Distributed Systems CW1

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# Q2.1

# Q2.2

# Q2.3

The weighted diameter of the network is 7. This is realised by the path A-C-E-G-H.

The non-weighted diameter of the network is 4, and is also realised by the path A-C-E-G-H.

# Q2.4

## Prims Algorithm

* Pick any starting node in the graph, add it to the MST.
* Look at edges outgoing from the current MST, pick the one with the lowest weight and add it to the MST.
* Repeat step 2 until all nodes are covered by the MST

## Steps

* Pick Node 3.
* Pick edge 3-2 with weight 7.
* Pick edge 2-6 with weight 9.
* Pick edge 6-9 with weight 4.
* Pick edge 6-5 with weight 11.
* Pick edge 5-7 with weight 12.
* Pick edge 5-8 with weight 15.
* Pick edge 2-1 with weight 20.
* Pick edge 5-4 with weight 23.

All nodes have been added to the MST, the algorithm is complete.

