

CS 293 Lab Assignment 10

Due: Oct 21, 2022, 2pm

In this lab, we will take forward the task that we started in Lab 9, i.e. to help passengers plan their journeys. In Lab 9, we considered only direct journeys from a source station to a destination station. In this lab, we will allow journeys with change of trains. However, a passenger may have constraints on how many change of trains she/he/they may want to use, and also on the maximum amount of time he/she/they are willing to wait at a transit station for a connecting train.

Use Depth-First-Search/Breadth-First-Search or even a Best-First Search (that uses a priority queue instead of a stack or queue to store unexplored nodes) to print journeys from a source station to a destination station, with a specified maximum number of stop-overs and a specified maximum transit waiting time during any of the stop-overs.

You must write your code for printPlanJourneys in printJourney.cpp. Feel free to define any new classes you may want to use in this file. When printing journeys, you can use printStationInfo function provided in the Planner class. You should print journeys in a way that makes sense to the passenger. So if there is a journey from A to B in train 101, and then from B to C in train 102, you should print the journey information from A to B in train 101 first, and then indicate that there is a change over at station B to a journey from B to C in train 102. You must also indicate the transit time in your output.

Please submit only printJourney.cpp and assumptions.txt in a tar zipped folder named <roll_number>_L10