**MRLC\_List (hal.dot)**

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------------- FILES -------------

1: hal.dot

2: fir1.dot

3: cosine1.dot

4: cosine2.dot

5: Any other .dot file

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Enter the file option: 1

========================================

------------- ALGORITHMS -------------

1: MLRC\_ILP

2: MRLC\_ILP

3: MLRC\_List

4: MRLC\_List

========================================

Enter Option: 4

========================================

Nodes associated with Operations = [['7', '9', '8', '10', '12', '14'], ['11', '13'], ['17', '16'], ['15'], ['20', '21', '19', '18']]

Unique Resource Types = ['mul', 'add', 'sub', 'les', 'exp']

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MRLC\_List: Minimum Latency: 102

Enter Latency: 103

-------------------------Start of t = 1-------------------------

Un-scheduled Nodes = ['20', '21', '22', '0', '7', '9', '8', '11', '10', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes before deletion = ['9', '8', '11', '7', '10']

Nodes with no valid Scheduled Predecessor = []

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['9', '8', '11', '7', '10']

Nodes with Predecessor Still Busy = []

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['9', '8', '11', '7', '10']

U = [['9', '8', '7', '10'], ['11'], [], [], []]

B = [[], [], [], [], []]

S = [[1, 33, 1, 12], [43], -1, -1, -1]

U\* = [[], [], [], [], []]

V = [['9'], ['11'], [], [], []]

Number Of Instances = [1, 1, 1, 1, 1]

Scheduled Nodes = ['9', '11']

Un-scheduled Nodes = ['20', '21', '22', '7', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

-------------------------End of t = 1-------------------------

-------------------------Start of t = 2-------------------------

Un-scheduled Nodes = ['20', '21', '22', '7', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '21', '22', '7', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '12', '20', '14', '22', '16', '19', '18', '17']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['21', '7', '8', '10', '15']

Nodes with Predecessor Still Busy = ['15', '21']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['7', '8', '10']

U = [['7', '8', '10'], [], [], [], []]

B = [['9'], ['11'], [], [], []]

S = [[0, 32, 11], -1, -1, -1, -1]

U\* = [['7'], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [2, 1, 1, 1, 1]

Scheduled Nodes = ['7']

Un-scheduled Nodes = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

-------------------------End of t = 2-------------------------

-------------------------Start of t = 3-------------------------

Un-scheduled Nodes = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '20', '14', '17', '16', '19', '18', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['21', '8', '10', '12', '15']

Nodes with Predecessor Still Busy = ['12', '15', '21']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8', '10']

U = [['8', '10'], [], [], [], []]

B = [['7', '9'], ['11'], [], [], []]

S = [[31, 10], -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [2, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

-------------------------End of t = 3-------------------------

-------------------------Start of t = 4-------------------------

Un-scheduled Nodes = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '20', '14', '17', '16', '19', '18', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['21', '8', '10', '12', '15']

Nodes with Predecessor Still Busy = ['12', '15', '21']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8', '10']

U = [['8', '10'], [], [], [], []]

B = [['7', '9'], ['11'], [], [], []]

S = [[30, 9], -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [2, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

-------------------------End of t = 4-------------------------

-------------------------Start of t = 5-------------------------

Un-scheduled Nodes = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '20', '14', '17', '16', '19', '18', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['21', '8', '10', '12', '15']

Nodes with Predecessor Still Busy = ['12', '15', '21']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8', '10']

U = [['8', '10'], [], [], [], []]

B = [['7', '9'], ['11'], [], [], []]

S = [[29, 8], -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [2, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

-------------------------End of t = 5-------------------------

-------------------------Start of t = 6-------------------------

Un-scheduled Nodes = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '20', '14', '17', '16', '19', '18', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['21', '8', '10', '12', '15']

Nodes with Predecessor Still Busy = ['12', '15', '21']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8', '10']

U = [['8', '10'], [], [], [], []]

B = [['7', '9'], ['11'], [], [], []]

S = [[28, 7], -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [2, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

-------------------------End of t = 6-------------------------

-------------------------Start of t = 7-------------------------

Un-scheduled Nodes = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '20', '14', '17', '16', '19', '18', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['21', '8', '10', '12', '15']

Nodes with Predecessor Still Busy = ['12', '15', '21']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8', '10']

U = [['8', '10'], [], [], [], []]

B = [['7', '9'], ['11'], [], [], []]

S = [[27, 6], -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [2, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

-------------------------End of t = 7-------------------------

-------------------------Start of t = 8-------------------------

Un-scheduled Nodes = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '20', '14', '17', '16', '19', '18', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['21', '8', '10', '12', '15']

Nodes with Predecessor Still Busy = ['12', '15', '21']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8', '10']

U = [['8', '10'], [], [], [], []]

B = [['7', '9'], ['11'], [], [], []]

S = [[26, 5], -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [2, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

-------------------------End of t = 8-------------------------

-------------------------Start of t = 9-------------------------

Un-scheduled Nodes = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '20', '14', '17', '16', '19', '18', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['21', '8', '10', '12', '15']

Nodes with Predecessor Still Busy = ['12', '15', '21']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8', '10']

U = [['8', '10'], [], [], [], []]

B = [['7', '9'], ['11'], [], [], []]

S = [[25, 4], -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [2, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

-------------------------End of t = 9-------------------------

-------------------------Start of t = 10-------------------------

Un-scheduled Nodes = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '20', '14', '17', '16', '19', '18', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['21', '8', '10', '12', '15']

Nodes with Predecessor Still Busy = ['12', '15', '21']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8', '10']

