CMPE 160.01
INTRODUCTION TO OBJECT ORIENTED PROG.

Assignment 1 Report

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First of all, reading the data file and putting data into appropriate “Arrays” or “ArrayLists” is crucial because all the work is dependent on this. Then in the input part, depending on whether the inputs are fitting or not, the canvas will pop out or code will only print a single message to the console. If the station names which are taken in the input part is not present in the data file, console will print “The station names provided are not present in this map” or if they are not connected with any metro lines, which means only one of the stations is in “M9 Line”, console will print “These two stations are not connected”.

Then, only if inputs are fitting, map will be created with the drawMap function which saves programmer from writing same lines repeatedly. All the metro lines and station names which are starred in the data file will appear on the canvas.

Afterwards, if the start and destination stations are not in the same line, then finding the correct route between the stations is provided by FindWay function. Which checks weather startLine* and destLine* are contain same breakpoint, which is also defined by the datafile. If they contain the same breakpoint, then only one transfer will be made between metro lines. If they do not, then breakpoints in the startLine will be new start stations one by one with usage of recursion, until the function finds a way to connect with destination station. The route will be stored in “mainWay” list.

Later, the FindConnection function checks whether the mainWay has a proper format for Painting method, which is defined in the paragraph below. If it doesn’t have a proper format, then the FindConnection function will be the method which fixes this issue. It basically searches for every start-end point in the mainWay list and if these points are not in the same line, then it connects these two stations and inserts into mainWay with a correct index.

Finally, the Painting method will do the visible part which is coloring current and past stations. The crucial thing in the visible part is keeping one map clean and painting over it. Because it cannot be done that shrinking the painted circle, every time a painting will be done, canvas should be cleared, and a clean map should be displayed. Every current station is added to pastStationNames list. Then, past stations circles would be normal size but orange color circles and current station circle would be large size and orange color circle. The painting method basically executes and shows a transfer only in the same line.

startLine* = start station’s line index in the data file
destLine* = destination station’s line index in the data file

Example 1:

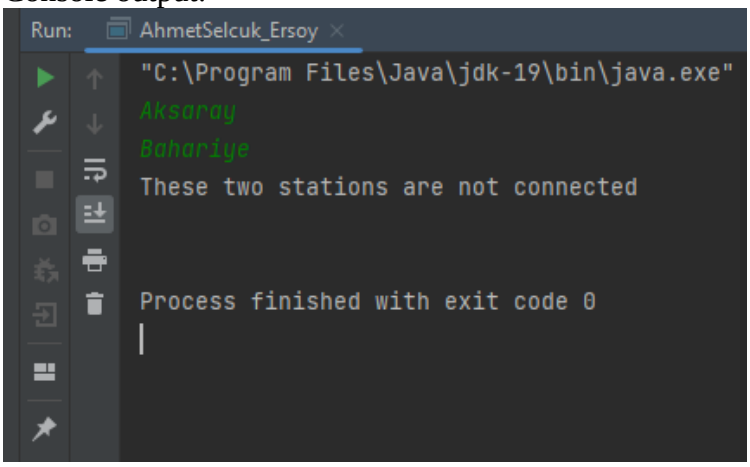
Input:
Levent
Uskudar

Canvas output:

Example 2:

Input:
Aksaray
Bahariye

Console output:

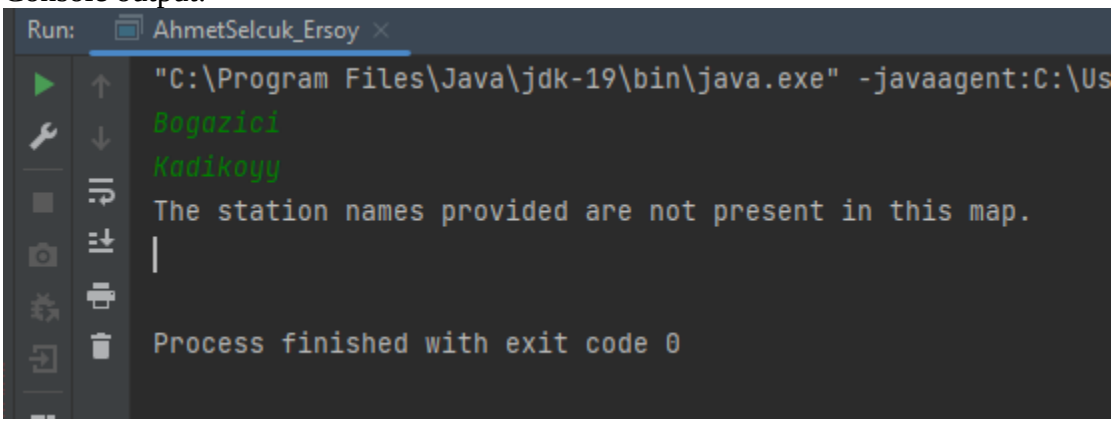


Canvas will not pop up.

Example 3:

Input:
Bogazici
Kadikoyy

Console output:



Canvas will not pop up.

Example 4:

Input:
IstanbulHavalimani
SabihaGokcenHavalimani

Canvas output: