CompSci-230: Homework 6

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4 6 6 6 6

5 5 6 5 5

4 5 5 5 3

2 3 3 1 3

1 1 1 2 2

P1 P2 P3 P4 P5 idling ratio is 0

Explain: I make J4 and J6 execute more times in one period. For J4, it only runs in P1, so it is legal. For J6, even though it run in 4 different processors, but they are not ahead each other more than one time slice, so it is legal too.

1. (a)

6 6 4 6

5 5 4 6

5 5 5 5

3 3 3 3

2 2 2 5

1 1 1 1

P1 P2 P4 P5 idling ratio is 0

Explain: I still make J4 and J6 execute more times in one period. The reason is the same as above.

(b)

5 3 1 6

4 6 6 6

5 5 5 5

4 5 5 3

2 3 1 3

1 1 2 2

P1 P2 P4 P5 idling ratio is 0

Explain: I just migrate 4 of the original 5 VP in P3. The J6 execute more than once. But it is still legal.

1. Cost of (a) is 15 VPs

6 6 4 6

5 5 4 6

5 5 5 5

3 3 3 3

2 2 2 5

1 1 1 1

P1 P2 P4 P5

Cost of (b) is only 4 VPs

5 3 1 6

4 6 6 6

5 5 5 5

4 5 5 3

2 3 1 3

1 1 2 2

P1 P2 P4 P5

So the way of re-assigns VPs is more efficient than totally generate a new allocation model.