U = [['8', '10'], [], [], [], []]

B = [['7', '9'], ['11'], [], [], []]

S = [[24, 3], -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [2, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

-------------------------End of t = 10-------------------------

-------------------------Start of t = 11-------------------------

Un-scheduled Nodes = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '20', '14', '17', '16', '19', '18', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['21', '8', '10', '12', '15']

Nodes with Predecessor Still Busy = ['12', '15', '21']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8', '10']

U = [['8', '10'], [], [], [], []]

B = [['7', '9'], ['11'], [], [], []]

S = [[23, 2], -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [2, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

-------------------------End of t = 11-------------------------

-------------------------Start of t = 12-------------------------

Un-scheduled Nodes = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '20', '14', '17', '16', '19', '18', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['21', '8', '10', '12', '15']

Nodes with Predecessor Still Busy = ['12', '15', '21']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8', '10']

U = [['8', '10'], [], [], [], []]

B = [['7', '9'], ['11'], [], [], []]

S = [[22, 1], -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [2, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

-------------------------End of t = 12-------------------------

-------------------------Start of t = 13-------------------------

Un-scheduled Nodes = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '21', '22', '8', '10', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '20', '14', '17', '16', '19', '18', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['21', '8', '10', '12', '15']

Nodes with Predecessor Still Busy = ['12', '15', '21']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8', '10']

U = [['8', '10'], [], [], [], []]

B = [['7', '9'], ['11'], [], [], []]

S = [[21, 0], -1, -1, -1, -1]

U\* = [['10'], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = ['10']

Un-scheduled Nodes = ['20', '21', '22', '8', '13', '12', '15', '14', '17', '16', '19', '18']

-------------------------End of t = 13-------------------------

-------------------------Start of t = 14-------------------------

Un-scheduled Nodes = ['20', '21', '22', '8', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '21', '22', '8', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '20', '22', '17', '16', '19', '18']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['21', '8', '12', '15', '14']

Nodes with Predecessor Still Busy = ['12', '15', '21', '14']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8']

U = [['8'], [], [], [], []]

B = [['7', '9', '10'], ['11'], [], [], []]

S = [[20], -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '21', '22', '8', '13', '12', '15', '14', '17', '16', '19', '18']

-------------------------End of t = 14-------------------------

-------------------------Start of t = 15-------------------------

Un-scheduled Nodes = ['20', '21', '22', '8', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '21', '22', '8', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '20', '22', '17', '16', '19', '18']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['21', '8', '12', '15', '14']

Nodes with Predecessor Still Busy = ['12', '15', '21', '14']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8']

U = [['8'], [], [], [], []]

B = [['7', '9', '10'], ['11'], [], [], []]

S = [[19], -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '21', '22', '8', '13', '12', '15', '14', '17', '16', '19', '18']

-------------------------End of t = 15-------------------------

-------------------------Start of t = 16-------------------------

Un-scheduled Nodes = ['20', '21', '22', '8', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '21', '22', '8', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '20', '22', '17', '16', '19', '18']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['21', '8', '12', '15', '14']

Nodes with Predecessor Still Busy = ['12', '15', '21', '14']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8']

U = [['8'], [], [], [], []]

B = [['7', '9', '10'], ['11'], [], [], []]

S = [[18], -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '21', '22', '8', '13', '12', '15', '14', '17', '16', '19', '18']

-------------------------End of t = 16-------------------------

-------------------------Start of t = 17-------------------------

Un-scheduled Nodes = ['20', '21', '22', '8', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '21', '22', '8', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '20', '22', '17', '16', '19', '18']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['21', '8', '12', '15', '14']

Nodes with Predecessor Still Busy = ['12', '15', '21', '14']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8']

U = [['8'], [], [], [], []]

B = [['7', '9', '10'], ['11'], [], [], []]

S = [[17], -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '21', '22', '8', '13', '12', '15', '14', '17', '16', '19', '18']

-------------------------End of t = 17-------------------------

-------------------------Start of t = 18-------------------------

Un-scheduled Nodes = ['20', '21', '22', '8', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '21', '22', '8', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '20', '22', '17', '16', '19', '18']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['21', '8', '12', '15', '14']

Nodes with Predecessor Still Busy = ['12', '15', '21', '14']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8']

U = [['8'], [], [], [], []]

B = [['7', '9', '10'], ['11'], [], [], []]

S = [[16], -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '21', '22', '8', '13', '12', '15', '14', '17', '16', '19', '18']

-------------------------End of t = 18-------------------------

-------------------------Start of t = 19-------------------------

Un-scheduled Nodes = ['20', '21', '22', '8', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '21', '22', '8', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '20', '22', '17', '16', '19', '18']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['21', '8', '12', '15', '14']

Nodes with Predecessor Still Busy = ['12', '15', '21', '14']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8']

U = [['8'], [], [], [], []]

B = [['7', '9', '10'], ['11'], [], [], []]

S = [[15], -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '21', '22', '8', '13', '12', '15', '14', '17', '16', '19', '18']

-------------------------End of t = 19-------------------------

-------------------------Start of t = 20-------------------------

Un-scheduled Nodes = ['20', '21', '22', '8', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '21', '22', '8', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '20', '22', '17', '16', '19', '18']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['21', '8', '12', '15', '14']

Nodes with Predecessor Still Busy = ['12', '15', '21', '14']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8']

U = [['8'], [], [], [], []]

B = [['7', '9', '10'], ['11'], [], [], []]

S = [[14], -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '21', '22', '8', '13', '12', '15', '14', '17', '16', '19', '18']

