Gebze Technical University
Computer Engineering

CSE 222
2017 Spring

HOMEWORK 7 REPORT

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Course Assistant:Nur Banu Albayrak

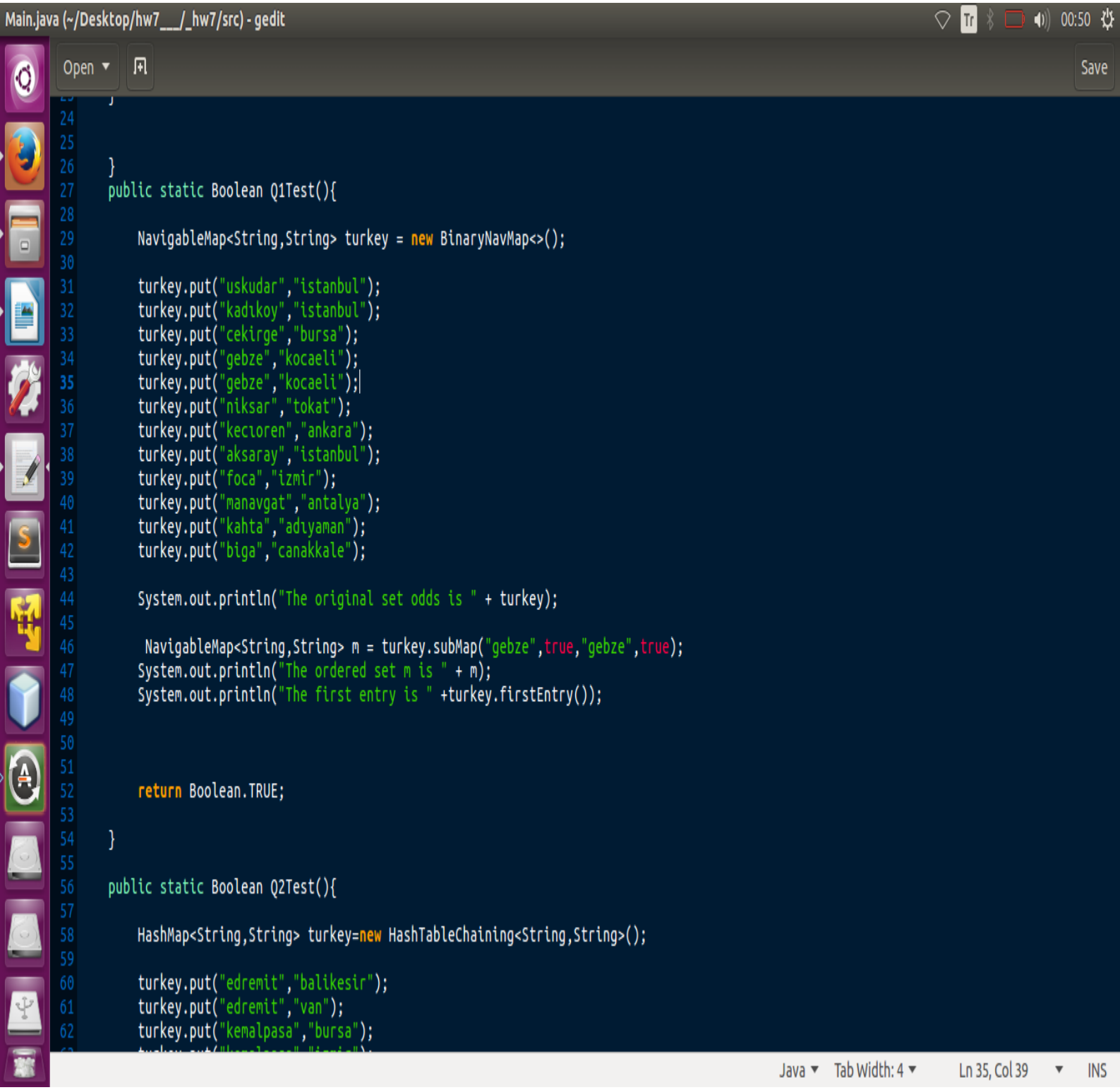
~Problem solutions approach

=> 1. Soru için verilen problemi BinaryNavMap classında put ,get , submap fonksiyonlarını imlement ederek bir Navigable ı implement eden hashtree mapi oluşturdum.

=>2. Soru için verilen problemde ise hashtable tablosunda linear probing yaparak hashchainig classı tasarladım.Bu tablonun size nı 128 olarak belirleyerek tabloyu doldurdum.Ve put ,get , size methodlarını implement ettim.

~ Testing ~

Q-1----------


Main.java (~/Desktop/hw7___/_hw7/src) - gedit
00:50
Open
Save
}
public static Boolean Q1Test(){
NavigableMap<String,String> turkey = new BinaryNavMap<>();
turkey.put("uskudar","istanbul");
turkey.put("kadıkoy","istanbul");
turkey.put("cekirge","bursa");
turkey.put("gebze","kocaeli");
turkey.put("gebze","kocaeli");
turkey.put("niksar","tokat");
turkey.put("kecıoren","ankara");
turkey.put("aksaray","istanbul");
turkey.put("foca","izmir");
turkey.put("manavgat","antalya");
turkey.put("kahta","adıyaman");
turkey.put("biga","canakkale");
System.out.println("The original set odds is " + turkey);
NavigableMap<String,String> m = turkey.subMap("gebze",true,"gebze",true);
System.out.println("The ordered set m is " + m);
System.out.println("The first entry is " +turkey.firstEntry());
return Boolean.TRUE;
}
public static Boolean Q2Test(){
HashMap<String,String> turkey=new HashTableChaining<String,String>();
turkey.put("edremit","balikesir");
turkey.put("edremit","van");
turkey.put("kemalpasa","bursa");
Java
Tab Width: 4
Ln 35, Col 39
INS

