Process Synchronization

Scenario Statement:

Suppose there are four processes **(P1, P2 , P3, P4)**, and three semaphore variables **(A, B, C)**.

I) Process **P2** must execute before process **P1**.
II) Process **P4** must execute after process **P3**.
III) Process **P3** executes after process **P2**.

Initial values of each semaphore are as

A = 0, B =0, C = 0

Execute all the processes successfully using process synchronization operations **wait( )** and **signal( )**.

P2 > P1

P3 > P4

P2 > P3 > P1 > P4

P2	**P3**	**P1**	**P4**
Signal(A); Print(P2);	Wait(A); ... Signal(A); Print(P3); Signal(B);	Wait(B); ... Signal(B); Print(P1); Signal(C);	Wait(C); ... Signal(C); Print(P4);

Solution:

P1	**P2**	**P3**	**P4**
Wait(B); ... Signal(B); Print(P1); Signal(C);	Signal(A); Print(P2);	Wait(A); ... Signal(A); Print(P3); Signal(B);	Wait(C); ... Signal(C); Print(P4);

Wait(S): while S<=0 do nothing

S = S-1

Signal(S): S = S-1