-------------------------End of t = 20-------------------------

-------------------------Start of t = 21-------------------------

Un-scheduled Nodes = ['20', '21', '22', '8', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '21', '22', '8', '13', '12', '15', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '20', '22', '17', '16', '19', '18']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['21', '8', '12', '15', '14']

Nodes with Predecessor Still Busy = ['12', '14']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['21', '8', '15']

U = [['8'], [], [], ['15'], ['21']]

B = [['7', '9', '10'], [], [], [], []]

S = [[13], -1, -1, [43], [63]]

U\* = [[], [], [], [], []]

V = [[], [], [], ['15'], ['21']]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = ['15', '21']

Un-scheduled Nodes = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

-------------------------End of t = 21-------------------------

-------------------------Start of t = 22-------------------------

Un-scheduled Nodes = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '22', '17', '16', '19', '18']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['20', '8', '12', '14']

Nodes with Predecessor Still Busy = ['12', '20', '14']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8']

U = [['8'], [], [], [], []]

B = [['7', '9', '10'], [], [], ['15'], ['21']]

S = [[12], -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

-------------------------End of t = 22-------------------------

-------------------------Start of t = 23-------------------------

Un-scheduled Nodes = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '22', '17', '16', '19', '18']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['20', '8', '12', '14']

Nodes with Predecessor Still Busy = ['12', '20', '14']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8']

U = [['8'], [], [], [], []]

B = [['7', '9', '10'], [], [], ['15'], ['21']]

S = [[11], -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

-------------------------End of t = 23-------------------------

-------------------------Start of t = 24-------------------------

Un-scheduled Nodes = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '22', '17', '16', '19', '18']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['20', '8', '12', '14']

Nodes with Predecessor Still Busy = ['12', '20', '14']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8']

U = [['8'], [], [], [], []]

B = [['7', '9', '10'], [], [], ['15'], ['21']]

S = [[10], -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

-------------------------End of t = 24-------------------------

-------------------------Start of t = 25-------------------------

Un-scheduled Nodes = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '22', '17', '16', '19', '18']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['20', '8', '12', '14']

Nodes with Predecessor Still Busy = ['12', '20', '14']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8']

U = [['8'], [], [], [], []]

B = [['7', '9', '10'], [], [], ['15'], ['21']]

S = [[9], -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

-------------------------End of t = 25-------------------------

-------------------------Start of t = 26-------------------------

Un-scheduled Nodes = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '22', '17', '16', '19', '18']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['20', '8', '12', '14']

Nodes with Predecessor Still Busy = ['12', '20', '14']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8']

U = [['8'], [], [], [], []]

B = [['7', '9', '10'], [], [], ['15'], ['21']]

S = [[8], -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

-------------------------End of t = 26-------------------------

-------------------------Start of t = 27-------------------------

Un-scheduled Nodes = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '22', '17', '16', '19', '18']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['20', '8', '12', '14']

Nodes with Predecessor Still Busy = ['12', '20', '14']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8']

U = [['8'], [], [], [], []]

B = [['7', '9', '10'], [], [], ['15'], ['21']]

S = [[7], -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

-------------------------End of t = 27-------------------------

-------------------------Start of t = 28-------------------------

Un-scheduled Nodes = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '22', '17', '16', '19', '18']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['20', '8', '12', '14']

Nodes with Predecessor Still Busy = ['12', '20', '14']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8']

U = [['8'], [], [], [], []]

B = [['7', '9', '10'], [], [], ['15'], ['21']]

S = [[6], -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

-------------------------End of t = 28-------------------------

-------------------------Start of t = 29-------------------------

Un-scheduled Nodes = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '22', '17', '16', '19', '18']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['20', '8', '12', '14']

Nodes with Predecessor Still Busy = ['12', '20', '14']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8']

U = [['8'], [], [], [], []]

B = [['7', '9', '10'], [], [], ['15'], ['21']]

S = [[5], -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

-------------------------End of t = 29-------------------------

-------------------------Start of t = 30-------------------------

Un-scheduled Nodes = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '22', '17', '16', '19', '18']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['20', '8', '12', '14']

Nodes with Predecessor Still Busy = ['12', '20', '14']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8']

U = [['8'], [], [], [], []]

B = [['7', '9', '10'], [], [], ['15'], ['21']]

S = [[4], -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

-------------------------End of t = 30-------------------------

-------------------------Start of t = 31-------------------------

Un-scheduled Nodes = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '22', '8', '13', '12', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['13', '22', '17', '16', '19', '18']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['20', '8', '12', '14']

Nodes with Predecessor Still Busy = ['12', '20', '14']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['8']

U = [['8'], [], [], [], []]

B = [['7', '10'], [], [], ['15'], ['21']]

S = [[3], -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [['8'], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = ['8']

Un-scheduled Nodes = ['20', '22', '13', '12', '14', '17', '16', '19', '18']

-------------------------End of t = 31-------------------------

-------------------------Start of t = 32-------------------------

Un-scheduled Nodes = ['20', '22', '13', '12', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '22', '13', '12', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22', '16']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['20', '13', '12', '14']

Nodes with Predecessor Still Busy = ['13', '20', '14']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['12']

U = [['12'], [], [], [], []]

B = [['8', '10'], [], [], ['15'], ['21']]

S = [[0], -1, -1, -1, -1]

U\* = [['12'], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = ['12']

Un-scheduled Nodes = ['20', '22', '13', '14', '17', '16', '19', '18']

-------------------------End of t = 32-------------------------

-------------------------Start of t = 33-------------------------

Un-scheduled Nodes = ['20', '22', '13', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '22', '13', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['20', '13', '14', '16']