Q2----------

Main.java (~/Desktop/hw7___/_hw7/src) - gedit

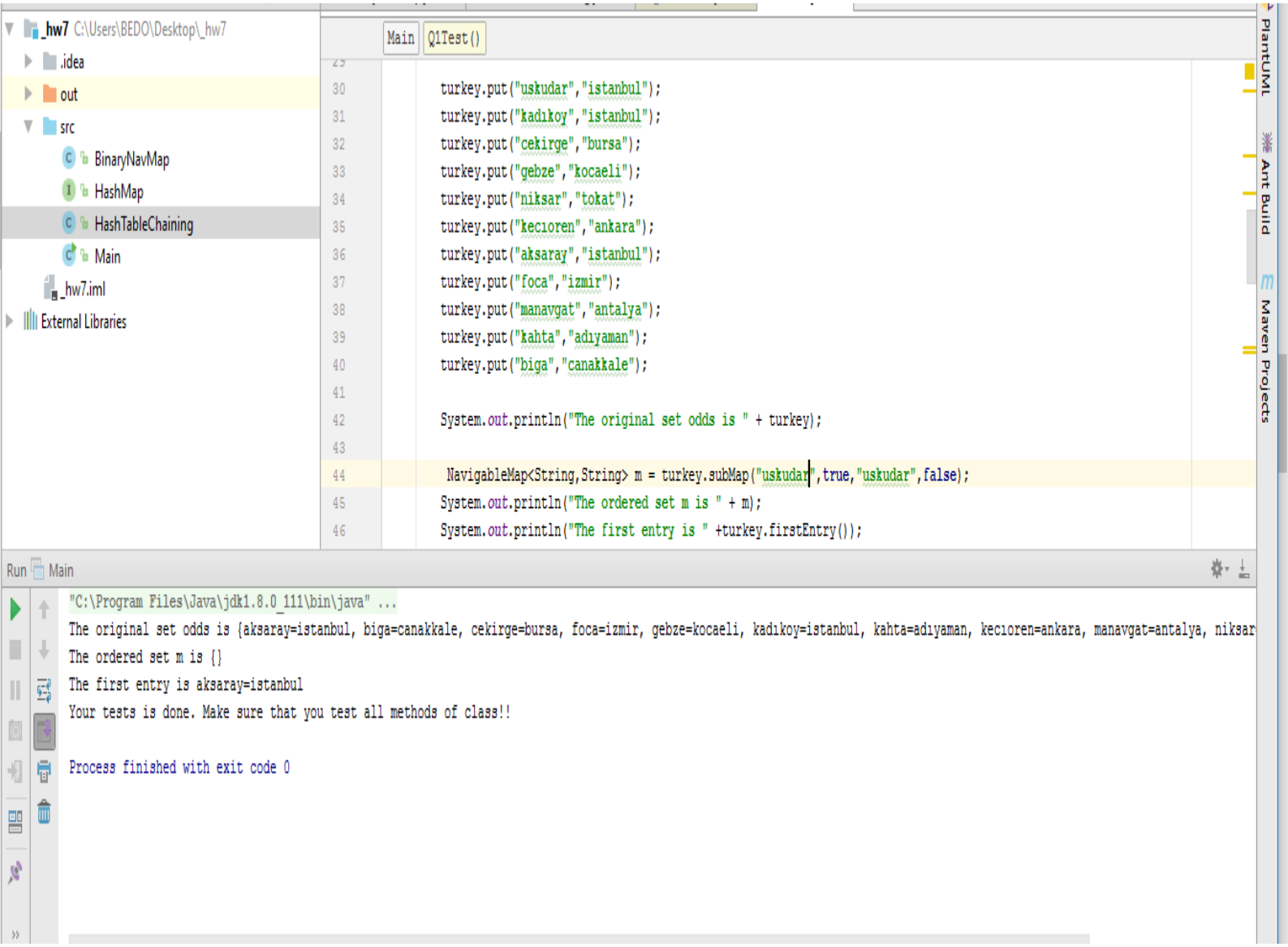
Open Save

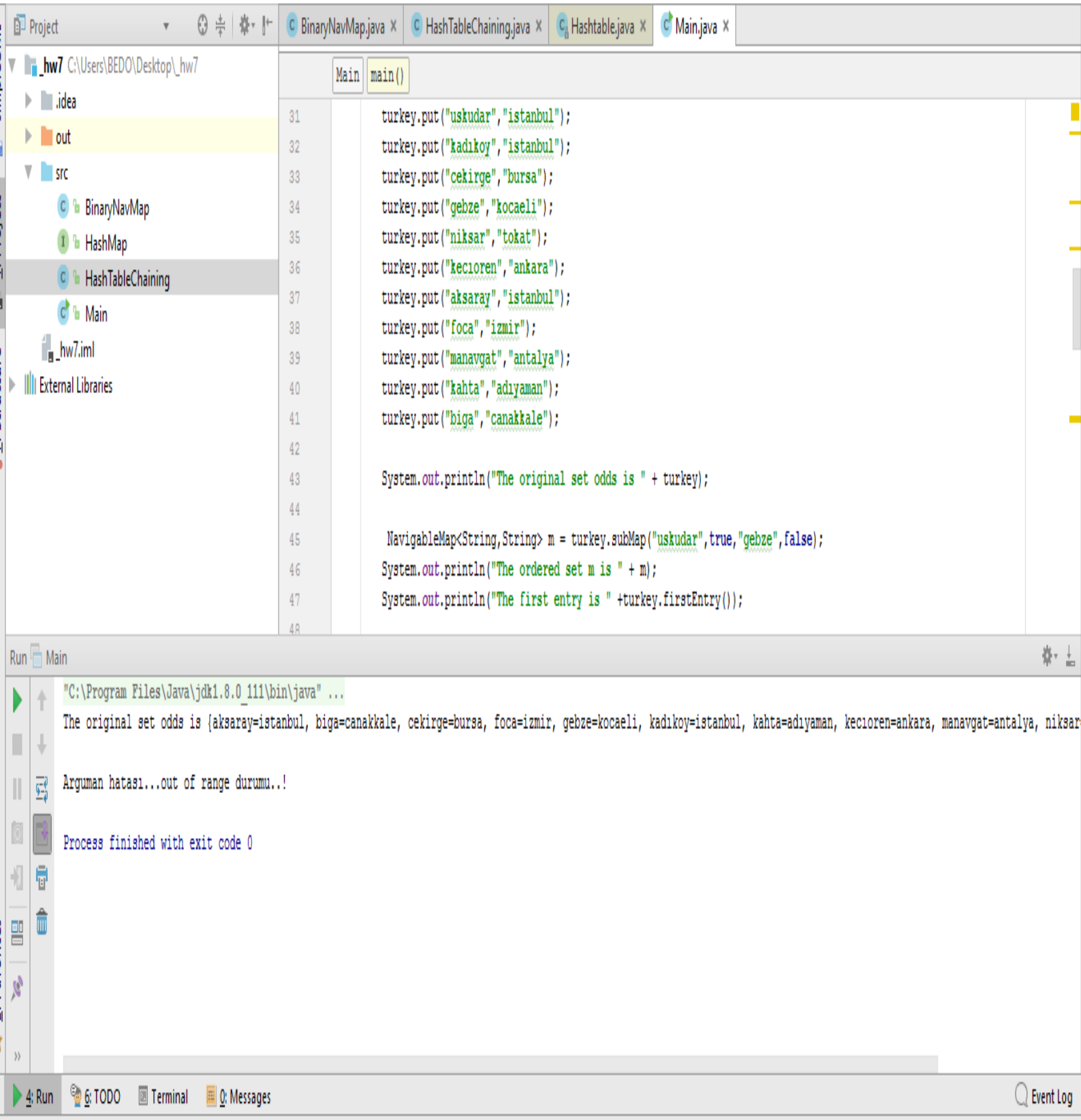
```
51
52          return Boolean.TRUE;
53
54      }
55
56      public static Boolean Q2Test(){
57
58          HashMap<String,String> turkey=new HashTableChaining<String,String>();
59
60          turkey.put("edremit","balikesir");
61          turkey.put("edremit","van");
62          turkey.put("kemalpasa","bursa");
63          turkey.put("kemalpasa","izmir");
64          turkey.put("ortakoy","istanbul");//we assume a district
65          turkey.put("ortakoy","aksaray");
66          turkey.put("ortakoy","corum");
67          turkey.put("kecıoren","ankara");
68          turkey.put("pinarbasi","kastamonu");
69          turkey.put("pinarbasi","kayseri");
70          turkey.put("eregli","konya");
71          turkey.put("eregli","tekirdag");
72          turkey.put("eregli","zonguldak");
73          turkey.put("golbasi","adıyaman");
74          turkey.put("golbasi","ankara");
75          turkey.put("biga","canakkale");
76
77
78          System.out.println("get(pinarbasi)-> "+turkey.get("pinarbasi"));
79          System.out.println("size-> "+turkey.size());
80          System.out.println("remove(uskudar)->"+turkey.remove("uskudar"));
81          System.out.println("remove(ortakoy)->"+turkey.remove("ortakoy"));
82          System.out.println("size-> "+turkey.size());
83
84
85          /* *test all
86
87              V get(Object key);
88
89              V put(K key, V value);
```

