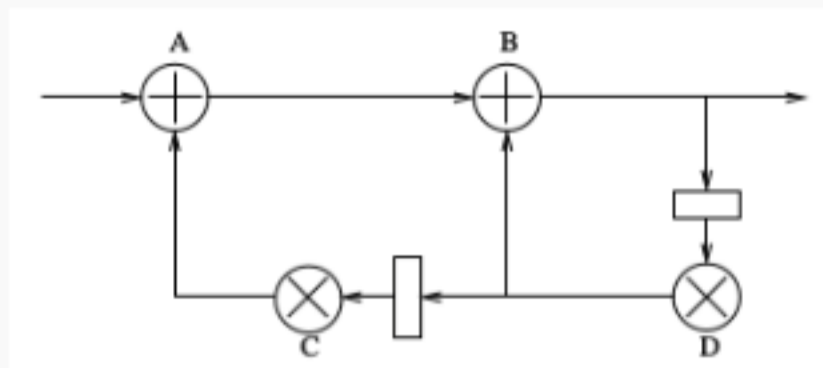# Unit 7 - Week 5

Course outline

Assignment 5

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2019-09-04, 23:59 IST.

For the diagram shown, assume input is $x(n)$ and output is $y(n)$. Also assume that each node A, B, C, D are functional units (adders and multipliers as indicated), and that the rectangular blocks are registers (or delay elements in general)

Also assume that you have one type of hardware unit that can perform either addition or multiplication,each pipelined to depth 1 (ie, latency = 1)

In the ASAP schedule for this system, indicate the cycle numbers in which each of the following operations will be scheduled (assume that the first cycle is called cycle 0):

1) Value of A = _____ ?

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Numeric) 1

1 point

2) Value of D = _____ ?

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Numeric) 0

1 point

In the ALAP schedule for this system, assume that we are trying to fit within a total period of 6 clock cycles (cycles are numbered from 0 to 5). Indicate the cycle numbers in which each of the following operations will be scheduled (assume that the first cycle is called cycle 0 and last cycle is 5)

3) Value of A = _____ ?

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Numeric) 4

1 point

4) Value of D = _____ ?

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Numeric) 4

1 point

Given the previous two cases for a total schedule length of 6 time units, what will be the mobility of each of the following blocks in number of cycles:

5) Value of A = _____ ?

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Numeric) 3

1 point

6) Value of D = _____ ?

No, the answer is incorrect.
Score: 0
Accepted Answers:
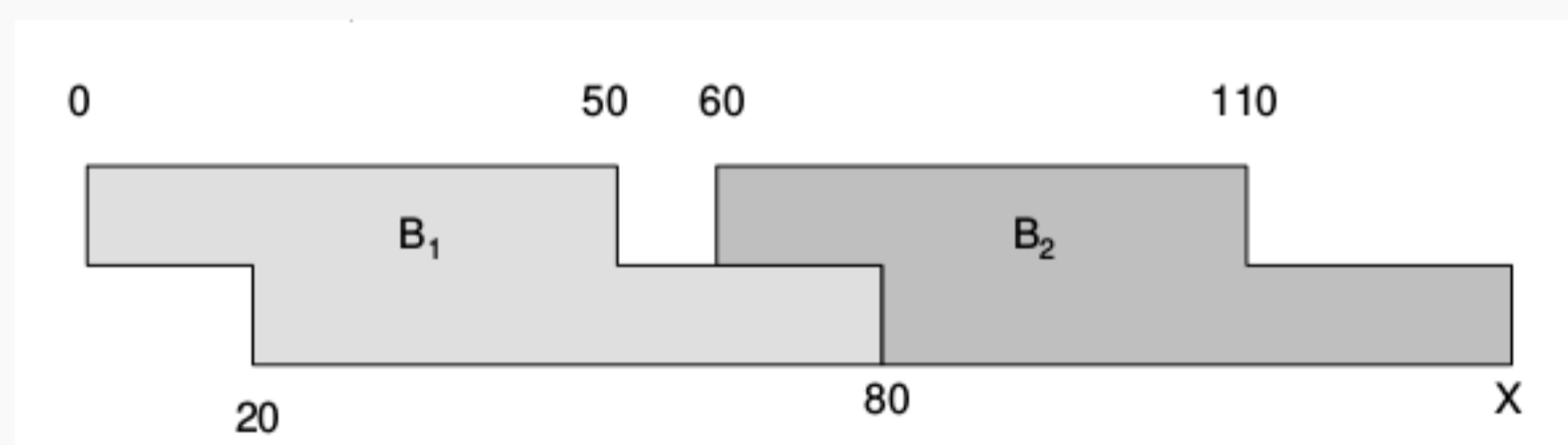(Type: Numeric) 4

1 point

7) What will be the hardware utilization efficiency (in percentage, answer accurate to one decimal point) assuming a single hardware unit is used for all the computations and the total schedule length is 6 time units?

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Range) 66.6,66.8

1 point

For the diagram shown, assume there are some functions being scheduled in an overlapped schedule on two processors. The block B_1 shows all the functions in one iteration (without showing the individual functions), and B_2 is identical to B_1 , except that it is later in time

8) What will be the value of X in the figure ?

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Numeric) 140

1 point

9) What is the initiation interval of the schedule shown?

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Numeric) 60

1 point

10) What is the hardware utilization efficiency of this design (in percentage, accurate to 1 decimal place)

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Range) 91.6,91.8

1 point