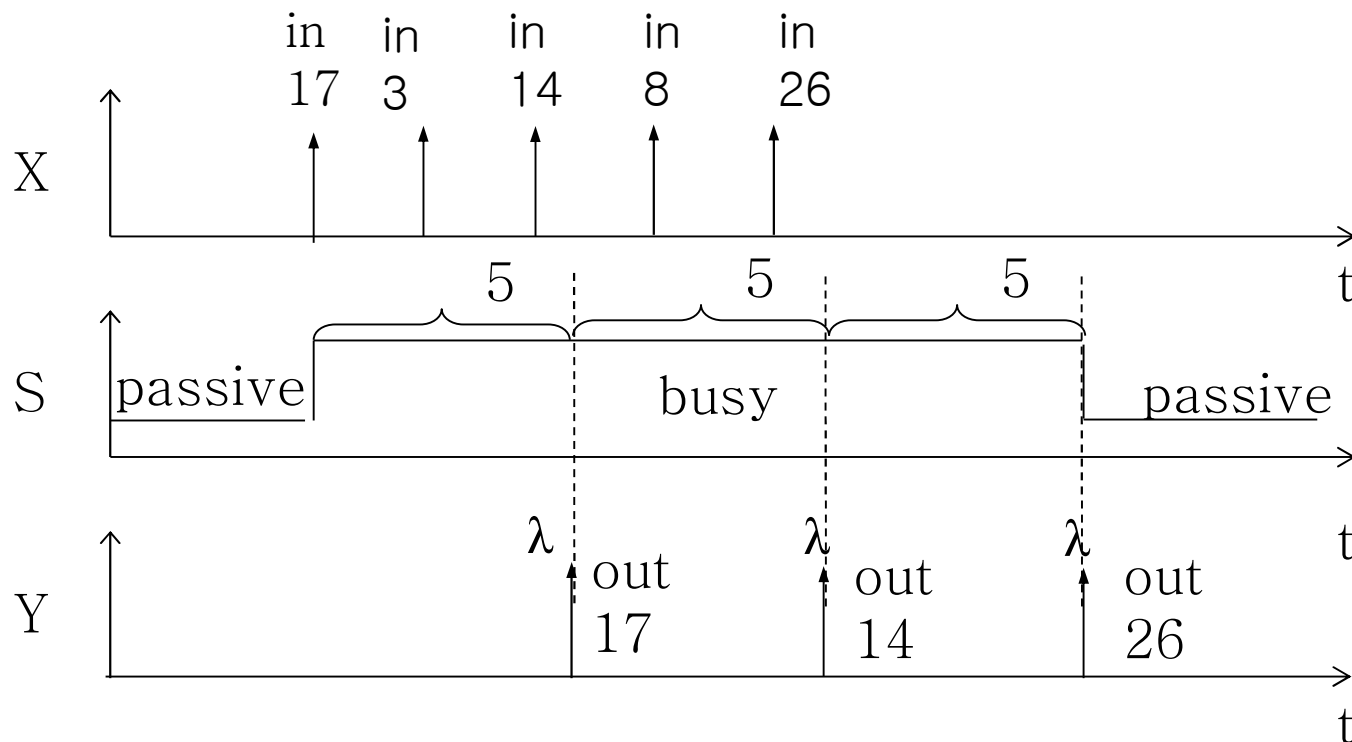
sbb (simple baseball)

Program the model for just one inning, i.e., just up to 3 outs.

Input (pitch) : fiz (fast-in-zone), siz (slow-in-zone),
           foz (fast-out-of-zone), soz (slow-out-of-zone)
Output: end-of-inning, current score (until the end of the current inning)

▶ Generate an outcome of a play randomly depending on the pitch input.
(The ratio of outcomes after a pitch can be determined by (random int) .
 The ratio of outcomes are modeler dependent).
 example) The numbers in the parenthesis are percentages.
with fiz : (strike 50) (foul-ball 25) (single-hit 10) (double-hit 7) (triple-hit 2) (home-run 1)
         (base-on-balls 5)
with siz: . . .
with foz : (ball 50) (strike 20) (foul-ball 20) (single-hit 5) (double-hit 3) (triple-hit 1)
         (home-run 1)   ;; note that the strike is also possible if the player swings in the air.
with soz: . . .

▶ hint; phase: none, 1st-base, 1st-2nd-base, 1st-3rd-base, 2nd-base, 2nd-3rd-base, 3rd-base, full-base
        state variable: ball-count, strike-count, out-count, points, etc.

sbb continues

▶ Input port : input value is one of the followings,
             fiz, siz, foz, soz
    Output port : output value is the end-of-inning

▶ Test until the a inning is over .
     Test of 3 innings with the different input combinations.

▶ hint:
    * sigma for each phase: infinity (wait until the next pitch)
                      or some finite value (if the time limit is imposed until the next pitch)

    * (random 10) returns integer values from 0 to 9

▶ For all the models, inputs arriving during a phase except passive are
   ignored (just continue function should be executed) otherwise specified.

   Also, the model testing related to above case is not needed.

▶ Try within the scheme or devs-scheme environment :   F3, ►

▶ log file generation

   [1] (transcript-on "p.tst")

   [2] (load "mbase/p.m")

   [3] (send p inject 'in 'g1 7)

     :   :

   [n] (transcript-off)

How to submit the midterm project

▶ Submit the followings in midterm project file (*.doc or *.hwp)
   1. Three diagrams for all models
      (model, timing, state transition diagrams)
   2. Source codes (model definitions or programs)
      (nep-to.m, …, sbb.m)
   3. Test results (verifications)

▶ In addition above midterm project file, also submit the seven *.m files
   so that TA can test these models.

▶ Create a zip file that contains all the above files (one *.doc or *.hwp file and the
   seven*.m files) and **email the zip file** to **wonjin12@skku.edu**

The zip file should be named as shown below:
Mid-project_id_name.zip
Ex) Mid-project_2020123456_HongGilDong.zip

The Zip file should include the following files:
1. <u>Midterm project file</u> (*.doc or *.hwp)
   ↳ project file name is same as zip file name
2. The seven model program files
   (nep-to.m, tsp.m, ps.m, io.m, cg2.m, selp.m, sbb.m)

Submission file example

Mid-project_202
0123456_HongG
ilDong.zip

Mid-project_2020123456_HongGilDong.zip - 반디집 6.26

파일(F) 편집(E) 찾기(I) 설정(S) 보기(V) 도움말(A)

열기   풀기   새로 압축   파일 추가   파일 삭제   테스트

Mid-project_2020123456_Hong

Source File

이름

Source File

Mid-project_2020123456_HongGilDong.docx

파일: 8, 폴더: 1, 압축 파일 크기: 1.34KB

7 files
- cg2.m
- io.m
- nep-to.m
- ps.m
- sbb.m
- selp.m
- tsp.m

Refer to page 15