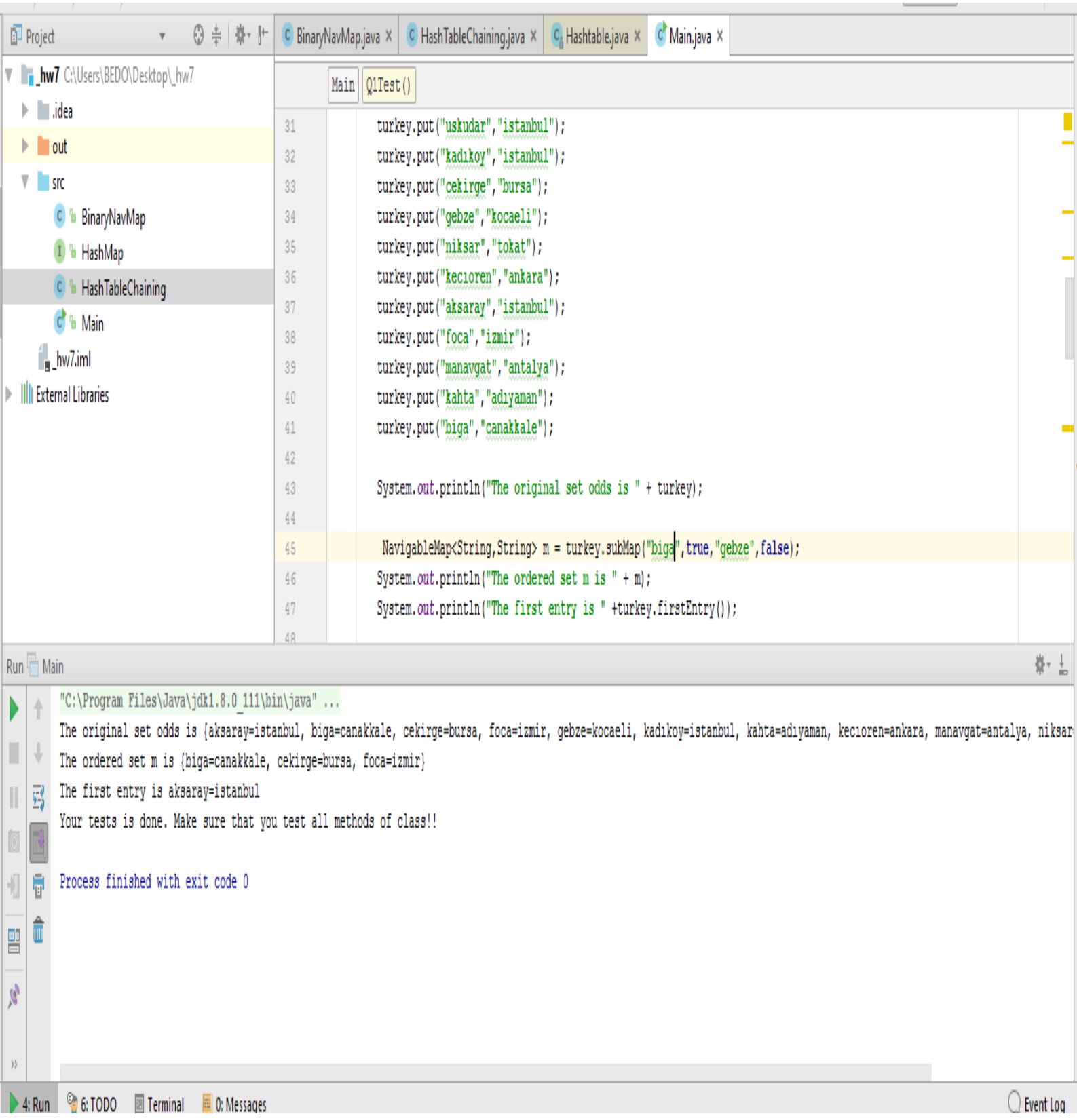
Java Tab Width: 4 Ln 35, Col 39 INS

~ Results ~

Q-1)


_hw7 C:\Users\BEDO\Desktop_hw7
.idea
out
src
BinaryNavMap
HashMap
HashTableChaining
Main
_hw7.iml
External Libraries
Main
Q1Test()
turkey.put("uskudar","istanbul");
turkey.put("kadıkoy","istanbul");
turkey.put("cekirge","bursa");
turkey.put("gebze","kocaeli");
turkey.put("niksar","tokat");
turkey.put("kecıoren","ankara");
turkey.put("aksaray","istanbul");
turkey.put("foca","izmir");
turkey.put("manavgat","antalya");
turkey.put("kahta","adıyaman");
turkey.put("biga","canakkale");
System.out.println("The original set odds is " + turkey);
NavigableMap<String,String> m = turkey.subMap("uskudar",true,"uskudar",false);
System.out.println("The ordered set m is " + m);
System.out.println("The first entry is " +turkey.firstEntry());
Run
Main
"C:\Program Files\Java\jdk1.8.0_111\bin\java" ...
The original set odds is {aksaray=istanbul, biga=canakkale, cekirge=bursa, foca=izmir, gebze=kocaeli, kadıkoy=istanbul, kahta=adıyaman, kecıoren=ankara, manavgat=antalya, niksar
The ordered set m is {}
The first entry is aksaray=istanbul
Your tests is done. Make sure that you test all methods of class!!
Process finished with exit code 0
PlantUML
Ant Build
Maven Projects


Project
BinaryNavMap.java
HashTableChaining.java
Hashtable.java
Main.java
_hw7 C:\Users\BEDO\Desktop_hw7
.idea
out
src
BinaryNavMap
HashMap
HashTableChaining
Main
_hw7.iml
External Libraries
Main
main()
31 turkey.put("uskudar","istanbul");
32 turkey.put("kadikoy","istanbul");
33 turkey.put("cekirge","bursa");
34 turkey.put("gebze","kocaeli");
35 turkey.put("niksar","tokat");
36 turkey.put("kecioren","ankara");
37 turkey.put("aksaray","istanbul");
38 turkey.put("foca","izmir");
39 turkey.put("manavgat","antalya");
40 turkey.put("kahta","adıyaman");
41 turkey.put("biga","canakkale");
42
43 System.out.println("The original set odds is " + turkey);
44
45 NavigableMap<String,String> m = turkey.subMap("uskudar",true,"gebze",false);
46 System.out.println("The ordered set m is " + m);
47 System.out.println("The first entry is " +turkey.firstEntry());
Run
Main
"C:\Program Files\Java\jdk1.8.0_111\bin\java" ...
The original set odds is {aksaray=istanbul, biga=canakkale, cekirge=bursa, foca=izmir, gebze=kocaeli, kadikoy=istanbul, kahta=adıyaman, kecioren=ankara, manavgat=antalya, niksar
Arguman hatası...out of range durumu..!
Process finished with exit code 0
4: Run
6: TODO
Terminal
0: Messages
Event Log


