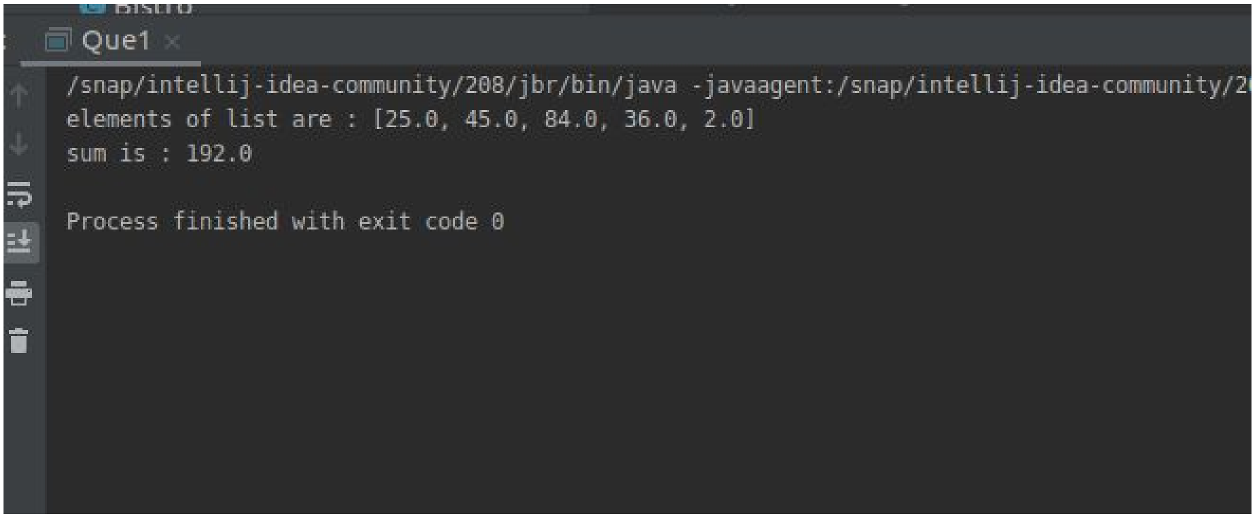
<u>Collections</u>

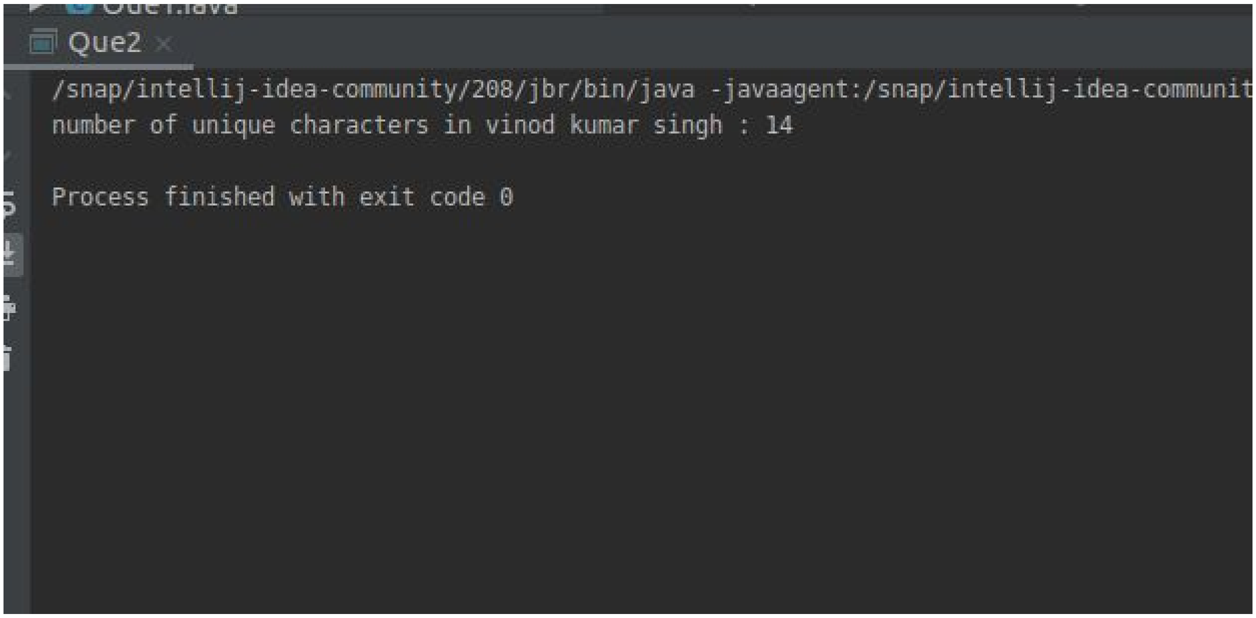
1. Write Java code to define List . Insert 5 floating point numbers in List, and using an iterator, find the sum of the numbers in List.



