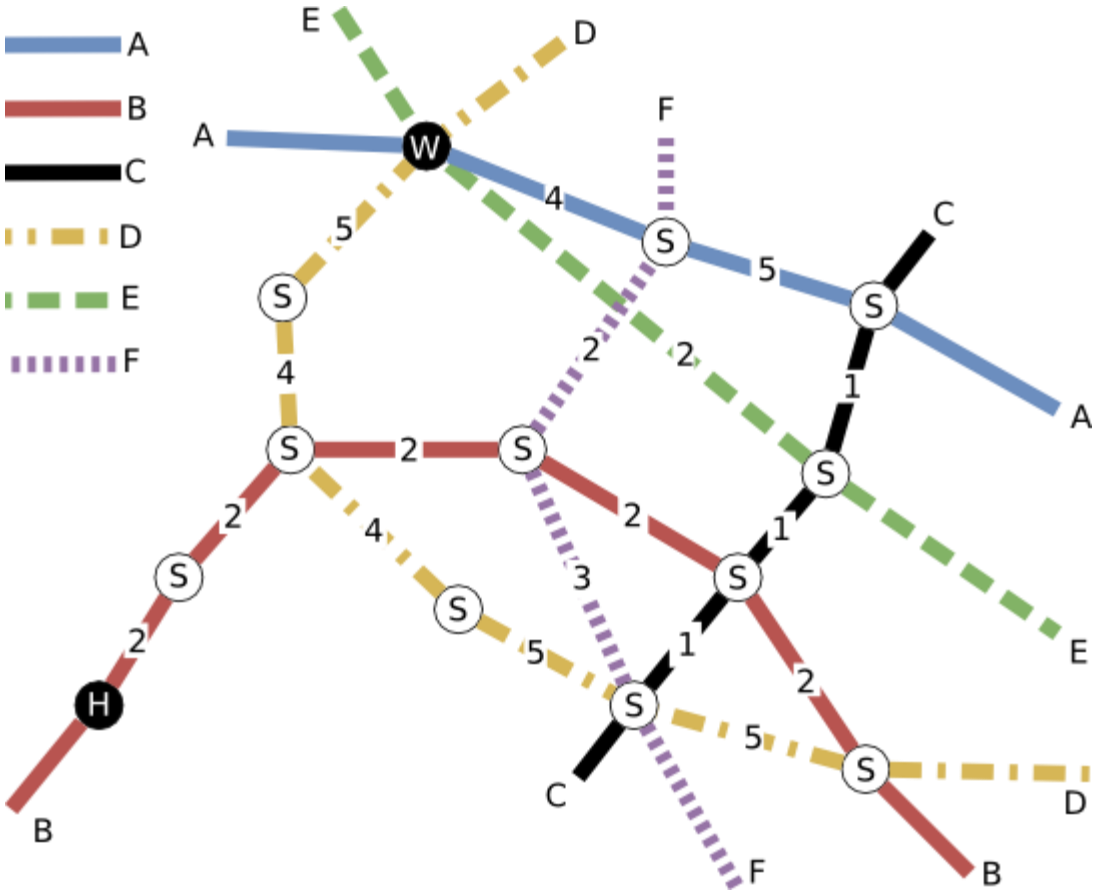
CS6102 - COMPUTATIONAL THINKING LAB
(Week 12 – 16.02.2023)

1. Jonathan goes to work by train every day. There is no direct line, so Jonathan has to switch between several lines. The map below shows the available lines with the travel time between any two stations (Jonathan's home is marked with "H", his workplace is marked with "W", and the stations, where it is possible to change line, are marked with "S").



Question:
Assuming that changing line takes no time, which lines should Jonathan take in order to arrive at work as fast as possible?

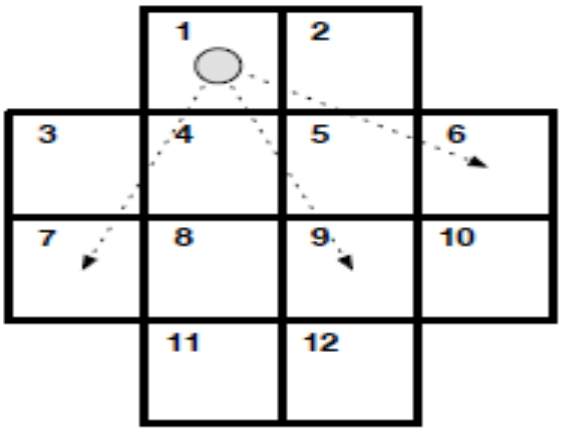
a

b

C

d

2. A single chess Knight is able to move on the small cross shaped board below. A Knight can move two spaces in one direction and then move one square at right angles, or vice versa, as shown. It jumps to the new square without visiting any in between, and must always land on a square on the board. Find a sequence of moves that starts from Square 1, visits every square exactly once by making such knight's moves and finishes where it started.



Write an algorithm for the knight moves.