Nodes with Predecessor Still Busy = ['13', '20', '14', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['8', '10', '12'], [], [], ['15'], ['21']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '22', '13', '14', '17', '16', '19', '18']

-------------------------End of t = 33-------------------------

-------------------------Start of t = 34-------------------------

Un-scheduled Nodes = ['20', '22', '13', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '22', '13', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['20', '13', '14', '16']

Nodes with Predecessor Still Busy = ['13', '20', '14', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['8', '10', '12'], [], [], ['15'], ['21']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '22', '13', '14', '17', '16', '19', '18']

-------------------------End of t = 34-------------------------

-------------------------Start of t = 35-------------------------

Un-scheduled Nodes = ['20', '22', '13', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '22', '13', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['20', '13', '14', '16']

Nodes with Predecessor Still Busy = ['13', '20', '14', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['8', '10', '12'], [], [], ['15'], ['21']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '22', '13', '14', '17', '16', '19', '18']

-------------------------End of t = 35-------------------------

-------------------------Start of t = 36-------------------------

Un-scheduled Nodes = ['20', '22', '13', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '22', '13', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['20', '13', '14', '16']

Nodes with Predecessor Still Busy = ['13', '20', '14', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['8', '10', '12'], [], [], ['15'], ['21']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '22', '13', '14', '17', '16', '19', '18']

-------------------------End of t = 36-------------------------

-------------------------Start of t = 37-------------------------

Un-scheduled Nodes = ['20', '22', '13', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '22', '13', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['20', '13', '14', '16']

Nodes with Predecessor Still Busy = ['13', '20', '14', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['8', '10', '12'], [], [], ['15'], ['21']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '22', '13', '14', '17', '16', '19', '18']

-------------------------End of t = 37-------------------------

-------------------------Start of t = 38-------------------------

Un-scheduled Nodes = ['20', '22', '13', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '22', '13', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['20', '13', '14', '16']

Nodes with Predecessor Still Busy = ['13', '20', '14', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['8', '10', '12'], [], [], ['15'], ['21']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '22', '13', '14', '17', '16', '19', '18']

-------------------------End of t = 38-------------------------

-------------------------Start of t = 39-------------------------

Un-scheduled Nodes = ['20', '22', '13', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '22', '13', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['20', '13', '14', '16']

Nodes with Predecessor Still Busy = ['13', '20', '14', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['8', '10', '12'], [], [], ['15'], ['21']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '22', '13', '14', '17', '16', '19', '18']

-------------------------End of t = 39-------------------------

-------------------------Start of t = 40-------------------------

Un-scheduled Nodes = ['20', '22', '13', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '22', '13', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['20', '13', '14', '16']

Nodes with Predecessor Still Busy = ['13', '20', '14', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['8', '10', '12'], [], [], ['15'], ['21']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['20', '22', '13', '14', '17', '16', '19', '18']

-------------------------End of t = 40-------------------------

-------------------------Start of t = 41-------------------------

Un-scheduled Nodes = ['20', '22', '13', '14', '17', '16', '19', '18']

Nodes before deletion = ['20', '22', '13', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['20', '13', '14', '16']

Nodes with Predecessor Still Busy = ['13', '14', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['20']

U = [[], [], [], [], ['20']]

B = [['8', '10', '12'], [], [], [], []]

S = [-1, -1, -1, -1, [43]]

U\* = [[], [], [], [], []]

V = [[], [], [], [], ['20']]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = ['20']

Un-scheduled Nodes = ['22', '13', '14', '17', '16', '19', '18']

-------------------------End of t = 41-------------------------

-------------------------Start of t = 42-------------------------

Un-scheduled Nodes = ['22', '13', '14', '17', '16', '19', '18']

Nodes before deletion = ['22', '13', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['13', '14', '16']

Nodes with Predecessor Still Busy = ['13', '14', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['8', '10', '12'], [], [], [], ['20']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '13', '14', '17', '16', '19', '18']

-------------------------End of t = 42-------------------------

-------------------------Start of t = 43-------------------------

Un-scheduled Nodes = ['22', '13', '14', '17', '16', '19', '18']

Nodes before deletion = ['22', '13', '14', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['13', '14', '16']

Nodes with Predecessor Still Busy = ['13', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['14']

U = [['14'], [], [], [], []]

B = [['8', '12'], [], [], [], ['20']]

S = [[0], -1, -1, -1, -1]

U\* = [['14'], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = ['14']

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

-------------------------End of t = 43-------------------------

-------------------------Start of t = 44-------------------------

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

Nodes before deletion = ['22', '13', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['13', '16']

Nodes with Predecessor Still Busy = ['13', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['8', '12', '14'], [], [], [], ['20']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

-------------------------End of t = 44-------------------------

-------------------------Start of t = 45-------------------------

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

Nodes before deletion = ['22', '13', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['13', '16']

Nodes with Predecessor Still Busy = ['13', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['8', '12', '14'], [], [], [], ['20']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

-------------------------End of t = 45-------------------------

-------------------------Start of t = 46-------------------------

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

Nodes before deletion = ['22', '13', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['13', '16']

Nodes with Predecessor Still Busy = ['13', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['8', '12', '14'], [], [], [], ['20']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

-------------------------End of t = 46-------------------------

-------------------------Start of t = 47-------------------------

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

Nodes before deletion = ['22', '13', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['13', '16']

Nodes with Predecessor Still Busy = ['13', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['8', '12', '14'], [], [], [], ['20']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

-------------------------End of t = 47-------------------------

-------------------------Start of t = 48-------------------------

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

Nodes before deletion = ['22', '13', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['13', '16']