Project
BinaryNavMap.java
HashTableChaining.java
Hashtable.java
Main.java
_hw7 C:\Users\BEDO\Desktop_hw7
.idea
out
src
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HashTableChaining
Main
_hw7.iml
External Libraries
Main
Q1Test()
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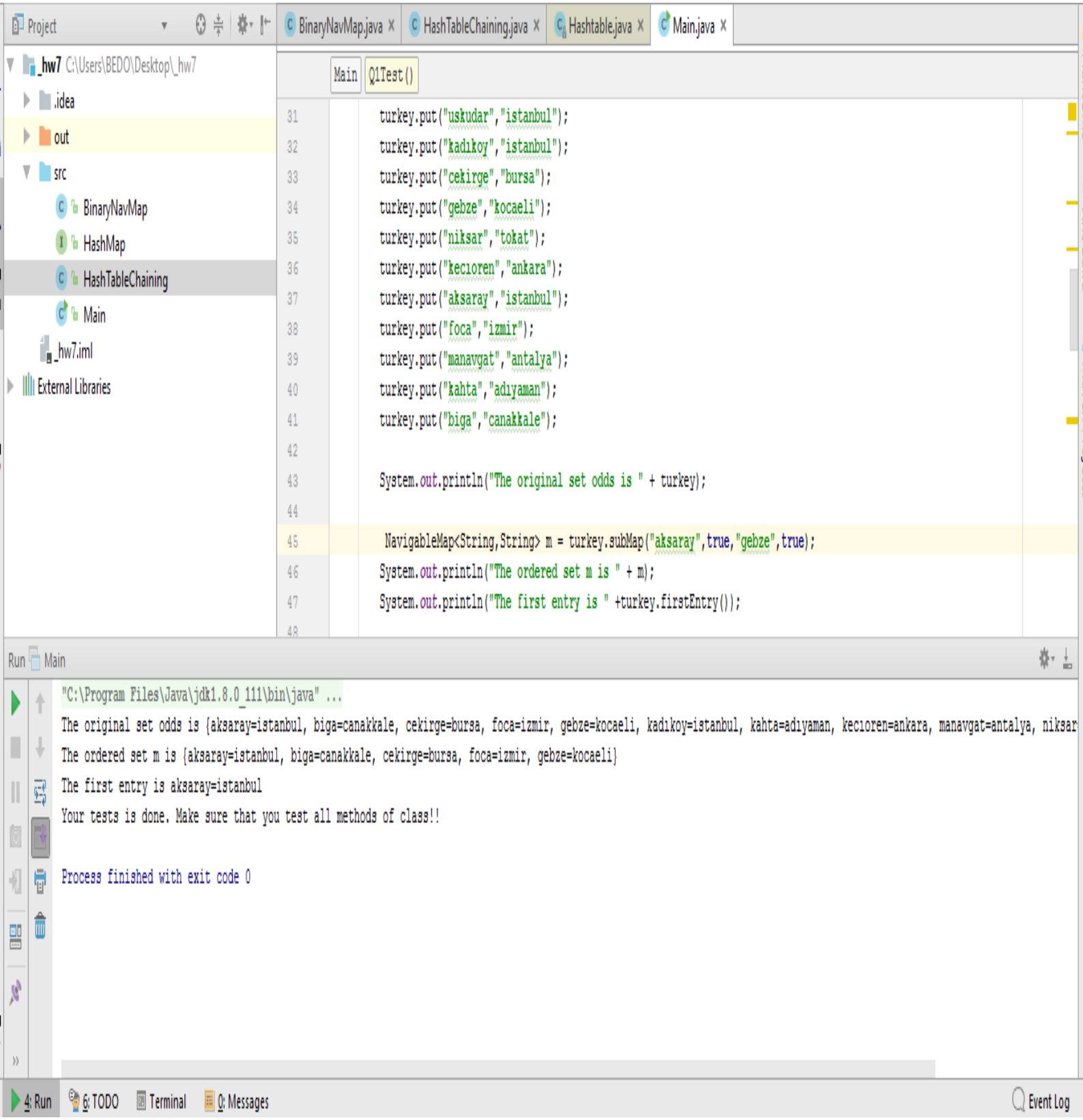
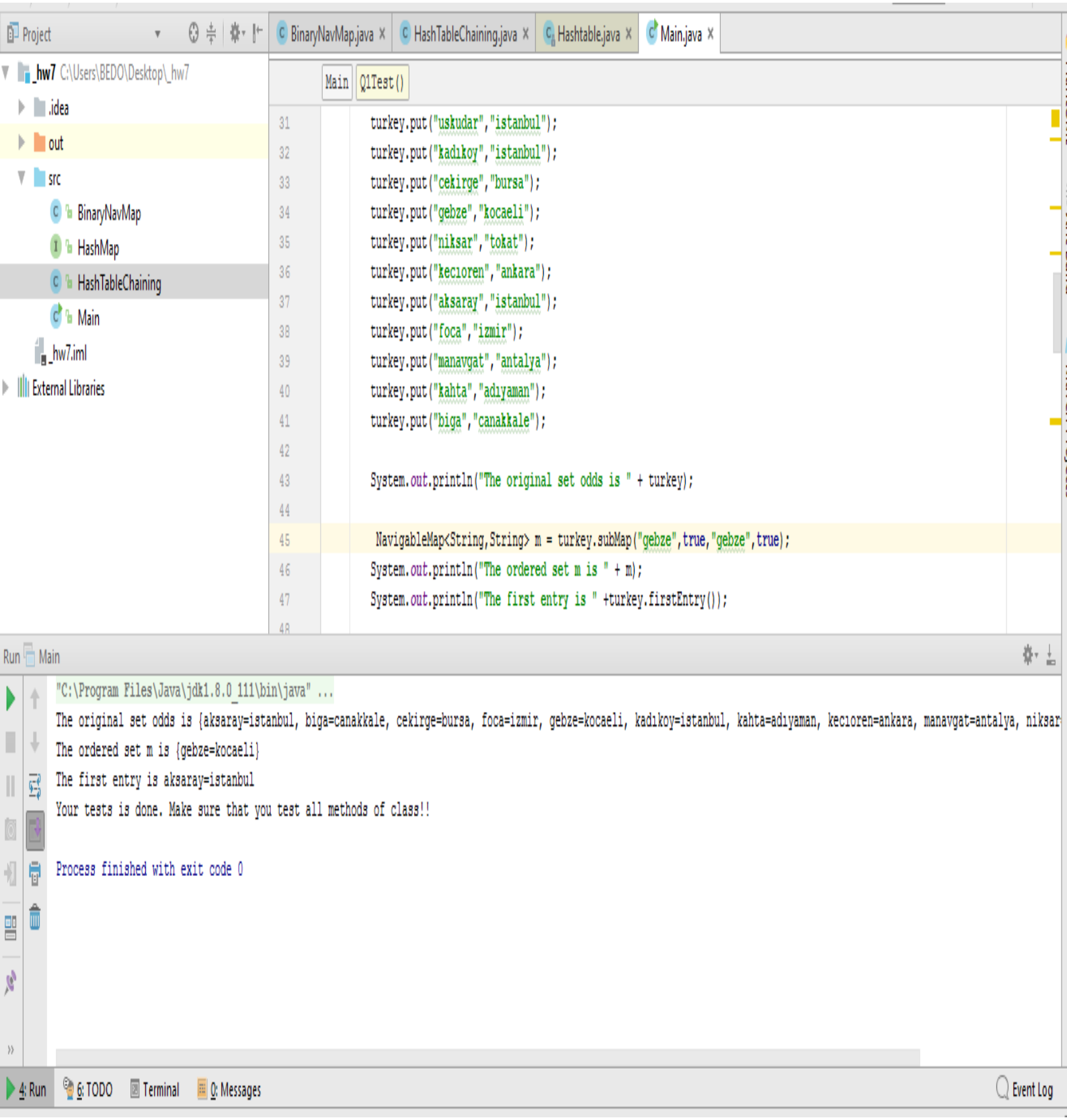
turkey.put("kadikoy","istanbul");
turkey.put("cekirge","bursa");
turkey.put("gebze","kocaeli");
turkey.put("niksar","tokat");
turkey.put("kecioren","ankara");
turkey.put("aksaray","istanbul");
turkey.put("foca","izmir");
turkey.put("manavgat","antalya");
turkey.put("kahta","adiyaman");
turkey.put("biga","canakkale");
System.out.println("The original set odds is " + turkey);
NavigableMap<String,String> m = turkey.subMap("biga",true,"gebze",false);
System.out.println("The ordered set m is " + m);
System.out.println("The first entry is " +turkey.firstEntry());
Run
Main
"C:\Program Files\Java\jdk1.8.0_111\bin\java" ...
The original set odds is {aksaray=istanbul, biga=canakkale, cekirge=bursa, foca=izmir, gebze=kocaeli, kadikoy=istanbul, kahta=adiyaman, kecioren=ankara, manavgat=antalya, niksar
The ordered set m is {biga=canakkale, cekirge=bursa, foca=izmir}
The first entry is aksaray=istanbul
Your tests is done. Make sure that you test all methods of class!!
Process finished with exit code 0
4: Run
6: TODO
Terminal
0: Messages
Event Log


