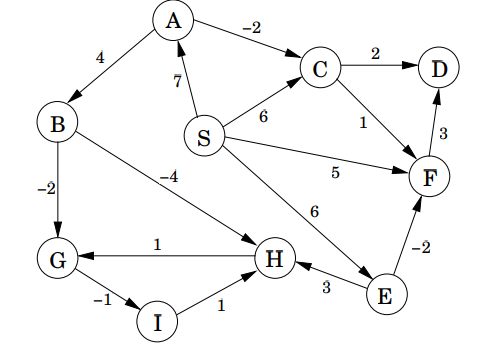
Ryne Kolessar

CSC 321 – Algorithms Assignment #4

11/4/2019

1. (10 points) Textbook, page 120, exercise 4.2. You only need to show the contents of the table as in Figure 4.14 in the textbook.



|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| dist | S | A | B | C | D | E | F | G | H | I |
| 0 | 0 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |
| 1 | 0 | 7 | ∞ | 6 | ∞ | 6 | 5 | ∞ | ∞ | ∞ |
| 2 | 0 | 7 | ∞ | 6 | 8 | 6 | 5 | ∞ | ∞ | ∞ |
| 3 | 0 | 7 | 11 | 5 | 7 | 6 | 5 | ∞ | ∞ | ∞ |
| 4 | 0 | 7 | 11 | 5 | 7 | 6 | 5 | 9 | ∞ | ∞ |
| 5 | 0 | 7 | 11 | 5 | 7 | 6 | 5 | 9 | 7 | ∞ |
| 6 | 0 | 7 | 11 | 5 | 7 | 6 | 5 | 8 | 7 | ∞ |
| 7 | 0 | 7 | 11 | 5 | 7 | 6 | 5 | 8 | 7 | 7 |
| 8 | 0 | 7 | 11 | 5 | 7 | 6 | 4 | 8 | 7 | 7 |

1. (10 points) Textbook, page 121, exercise 4.8.
2. (10 points) Textbook, page 121, exercise 4.11. (Hint. Consult the running time table on page 114 for Dijkstra’s algorithm for different implementations, and the discussion below it.)