## CSE 331 22au Section 7 Handout

1. Recall the pseudocode for Dijkstra's algorithm, and consider the following graph below.
```
active = priority queue of paths.
finished = empty set of nodes.
add a path from start to itself to active
while active is non-empty:
    minPath = active.removeMin()
    minDest = destination node in minPath
    if minDest is dest:
        return minPath
    if minDest is in finished:
        continue
    for each edge e = \langleminDest, child\rangle:
        if child is not in finished:
        newPath = minPath + e
        add newPath to active
    add minDest to finished
```



Find the shortest path starting from $\mathbf{A}$ going to $\mathbf{E}$. Record each update (push, pop) to the queue or any returns (true, false) in the table below.

| Node | Finished | Cost | Previous |
| :---: | :---: | :---: | :---: |
| A |  |  |  |
| B |  |  |  |
| C |  |  |  |
| D |  |  |  |
| E |  |  |  |
| F |  |  |  |
| G |  |  |  |
| H |  |  |  |

