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CS 2420

04/16/2016

Homework 8 Section 1

1)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Source** |  |  |  |  |
| **0** | 1 | 2 | 5 |  |
| **1** | 0 | 2 | 4 | 5 |
| **2** | 0 | 1 | 3 |  |
| **3** | 2 | 4 | 7 |  |
| **4** | 1 | 3 | 5 | 6 |
| **5** | 0 | 1 | 4 |  |
| **6** | 4 | 7 |  |  |
| **7** | 3 | 6 |  |  |

2)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Source** |  |  |  |  |
| **0** | 1 | 2 |  |  |
| **1** | 3 |  |  |  |
| **2** | 1 |  |  |  |
| **3** | 2 | 6 |  |  |
| **4** | 1 | 3 | 5 | 7 |
| **5** | 6 |  |  |  |
| **6** |  |  |  |  |
| **7** | 5 |  |  |  |

3a) With 0 as the source

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Node** | 0 | 1 | 2 | 5 | 4 | 3 | 6 | 7 |
| **Distance** | - | 1 | 1 | 1 | 2 | 2 | 3 | 3 |
| **Predecessor** | - | 0 | 0 | 0 | 1 | 2 | 4 | 3 |

3b)

0 (-)

7 (3)

6 (3)

3 (2)

4 (2)

1 (1)

5 (1)

2 (1)

Another Source Vertex

Source Vertex

4 ( 11-16 )

4a)

0 (1 – 10)

1 (2 - 9)

7 (14 -15 )

5 (12 -13 )

3 (3- 8 )

6 (6 – 7)

2 ( 4- 5) )

4b) With 0 as source

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Node** | 0 | 1 | 3 | 2 | 6 |
| **Distance** | - | 1 | 2 | 3 | 3 |
| **Predecessor** | - | 0 | 1 | 3 | 3 |

Reset with 4 as other source

|  |  |  |  |
| --- | --- | --- | --- |
| **Node** | 4 | 5 | 7 |
| **Distance** | - | 1 | 1 |
| **Predecessor** | - | 4 | 4 |

4c)

5 (1)

7 (1)

4 (-)

6 (3)

2 (3)

3 (2)

1 (1)

0 (-)