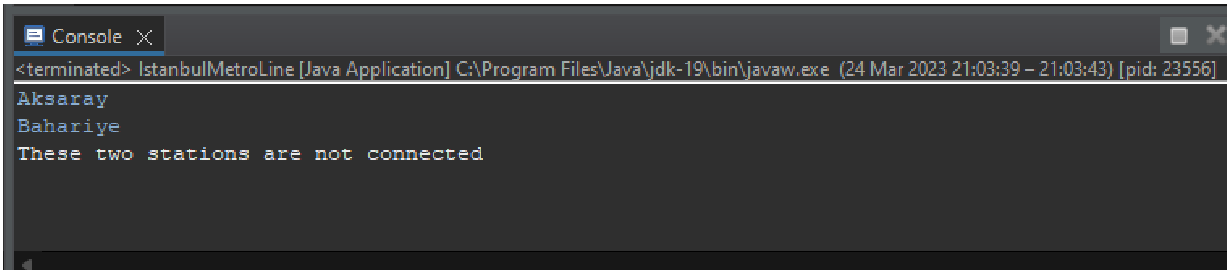
First of all, this program takes two inputs which are first and targeted stations. Then, it reads the file that contains the information about metro stations and store them in various arrays. After collecting the data from the file, code continues to find the path.

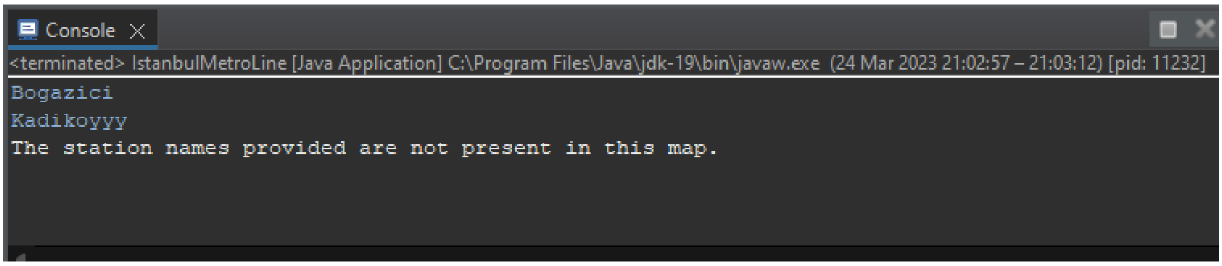
The first part of finding the path starts with checking the station whether it is a breakpoint or not. During checking step, code also finds the neighboring stations to the current station. To find the neighboring stations, related method searches the metro line that current station is in. After finding neighboring stations, code loops over these stations and calls itself recursively. Also, if a station has already passed, it won't be called again to avoid infinite recursions. Once code reaches targeted station, it returns the string that contains the stations it has passed. If it doesn't find the target station, it returns nothing. After returning string, code converts it to an array. Lastly, it prints the stations by looping an array. If inputs are not valid, it calls a method to check whether inputs are valid or not.

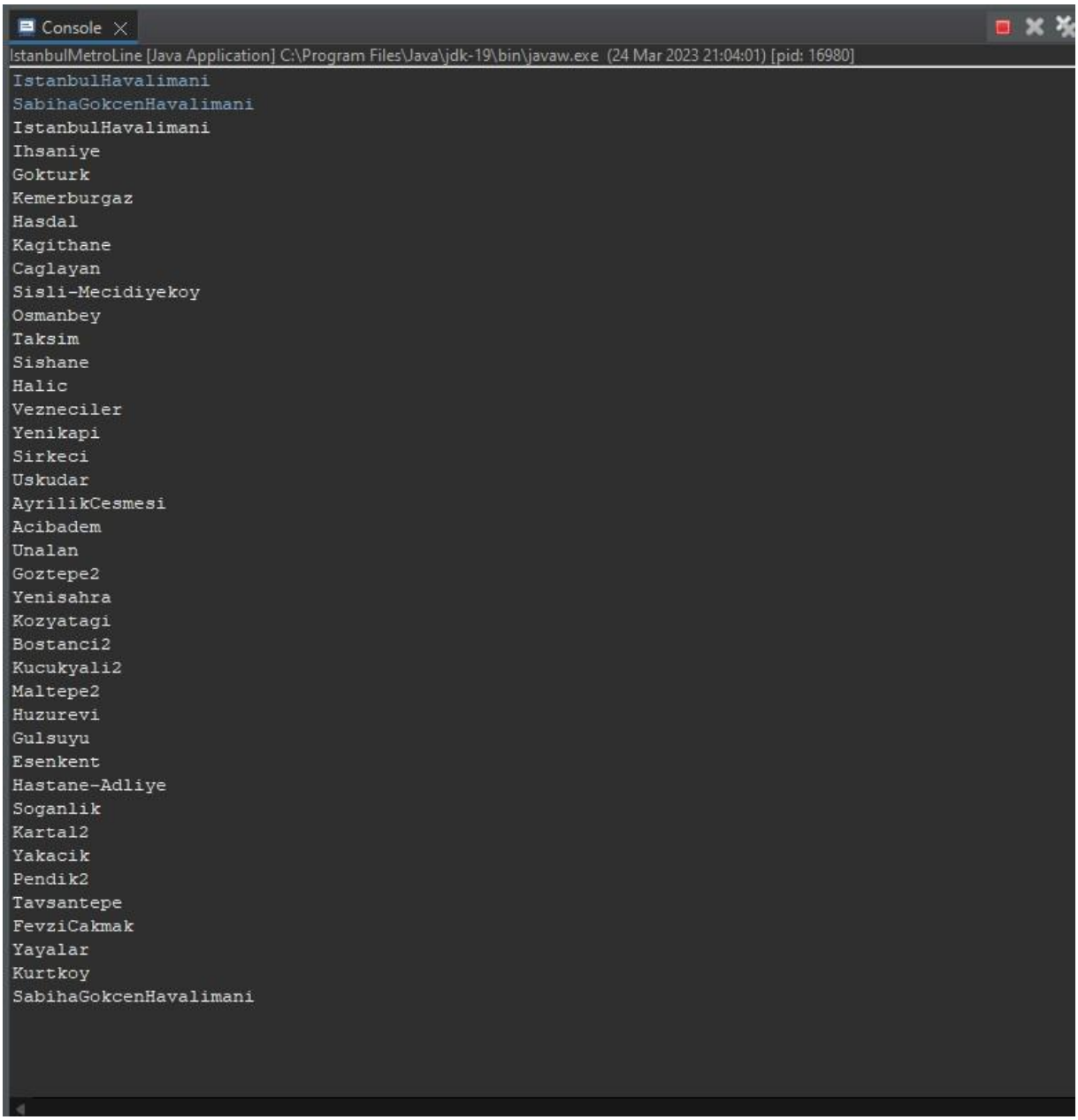
The last part of the program is drawing and animating. Firstly, it sets up the canvas. Then, it draws the metro lines with corresponding color values. Then, it draws points at the station's coordinates to depict the station and writes their names on canvas. Lastly, it animates the progress. The animation progress is drawing point on the passed stations. After code passes a station, the point goes to the next station and current station stays with a point with lower radius.