Nodes with Predecessor Still Busy = ['13', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['8', '12', '14'], [], [], [], ['20']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

-------------------------End of t = 48-------------------------

-------------------------Start of t = 49-------------------------

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

Nodes before deletion = ['22', '13', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['13', '16']

Nodes with Predecessor Still Busy = ['13', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['8', '12', '14'], [], [], [], ['20']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

-------------------------End of t = 49-------------------------

-------------------------Start of t = 50-------------------------

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

Nodes before deletion = ['22', '13', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['13', '16']

Nodes with Predecessor Still Busy = ['13', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['8', '12', '14'], [], [], [], ['20']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

-------------------------End of t = 50-------------------------

-------------------------Start of t = 51-------------------------

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

Nodes before deletion = ['22', '13', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['13', '16']

Nodes with Predecessor Still Busy = ['13', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['8', '12', '14'], [], [], [], ['20']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

-------------------------End of t = 51-------------------------

-------------------------Start of t = 52-------------------------

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

Nodes before deletion = ['22', '13', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['13', '16']

Nodes with Predecessor Still Busy = ['13', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['8', '12', '14'], [], [], [], ['20']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

-------------------------End of t = 52-------------------------

-------------------------Start of t = 53-------------------------

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

Nodes before deletion = ['22', '13', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['13', '16']

Nodes with Predecessor Still Busy = ['13', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['8', '12', '14'], [], [], [], ['20']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

-------------------------End of t = 53-------------------------

-------------------------Start of t = 54-------------------------

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

Nodes before deletion = ['22', '13', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['13', '16']

Nodes with Predecessor Still Busy = ['13', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['8', '12', '14'], [], [], [], ['20']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

-------------------------End of t = 54-------------------------

-------------------------Start of t = 55-------------------------

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

Nodes before deletion = ['22', '13', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['13', '16']

Nodes with Predecessor Still Busy = ['13', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['8', '12', '14'], [], [], [], ['20']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

-------------------------End of t = 55-------------------------

-------------------------Start of t = 56-------------------------

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

Nodes before deletion = ['22', '13', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['13', '16']

Nodes with Predecessor Still Busy = ['13', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['8', '12', '14'], [], [], [], ['20']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

-------------------------End of t = 56-------------------------

-------------------------Start of t = 57-------------------------

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

Nodes before deletion = ['22', '13', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['13', '16']

Nodes with Predecessor Still Busy = ['13', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['8', '12', '14'], [], [], [], ['20']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

-------------------------End of t = 57-------------------------

-------------------------Start of t = 58-------------------------

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

Nodes before deletion = ['22', '13', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['13', '16']

Nodes with Predecessor Still Busy = ['13', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['8', '12', '14'], [], [], [], ['20']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

-------------------------End of t = 58-------------------------

-------------------------Start of t = 59-------------------------

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

Nodes before deletion = ['22', '13', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['13', '16']

Nodes with Predecessor Still Busy = ['13', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['8', '12', '14'], [], [], [], ['20']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

-------------------------End of t = 59-------------------------

-------------------------Start of t = 60-------------------------

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

Nodes before deletion = ['22', '13', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['13', '16']

Nodes with Predecessor Still Busy = ['13', '16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['8', '12', '14'], [], [], [], ['20']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

-------------------------End of t = 60-------------------------

-------------------------Start of t = 61-------------------------

Un-scheduled Nodes = ['22', '13', '17', '16', '19', '18']

Nodes before deletion = ['22', '13', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['19', '18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['13', '16']

Nodes with Predecessor Still Busy = ['16']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['13']

U = [[], ['13'], [], [], []]

B = [['12', '14'], [], [], [], []]

S = [-1, [3], -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], ['13'], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = ['13']

Un-scheduled Nodes = ['22', '17', '16', '19', '18']

-------------------------End of t = 61-------------------------

-------------------------Start of t = 62-------------------------

Un-scheduled Nodes = ['22', '17', '16', '19', '18']

Nodes before deletion = ['22', '17', '16', '19', '18']

Nodes with no valid Scheduled Predecessor = ['18', '17', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['16', '19']

Nodes with Predecessor Still Busy = ['19']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['16']

U = [[], [], ['16'], [], []]

B = [['14'], ['13'], [], [], []]

S = [-1, -1, [0], -1, -1]

U\* = [[], [], ['16'], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = ['16']

Un-scheduled Nodes = ['22', '17', '19', '18']

-------------------------End of t = 62-------------------------

-------------------------Start of t = 63-------------------------

Un-scheduled Nodes = ['22', '17', '19', '18']

Nodes before deletion = ['22', '17', '19', '18']

Nodes with no valid Scheduled Predecessor = ['18', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['17', '19']

Nodes with Predecessor Still Busy = ['19', '17']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['14'], ['13'], ['16'], [], []]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '17', '19', '18']

-------------------------End of t = 63-------------------------

-------------------------Start of t = 64-------------------------

Un-scheduled Nodes = ['22', '17', '19', '18']

Nodes before deletion = ['22', '17', '19', '18']

Nodes with no valid Scheduled Predecessor = ['18', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['17', '19']

Nodes with Predecessor Still Busy = ['19', '17']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['14'], ['13'], ['16'], [], []]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '17', '19', '18']

-------------------------End of t = 64-------------------------

-------------------------Start of t = 65-------------------------

Un-scheduled Nodes = ['22', '17', '19', '18']

Nodes before deletion = ['22', '17', '19', '18']

Nodes with no valid Scheduled Predecessor = ['18', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['17', '19']

