Depth first search (stack version):

|  |  |  |
| --- | --- | --- |
| Iteration | Stack(top->bot) | Reachable: |
| 0 | 1 | - |
| 1 | 6,2 | 1 |
| 2 | 6, 7, 3 | 1, 2, |
| 3 | 6, 7, 8, 4 | 1, 2, 3 |
| 4 | 6, 7, 8, 5 | 1, 2, 3, 4 |
| 5 | 6, 7, 8, 9, 10 | 1, 2, 3, 4, 5 |
| 6 | 6, 7, 8, 9, 15 | 1, 2, 3, 4, 5, 10, |
| 7 | 6, 7, 8, 9, 14, 20 | 1, 2, 3, 4, 5, 10, 15 |
| 8 | 6, 7, 8, 9, 20, 19, 9 | 1, 2, 3, 4, 5, 10, 15, 14 |
| 9 | 6, 7, 8, 9, 20, 19 | 1, 2, 3, 4, 5, 10, 15, 14, 8 |
| 10 | 6, 7, 8, 9, 20, 24, 20 | 1, 2, 3, 4, 5, 10, 15, 14, 8, 19 |
| 11 | 6, 7, 8, 9, 20, 24 | 1, 2, 3, 4, 5, 10, 15, 14, 8, 9, 19 |
| 12 | 6, 7, 8, 9, 20, 25 | 1, 2, 3, 4, 5, 10, 15, 14, 8, 19, 20, 24 |
| 13 | 6, 7, 8, 9, 20 | 1, 2, 3, 4, 5, 10, 15, 14, 8, 19, 20, 24, 25 |

Breadth first search (queue version):

|  |  |  |
| --- | --- | --- |
| Iteration | Queue (frt->bk) | Reachable: |
| 0 | 1 | - |
| 1 | 6,2 | 1 |
| 2 | 2, 11 | 1, 6 |
| 3 | 11, 7, 3 | 1, 6, 2 |
| 4 | 7, 3, 16, 12 | 1, 6, 2, 11 |
| 5 | 3, 6, 12 | 1, 6, 2, 11, 7 |
| 6 | 16, 12, 8, 4 | 1, 6, 2, 11, 7, 3 |
| 7 | 12, 8, 4, 21 | 1, 6, 2, 11, 7, 3, 16 |
| 8 | 8, 4, 21, 17, 13 | 1, 6, 2, 11, 7, 3, 16, 12 |
| 9 | 4, 21, 17, 13 | 1, 6, 2, 11, 7, 3, 16, 12, 8 |
| 10 | 21, 17, 13, 9, 5 | 1, 6, 2, 11, 7, 3, 16, 12, 8, 4 |
| 11 | 17, 13, 9, 5, 22 | 1, 6, 2, 11, 7, 3, 16, 12, 8, 4, 21 |
| 12 | 13, 9, 5, 22 | 1, 6, 2, 11, 7, 3, 16, 12, 8, 4, 21, 17 |
| 13 | 9, 5, 22, 18 | 1, 6, 2, 11, 7, 3, 16, 12, 8, 4, 21, 17, 13 |
| 14 | 5, 22, 18, 14 | 1, 6, 2, 11, 7, 3, 16, 12, 8, 4, 21, 17, 13 |
| 15 | 22, 18, 14, 10 | 1, 6, 2, 11, 7, 3, 16, 12, 8, 4, 21, 17, 13, 5 |
| 16 | 18, 14, 10, 23 | 1, 6, 2, 11, 7, 3, 16, 12, 8, 4, 21, 17, 13, 5, 22 |
| 17 | 14, 10, 23 | 1, 6, 2, 11, 7, 3, 16, 12, 8, 4, 21, 17, 13, 5, 22, 23 |
| 18 | 10, 23, 15 | 1, 6, 2, 11, 7, 3, 16, 12, 8, 4, 21, 17, 13, 5, 22, 23, 14 |
| 19 | 23, 15 | 1, 6, 2, 11, 7, 3, 16, 12, 8, 4, 21, 17, 13, 5, 22, 23, 14, 5 |
| 20 | 15 | 1, 6, 2, 11, 7, 3, 16, 12, 8, 4, 21, 17, 13, 5, 22, 23, 14, 5, 15 |
| 21 | 20 | 1, 6, 2, 11, 7, 3, 16, 12, 8, 4, 21, 17, 13, 5, 22, 23, 14, 5, 15, 20 |
| 22 | 23 | 1, 6, 2, 11, 7, 3, 16, 12, 8, 4, 21, 17, 13, 5, 22, 23, 14, 5, 15, 20 |
| 23 | 24 | 1, 6, 2, 11, 7, 3, 16, 12, 8, 4, 21, 17, 13, 5, 22, 23, 14, 5, 15, 20, 23 |
| 24 | 25 | 1, 6, 2, 11, 7, 3, 16, 12, 8, 4, 21, 17, 13, 5, 22, 23, 14, 5, 15, 20, 23, 24 |
| 25 | 0 | 1, 6, 2, 11, 7, 3, 16, 12, 8, 4, 21, 17, 13, 5, 22, 23, 14, 5, 15, 20, 23, 24, 25 |