Sample input and outputs:


Standard Draw
File
IstanbulHavalimani
Gokturk
Kemerburgaz
Haciosman
Sanayi Mahallesi
4.Levent
Hisarustu
Bahcesehir
Olimpiyat
IkitelliSanayi
Tekstilkent-Giyimkent
Yesilpinar
Alibeykoy
Gayrettepe
Goztepe
Mahmutbey
Yildiz
Kisikli
Carsi
Cekmekoy
Menderes
Sagmalcilar
Taksim
Halkali
Zeytinburnu2
Aksaray
Sirkeci
SabihaGokcenHavalimani
Gebze
Unalan
Bostanci2
Esenkent
Pendik2
Fatih
Tuzla
Kadikoy
Soguklucesme
Feneryolu
Erenkoy
Kucukyali
Maltepe
Kartal
Guzelyali
Florya
Bakirkoy
Zeytinburnu
Yenibosna


Console
<terminated> IstanbulMetroLine [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (24 Mar 2023 21:03:39 – 21:03:43) [pid: 23556]
Aksaray
Bahariye
These two stations are not connected


Console
<terminated> IstanbulMetroLine [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (24 Mar 2023 21:02:57 – 21:03:12) [pid: 11232]
Bogazici
Kadikoyyy
The station names provided are not present in this map.


Console
IstanbulMetroLine [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (24 Mar 2023 21:04:01) [pid: 16980]
IstanbulHavalimani
SabihaGokcenHavalimani
IstanbulHavalimani
Ihsaniye
Gokturk
Kemerburgaz
Hasdal
Kagithane
Caglayan
Sisli-Mecidiyekoy
Osmanbey
Taksim
Sishane
Halic
Vezneciler
Yenikapi
Sirkeci
Uskudar
AyrilikCesmesi
Acibadem
Unalan
Goztepe2
Yenisahra
Kozyatagi
Bostanci2
Kucukyali2
Maltepe2
Huzurevi
Gulsuyu
Esenkent
Hastane-Adliye
Soganlik
Kartal2
Yakacik
Pendik2
Tavsantepe
FevziCakmak
Yayalar
Kurtkoy
SabihaGokcenHavalimani


Standard Draw
File
IstanbulHavalimani
Ihsaniye
Gokturk
Kemerburgaz
Haciosman
AtaturkOtoSanayi
SanayiMahallesi
4.Levent
Levent
Hisarustu
Gayrettepe
Sisli-Mecidiyekoy
Yildiz
Kagithane
Alibeykoy
Yesilpinar
Tekstilkent-Giyimkent
Olimpiyat
IkitelliSanayi
Bahariye
GoztepeMah
Mahmutbey
Bahcesehir
Kirazli
Menderes
Otogar
Sagmalcilar
Zeytinburnu2
Bahcelievler
Yenibosna
AtaturkHavalimani
Halkali
Florya
Bakirkoy
Zeytinburnu
Yenikapi
Aksaray
Halic
Taksim
Sirkeci
Uskudar
Kisikli
Carsi
Ihlamurkuyu
Cekmekoy
Unalan
Kadikoy
Sogutlucesme
Feneryolu
Erenkoy
Kucukyali
Maltepe
Kartal
Guzelyali
Bostanci2
Esenkent
Pendik2
SabihaGokcenHavalimani
Tuzla
Fatih
Gebze