Nodes with Predecessor Still Busy = ['19', '17']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['14'], ['13'], ['16'], [], []]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '17', '19', '18']

-------------------------End of t = 65-------------------------

-------------------------Start of t = 66-------------------------

Un-scheduled Nodes = ['22', '17', '19', '18']

Nodes before deletion = ['22', '17', '19', '18']

Nodes with no valid Scheduled Predecessor = ['18', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['17', '19']

Nodes with Predecessor Still Busy = ['19', '17']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['14'], ['13'], ['16'], [], []]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '17', '19', '18']

-------------------------End of t = 66-------------------------

-------------------------Start of t = 67-------------------------

Un-scheduled Nodes = ['22', '17', '19', '18']

Nodes before deletion = ['22', '17', '19', '18']

Nodes with no valid Scheduled Predecessor = ['18', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['17', '19']

Nodes with Predecessor Still Busy = ['19', '17']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['14'], ['13'], ['16'], [], []]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '17', '19', '18']

-------------------------End of t = 67-------------------------

-------------------------Start of t = 68-------------------------

Un-scheduled Nodes = ['22', '17', '19', '18']

Nodes before deletion = ['22', '17', '19', '18']

Nodes with no valid Scheduled Predecessor = ['18', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['17', '19']

Nodes with Predecessor Still Busy = ['19', '17']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['14'], ['13'], ['16'], [], []]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '17', '19', '18']

-------------------------End of t = 68-------------------------

-------------------------Start of t = 69-------------------------

Un-scheduled Nodes = ['22', '17', '19', '18']

Nodes before deletion = ['22', '17', '19', '18']

Nodes with no valid Scheduled Predecessor = ['18', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['17', '19']

Nodes with Predecessor Still Busy = ['19', '17']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['14'], ['13'], ['16'], [], []]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '17', '19', '18']

-------------------------End of t = 69-------------------------

-------------------------Start of t = 70-------------------------

Un-scheduled Nodes = ['22', '17', '19', '18']

Nodes before deletion = ['22', '17', '19', '18']

Nodes with no valid Scheduled Predecessor = ['18', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['17', '19']

Nodes with Predecessor Still Busy = ['19', '17']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['14'], ['13'], ['16'], [], []]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '17', '19', '18']

-------------------------End of t = 70-------------------------

-------------------------Start of t = 71-------------------------

Un-scheduled Nodes = ['22', '17', '19', '18']

Nodes before deletion = ['22', '17', '19', '18']

Nodes with no valid Scheduled Predecessor = ['18', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['17', '19']

Nodes with Predecessor Still Busy = ['19', '17']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['14'], ['13'], ['16'], [], []]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '17', '19', '18']

-------------------------End of t = 71-------------------------

-------------------------Start of t = 72-------------------------

Un-scheduled Nodes = ['22', '17', '19', '18']

Nodes before deletion = ['22', '17', '19', '18']

Nodes with no valid Scheduled Predecessor = ['18', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['17', '19']

Nodes with Predecessor Still Busy = ['19', '17']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [['14'], ['13'], ['16'], [], []]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '17', '19', '18']

-------------------------End of t = 72-------------------------

-------------------------Start of t = 73-------------------------

Un-scheduled Nodes = ['22', '17', '19', '18']

Nodes before deletion = ['22', '17', '19', '18']

Nodes with no valid Scheduled Predecessor = ['18', '22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['17', '19']

Nodes with Predecessor Still Busy = ['19']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['17']

U = [[], [], ['17'], [], []]

B = [[], ['13'], [], [], []]

S = [-1, -1, [0], -1, -1]

U\* = [[], [], ['17'], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = ['17']

Un-scheduled Nodes = ['22', '19', '18']

-------------------------End of t = 73-------------------------

-------------------------Start of t = 74-------------------------

Un-scheduled Nodes = ['22', '19', '18']

Nodes before deletion = ['22', '19', '18']

Nodes with no valid Scheduled Predecessor = ['22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['19', '18']

Nodes with Predecessor Still Busy = ['19', '18']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], ['13'], ['17'], [], []]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '19', '18']

-------------------------End of t = 74-------------------------

-------------------------Start of t = 75-------------------------

Un-scheduled Nodes = ['22', '19', '18']

Nodes before deletion = ['22', '19', '18']

Nodes with no valid Scheduled Predecessor = ['22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['19', '18']

Nodes with Predecessor Still Busy = ['19', '18']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], ['13'], ['17'], [], []]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '19', '18']

-------------------------End of t = 75-------------------------

-------------------------Start of t = 76-------------------------

Un-scheduled Nodes = ['22', '19', '18']

Nodes before deletion = ['22', '19', '18']

Nodes with no valid Scheduled Predecessor = ['22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['19', '18']

Nodes with Predecessor Still Busy = ['19', '18']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], ['13'], ['17'], [], []]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '19', '18']

-------------------------End of t = 76-------------------------

-------------------------Start of t = 77-------------------------

Un-scheduled Nodes = ['22', '19', '18']

Nodes before deletion = ['22', '19', '18']

Nodes with no valid Scheduled Predecessor = ['22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['19', '18']

Nodes with Predecessor Still Busy = ['19', '18']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], ['13'], ['17'], [], []]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '19', '18']

-------------------------End of t = 77-------------------------

-------------------------Start of t = 78-------------------------

Un-scheduled Nodes = ['22', '19', '18']

Nodes before deletion = ['22', '19', '18']

Nodes with no valid Scheduled Predecessor = ['22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['19', '18']

Nodes with Predecessor Still Busy = ['19', '18']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], ['13'], ['17'], [], []]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '19', '18']

-------------------------End of t = 78-------------------------

-------------------------Start of t = 79-------------------------

Un-scheduled Nodes = ['22', '19', '18']

Nodes before deletion = ['22', '19', '18']

Nodes with no valid Scheduled Predecessor = ['22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['19', '18']

Nodes with Predecessor Still Busy = ['19', '18']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], ['13'], ['17'], [], []]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '19', '18']

-------------------------End of t = 79-------------------------

-------------------------Start of t = 80-------------------------

Un-scheduled Nodes = ['22', '19', '18']

Nodes before deletion = ['22', '19', '18']

Nodes with no valid Scheduled Predecessor = ['22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['19', '18']

Nodes with Predecessor Still Busy = ['19', '18']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], ['13'], ['17'], [], []]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '19', '18']

-------------------------End of t = 80-------------------------

-------------------------Start of t = 81-------------------------

Un-scheduled Nodes = ['22', '19', '18']

Nodes before deletion = ['22', '19', '18']

Nodes with no valid Scheduled Predecessor = ['22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['19', '18']

Nodes with Predecessor Still Busy = ['18']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['19']

U = [[], [], [], [], ['19']]

B = [[], [], ['17'], [], []]

S = [-1, -1, -1, -1, [3]]

U\* = [[], [], [], [], []]

V = [[], [], [], [], ['19']]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = ['19']

Un-scheduled Nodes = ['22', '18']

-------------------------End of t = 81-------------------------

-------------------------Start of t = 82-------------------------

Un-scheduled Nodes = ['22', '18']

Nodes before deletion = ['22', '18']

Nodes with no valid Scheduled Predecessor = ['22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['18']

Nodes with Predecessor Still Busy = ['18']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], [], ['17'], [], ['19']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '18']

-------------------------End of t = 82-------------------------

-------------------------Start of t = 83-------------------------

Un-scheduled Nodes = ['22', '18']

Nodes before deletion = ['22', '18']

Nodes with no valid Scheduled Predecessor = ['22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['18']

Nodes with Predecessor Still Busy = ['18']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], [], ['17'], [], ['19']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 1]

Scheduled Nodes = []

Un-scheduled Nodes = ['22', '18']

-------------------------End of t = 83-------------------------

-------------------------Start of t = 84-------------------------

Un-scheduled Nodes = ['22', '18']

Nodes before deletion = ['22', '18']

Nodes with no valid Scheduled Predecessor = ['22']

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['18']

Nodes with Predecessor Still Busy = []

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = ['18']

U = [[], [], [], [], ['18']]

B = [[], [], [], [], ['19']]

S = [-1, -1, -1, -1, [0]]

U\* = [[], [], [], [], ['18']]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 2]

Scheduled Nodes = ['18']

Un-scheduled Nodes = ['22']

-------------------------End of t = 84-------------------------

-------------------------Start of t = 85-------------------------

Un-scheduled Nodes = ['22']

Nodes before deletion = ['22']

Nodes with no valid Scheduled Predecessor = []

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['22']

Nodes with Predecessor Still Busy = ['22']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], [], [], [], ['19', '18']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 2]

Scheduled Nodes = []

Un-scheduled Nodes = ['22']

-------------------------End of t = 85-------------------------

-------------------------Start of t = 86-------------------------

Un-scheduled Nodes = ['22']

Nodes before deletion = ['22']

Nodes with no valid Scheduled Predecessor = []

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['22']

Nodes with Predecessor Still Busy = ['22']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], [], [], [], ['19', '18']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 2]

Scheduled Nodes = []

Un-scheduled Nodes = ['22']

-------------------------End of t = 86-------------------------

-------------------------Start of t = 87-------------------------

Un-scheduled Nodes = ['22']

Nodes before deletion = ['22']

Nodes with no valid Scheduled Predecessor = []

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['22']

Nodes with Predecessor Still Busy = ['22']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], [], [], [], ['19', '18']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 2]

Scheduled Nodes = []

Un-scheduled Nodes = ['22']

-------------------------End of t = 87-------------------------

-------------------------Start of t = 88-------------------------

Un-scheduled Nodes = ['22']

Nodes before deletion = ['22']

Nodes with no valid Scheduled Predecessor = []

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['22']

Nodes with Predecessor Still Busy = ['22']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], [], [], [], ['19', '18']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 2]

Scheduled Nodes = []

Un-scheduled Nodes = ['22']

-------------------------End of t = 88-------------------------

-------------------------Start of t = 89-------------------------

Un-scheduled Nodes = ['22']

Nodes before deletion = ['22']

Nodes with no valid Scheduled Predecessor = []

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['22']

Nodes with Predecessor Still Busy = ['22']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], [], [], [], ['19', '18']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 2]

Scheduled Nodes = []

Un-scheduled Nodes = ['22']

-------------------------End of t = 89-------------------------

-------------------------Start of t = 90-------------------------

Un-scheduled Nodes = ['22']

Nodes before deletion = ['22']

Nodes with no valid Scheduled Predecessor = []

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['22']

Nodes with Predecessor Still Busy = ['22']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], [], [], [], ['19', '18']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 2]

Scheduled Nodes = []

Un-scheduled Nodes = ['22']

-------------------------End of t = 90-------------------------

-------------------------Start of t = 91-------------------------

Un-scheduled Nodes = ['22']

Nodes before deletion = ['22']

Nodes with no valid Scheduled Predecessor = []

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['22']

Nodes with Predecessor Still Busy = ['22']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], [], [], [], ['19', '18']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 2]

Scheduled Nodes = []

Un-scheduled Nodes = ['22']