Project
BinaryNavMap.java
HashTableChaining.java
Hashtable.java
Main.java
_hw7 C:\Users\BEDO\Desktop_hw7
.idea
out
src
BinaryNavMap
HashMap
HashTableChaining
Main
_hw7.iml
External Libraries
Main
Q1Test()
turkey.put("uskudar","istanbul");
turkey.put("kadıkoy","istanbul");
turkey.put("cekirge","bursa");
turkey.put("gebze","kocaeli");
turkey.put("niksar","tokat");
turkey.put("kecıoren","ankara");
turkey.put("aksaray","istanbul");
turkey.put("foca","izmir");
turkey.put("manavgat","antalya");
turkey.put("kahta","adıyaman");
turkey.put("biga","canakkale");
System.out.println("The original set odds is " + turkey);
NavigableMap<String,String> m = turkey.subMap("aksaray",true,"gebze",true);
System.out.println("The ordered set m is " + m);
System.out.println("The first entry is " +turkey.firstEntry());
Run
Main
"C:\Program Files\Java\jdk1.8.0_111\bin\java" ...
The original set odds is {aksaray=istanbul, biga=canakkale, cekirge=bursa, foca=izmir, gebze=kocaeli, kadıkoy=istanbul, kahta=adıyaman, kecıoren=ankara, manavgat=antalya, niksar
The ordered set m is {aksaray=istanbul, biga=canakkale, cekirge=bursa, foca=izmir, gebze=kocaeli}
The first entry is aksaray=istanbul
Your tests is done. Make sure that you test all methods of class!!
Process finished with exit code 0
4: Run
6: TODO
Terminal
0: Messages
Event Log


Project
BinaryNavMap.java
HashTableChaining.java
Hashtable.java
Main.java
_hw7 C:\Users\BEDO\Desktop_hw7
.idea
out
src
BinaryNavMap
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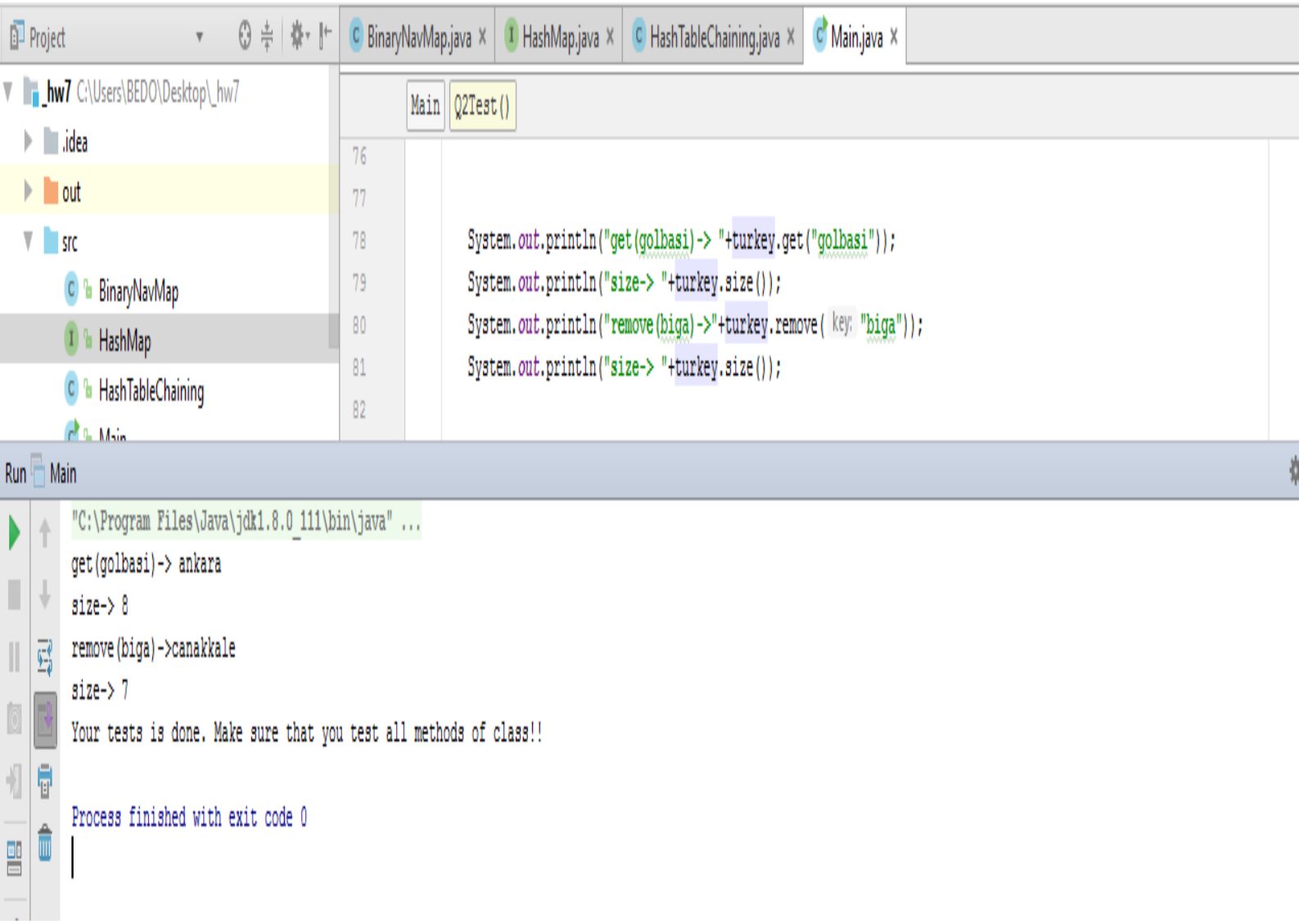
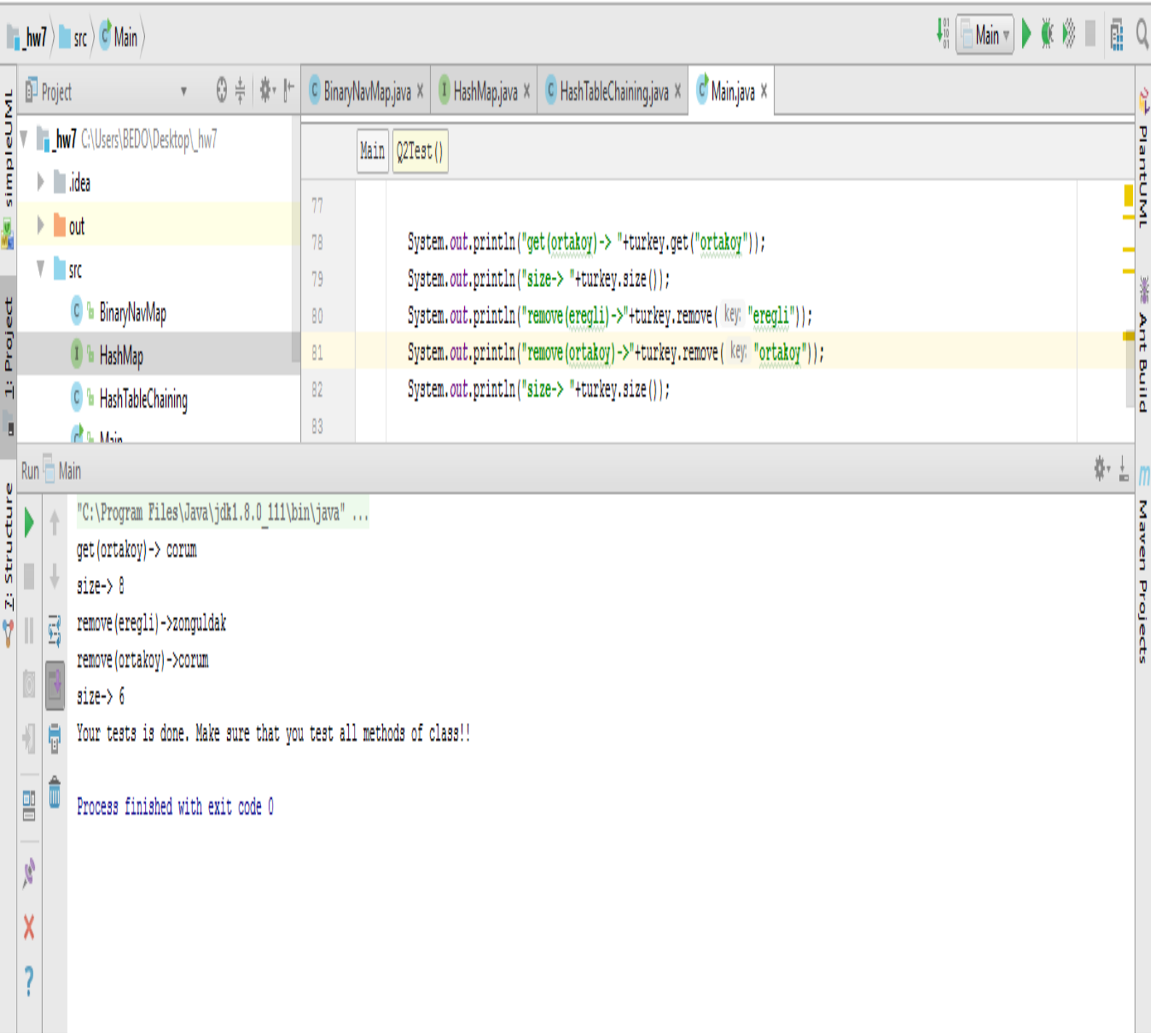
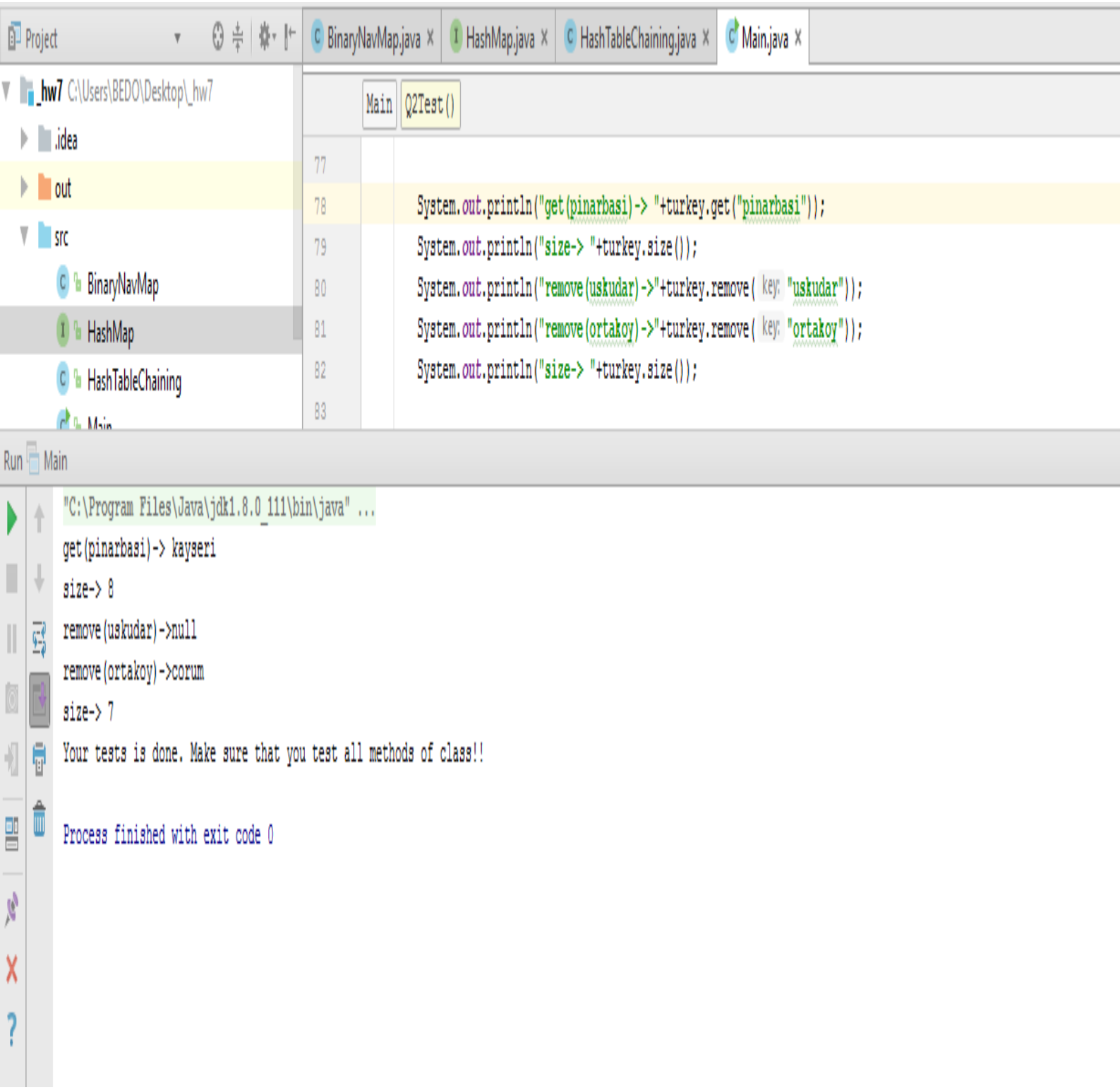
HashTableChaining
Main
_hw7.iml
External Libraries
Main
Q1Test()
turkey.put("uskudar","istanbul");
turkey.put("kadıkoy","istanbul");
turkey.put("cekirge","bursa");
turkey.put("gebze","kocaeli");
turkey.put("niksar","tokat");
turkey.put("kecıoren","ankara");
turkey.put("aksaray","istanbul");
turkey.put("foca","izmir");
turkey.put("manavgat","antalya");
turkey.put("kahta","adıyaman");
turkey.put("biga","canakkale");
System.out.println("The original set odds is " + turkey);
NavigableMap<String,String> m = turkey.subMap("gebze",true,"gebze",true);
System.out.println("The ordered set m is " + m);
System.out.println("The first entry is " +turkey.firstEntry());
Run
Main
"C:\Program Files\Java\jdk1.8.0_111\bin\java" ...
The original set odds is {aksaray=istanbul, biga=canakkale, cekirge=bursa, foca=izmir, gebze=kocaeli, kadıkoy=istanbul, kahta=adıyaman, kecıoren=ankara, manavgat=antalya, niksar
The ordered set m is {gebze=kocaeli}
The first entry is aksaray=istanbul
Your tests is done. Make sure that you test all methods of class!!
Process finished with exit code 0
4: Run
6: TODO
Terminal
0: Messages
Event Log