-------------------------End of t = 91-------------------------

-------------------------Start of t = 92-------------------------

Un-scheduled Nodes = ['22']

Nodes before deletion = ['22']

Nodes with no valid Scheduled Predecessor = []

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['22']

Nodes with Predecessor Still Busy = ['22']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], [], [], [], ['19', '18']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 2]

Scheduled Nodes = []

Un-scheduled Nodes = ['22']

-------------------------End of t = 92-------------------------

-------------------------Start of t = 93-------------------------

Un-scheduled Nodes = ['22']

Nodes before deletion = ['22']

Nodes with no valid Scheduled Predecessor = []

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['22']

Nodes with Predecessor Still Busy = ['22']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], [], [], [], ['19', '18']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 2]

Scheduled Nodes = []

Un-scheduled Nodes = ['22']

-------------------------End of t = 93-------------------------

-------------------------Start of t = 94-------------------------

Un-scheduled Nodes = ['22']

Nodes before deletion = ['22']

Nodes with no valid Scheduled Predecessor = []

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['22']

Nodes with Predecessor Still Busy = ['22']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], [], [], [], ['19', '18']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 2]

Scheduled Nodes = []

Un-scheduled Nodes = ['22']

-------------------------End of t = 94-------------------------

-------------------------Start of t = 95-------------------------

Un-scheduled Nodes = ['22']

Nodes before deletion = ['22']

Nodes with no valid Scheduled Predecessor = []

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['22']

Nodes with Predecessor Still Busy = ['22']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], [], [], [], ['19', '18']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 2]

Scheduled Nodes = []

Un-scheduled Nodes = ['22']

-------------------------End of t = 95-------------------------

-------------------------Start of t = 96-------------------------

Un-scheduled Nodes = ['22']

Nodes before deletion = ['22']

Nodes with no valid Scheduled Predecessor = []

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['22']

Nodes with Predecessor Still Busy = ['22']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], [], [], [], ['19', '18']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 2]

Scheduled Nodes = []

Un-scheduled Nodes = ['22']

-------------------------End of t = 96-------------------------

-------------------------Start of t = 97-------------------------

Un-scheduled Nodes = ['22']

Nodes before deletion = ['22']

Nodes with no valid Scheduled Predecessor = []

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['22']

Nodes with Predecessor Still Busy = ['22']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], [], [], [], ['19', '18']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 2]

Scheduled Nodes = []

Un-scheduled Nodes = ['22']

-------------------------End of t = 97-------------------------

-------------------------Start of t = 98-------------------------

Un-scheduled Nodes = ['22']

Nodes before deletion = ['22']

Nodes with no valid Scheduled Predecessor = []

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['22']

Nodes with Predecessor Still Busy = ['22']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], [], [], [], ['19', '18']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 2]

Scheduled Nodes = []

Un-scheduled Nodes = ['22']

-------------------------End of t = 98-------------------------

-------------------------Start of t = 99-------------------------

Un-scheduled Nodes = ['22']

Nodes before deletion = ['22']

Nodes with no valid Scheduled Predecessor = []

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['22']

Nodes with Predecessor Still Busy = ['22']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], [], [], [], ['19', '18']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 2]

Scheduled Nodes = []

Un-scheduled Nodes = ['22']

-------------------------End of t = 99-------------------------

-------------------------Start of t = 100-------------------------

Un-scheduled Nodes = ['22']

Nodes before deletion = ['22']

Nodes with no valid Scheduled Predecessor = []

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['22']

Nodes with Predecessor Still Busy = ['22']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], [], [], [], ['19', '18']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 2]

Scheduled Nodes = []

Un-scheduled Nodes = ['22']

-------------------------End of t = 100-------------------------

-------------------------Start of t = 101-------------------------

Un-scheduled Nodes = ['22']

Nodes before deletion = ['22']

Nodes with no valid Scheduled Predecessor = []

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['22']

Nodes with Predecessor Still Busy = ['22']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], [], [], [], ['18']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 2]

Scheduled Nodes = []

Un-scheduled Nodes = ['22']

-------------------------End of t = 101-------------------------

-------------------------Start of t = 102-------------------------

Un-scheduled Nodes = ['22']

Nodes before deletion = ['22']

Nodes with no valid Scheduled Predecessor = []

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['22']

Nodes with Predecessor Still Busy = ['22']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], [], [], [], ['18']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 2]

Scheduled Nodes = []

Un-scheduled Nodes = ['22']

-------------------------End of t = 102-------------------------

-------------------------Start of t = 103-------------------------

Un-scheduled Nodes = ['22']

Nodes before deletion = ['22']

Nodes with no valid Scheduled Predecessor = []

Nodes after 'Nodes with no valid Scheduled Predecessor' removed = ['22']

Nodes with Predecessor Still Busy = ['22']

Nodes after Invalid 'Nodes with Predecessor Still Busy' removed = []

U = [[], [], [], [], []]

B = [[], [], [], [], ['18']]

S = [-1, -1, -1, -1, -1]

U\* = [[], [], [], [], []]

V = [[], [], [], [], []]

Number Of Instances = [3, 1, 1, 1, 2]

Scheduled Nodes = []

Un-scheduled Nodes = ['22']

-------------------------End of t = 103-------------------------

-------------------------Start of t = 104-------------------------

Sink Node scheduled at t = 104

=========================End of t = 104=========================

------------------------- RESULTS -------------------------

Latency = 103

Number of Multiplier units required = 3

Number of Adder units required = 1

Number of Subtracter units required = 1

Number of Comparator units required = 1

Number of Exponent units required = 2