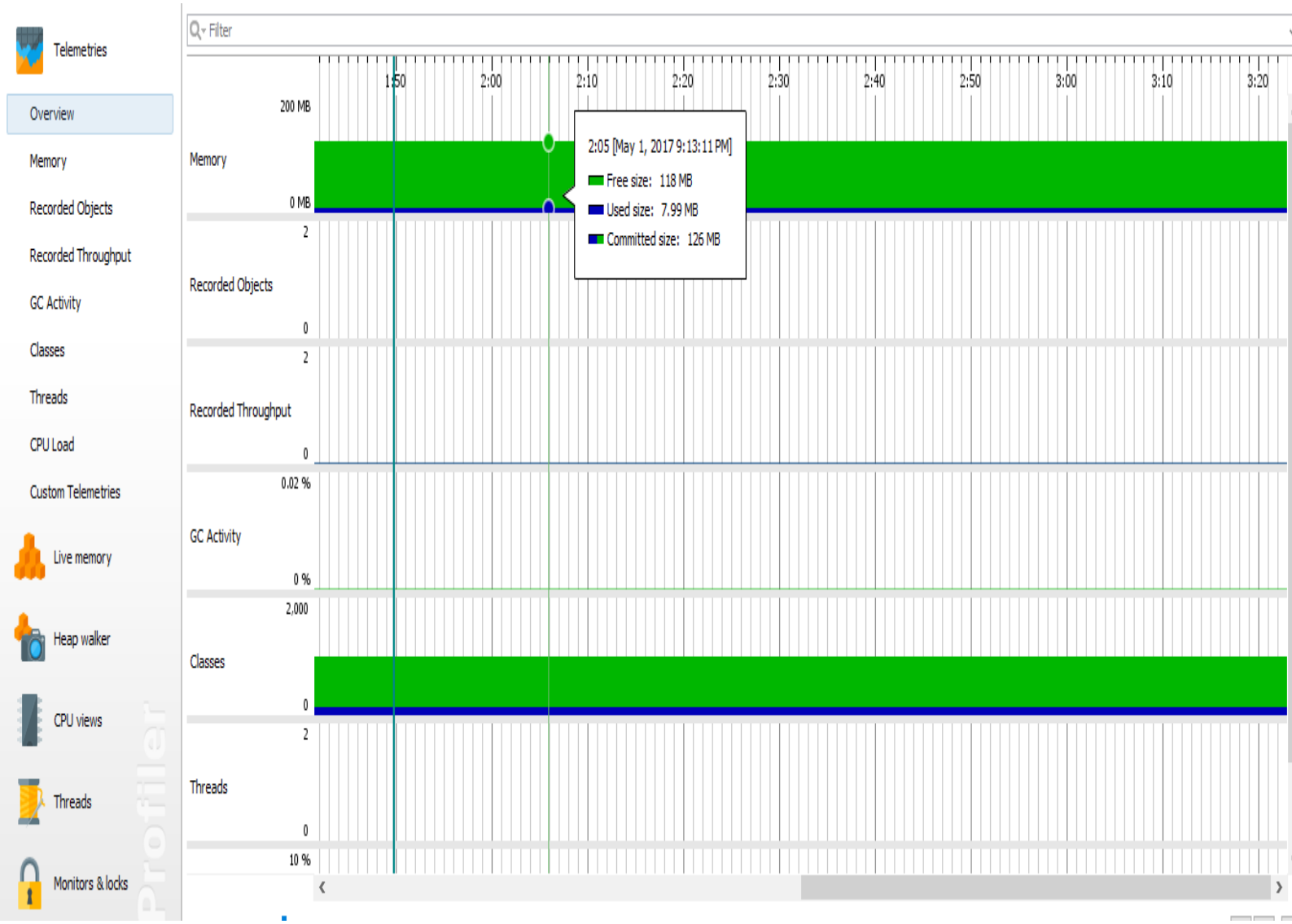
Q2-)

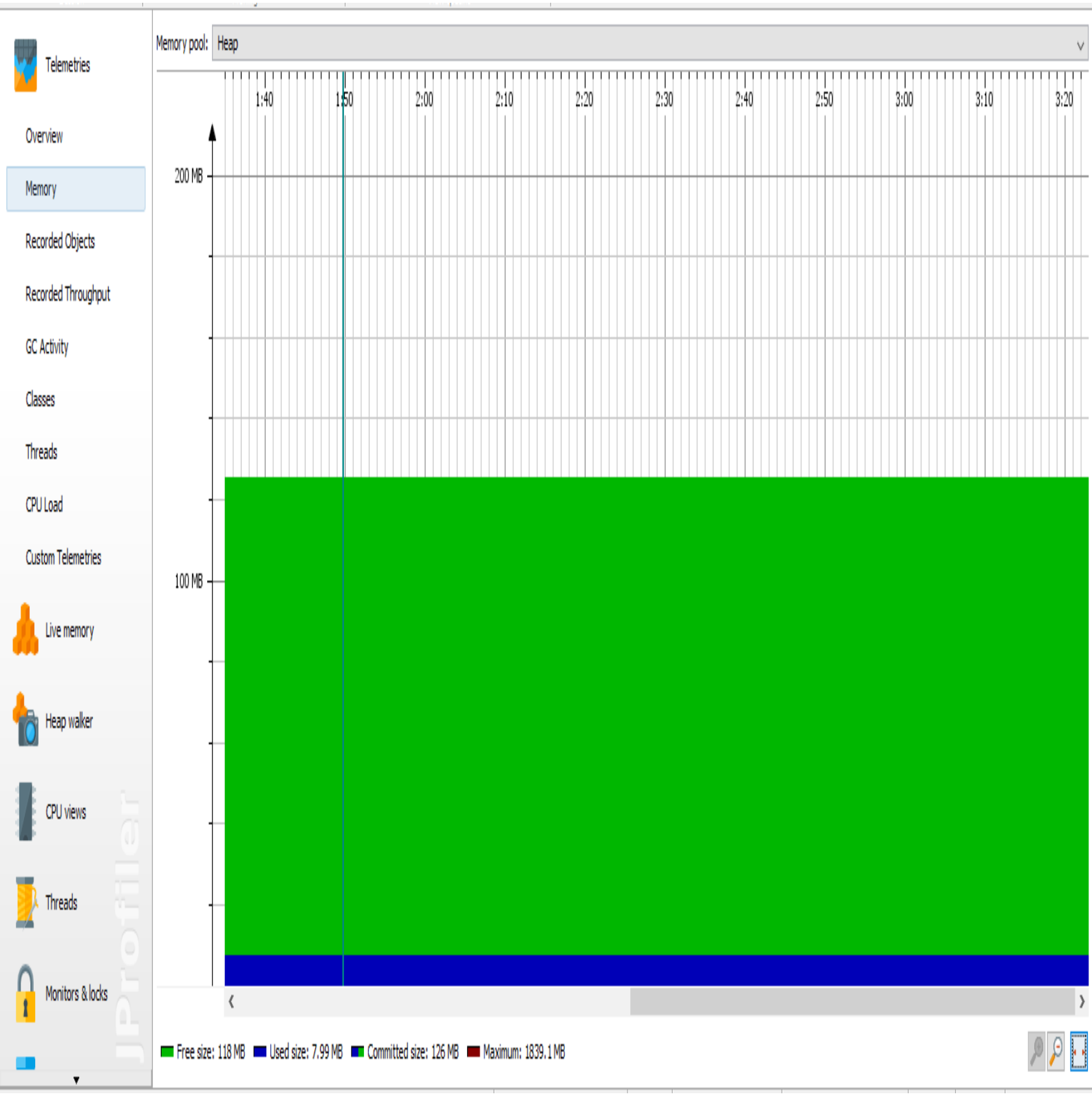

Project
BinaryNavMap.java
HashMap.java
HashTableChaining.java
Main.java
_hw7 C:\Users\BEDO\Desktop_hw7
.idea
out
src
BinaryNavMap
HashMap
HashTableChaining
Main
Q2Test()
System.out.println("get(golbasi)-> "+turkey.get("golbasi"));
System.out.println("size-> "+turkey.size());
System.out.println("remove(biga)->"+turkey.remove(key: "biga"));
System.out.println("size-> "+turkey.size());
Run
Main
"C:\Program Files\Java\jdk1.8.0_111\bin\java" ...
get(golbasi)-> ankara
size-> 8
remove(biga)->canakkale
size-> 7
Your tests is done. Make sure that you test all methods of class!!
Process finished with exit code 0

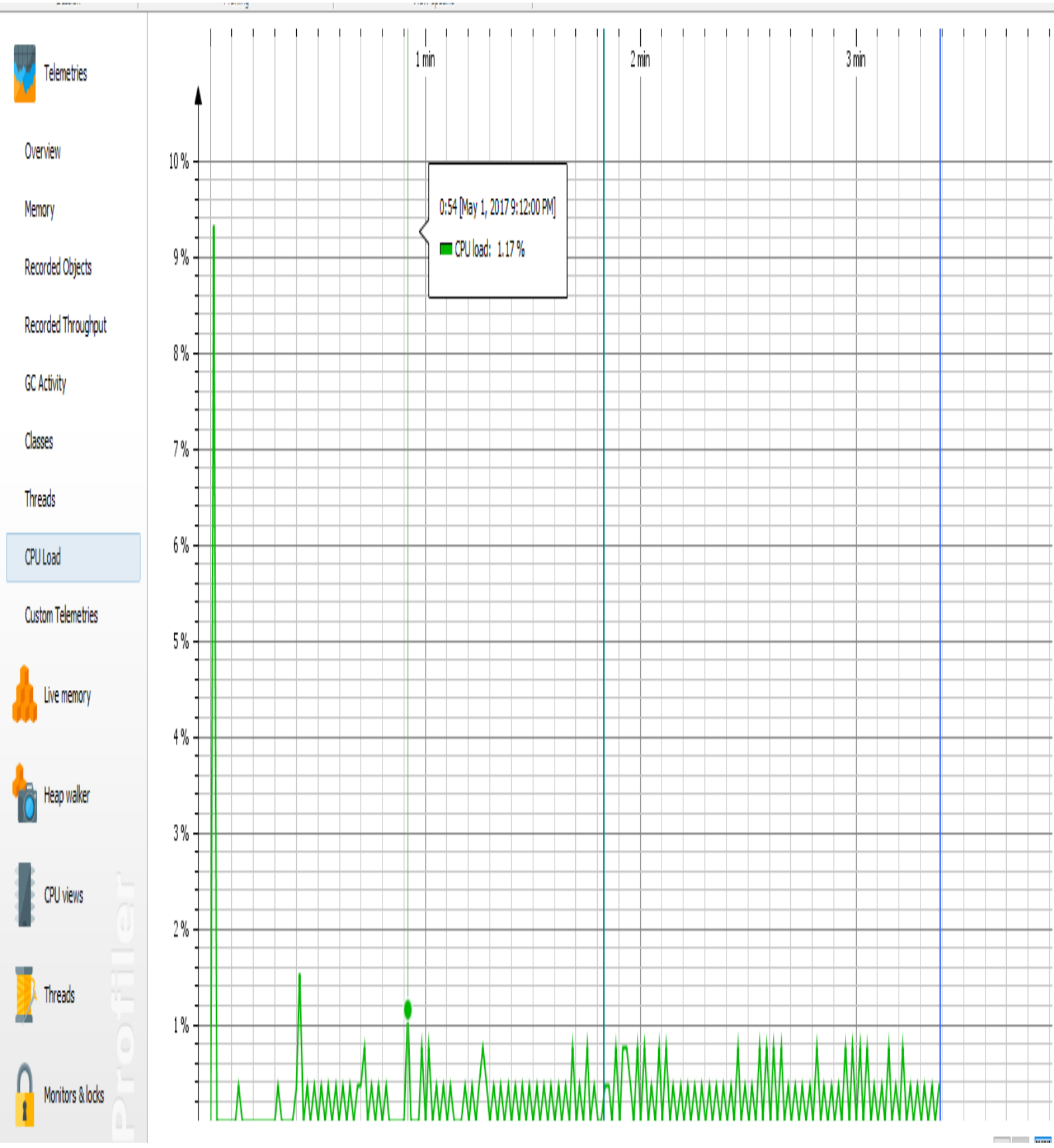

_hw7 src Main
Main
Project
BinaryNavMap.java
HashMap.java
HashTableChaining.java
Main.java
_hw7 C:\Users\BEDO\Desktop_hw7
.idea
out
src
BinaryNavMap
HashMap
HashTableChaining
Main
Q2Test()
77
78 System.out.println("get(ortakoy)-> "+turkey.get("ortakoy"));
79 System.out.println("size-> "+turkey.size());
80 System.out.println("remove(eregli)->"+turkey.remove(key: "eregli"));
81 System.out.println("remove(ortakoy)->"+turkey.remove(key: "ortakoy"));
82 System.out.println("size-> "+turkey.size());
83
Run Main
"C:\Program Files\Java\jdk1.8.0_111\bin\java" ...
get(ortakoy)-> corum
size-> 8
remove(eregli)->zonguldak
remove(ortakoy)->corum
size-> 6
Your tests is done. Make sure that you test all methods of class!!
Process finished with exit code 0


Project
BinaryNavMap.java
HashMap.java
HashTableChaining.java
Main.java
_hw7 C:\Users\BEDO\Desktop_hw7
.idea
out
src
BinaryNavMap
HashMap
HashTableChaining
Main
Main
Q2Test()
77
78 System.out.println("get(pinarbasi)-> "+turkey.get("pinarbasi"));
79 System.out.println("size-> "+turkey.size());
80 System.out.println("remove(uskudar)->"+turkey.remove(key: "uskudar"));
81 System.out.println("remove(ortakoy)->"+turkey.remove(key: "ortakoy"));
82 System.out.println("size-> "+turkey.size());
83
Run
Main
"C:\Program Files\Java\jdk1.8.0_111\bin\java" ...
get(pinarbasi)-> kayseri
size-> 8
remove(uskudar)->null
remove(ortakoy)->corum
size-> 7
Your tests is done. Make sure that you test all methods of class!!
Process finished with exit code 0

~ Other Diagrams ~




Telemetries
Overview
Memory
Recorded Objects
Recorded Throughput
GC Activity
Classes
Threads
CPU Load
Custom Telemetries
Live memory
Heap walker
CPU views
Threads
Monitors & locks
JProfiler
Memory pool: Heap
1:40
1:50
2:00
2:10
2:20
2:30
2:40
2:50
3:00
3:10
3:20
200 MB
100 MB
Free size: 118 MB
Used size: 7.99 MB
Committed size: 126 MB
Maximum: 1839.1 MB


Telemetries
Overview
Memory
Recorded Objects
Recorded Throughput
GC Activity
Classes
Threads
CPU Load
Custom Telemetries
Live memory
Heap walker
CPU views
Threads
Monitors & locks
Profiler
1 min
2 min
3 min
10 %
9 %
8 %
7 %
6 %
5 %
4 %
3 %
2 %
1 %
0:54 [May 1, 2017 9:12:00 PM]
CPU load: 1.17 %