```
/snap/intellij-idea-community/208/jbr/bin/java -javaagent:/snap/intellij-idea-community/2
elements of list are : [25.0, 45.0, 84.0, 36.0, 2.0]
sum is : 192.0

Process finished with exit code 0
```

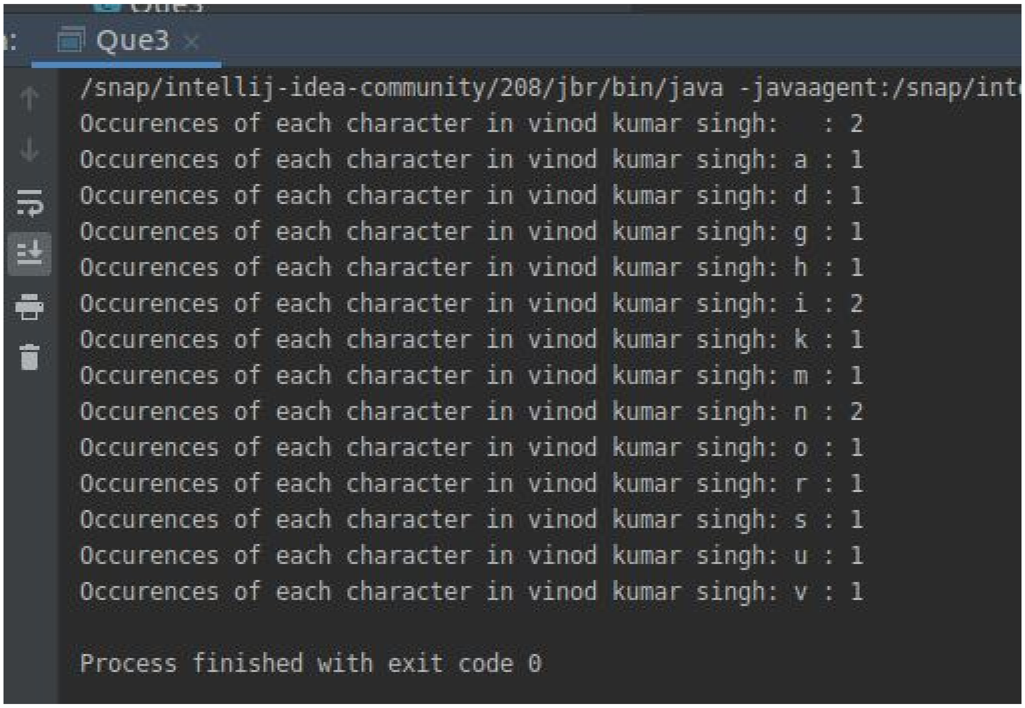
2.Write a method that takes a string and returns the number of unique characters in the string.



```
/snap/intellij-idea-community/208/jbr/bin/java -javaagent:/snap/intellij-idea-communit
number of unique characters in vinod kumar singh : 14

Process finished with exit code 0
```

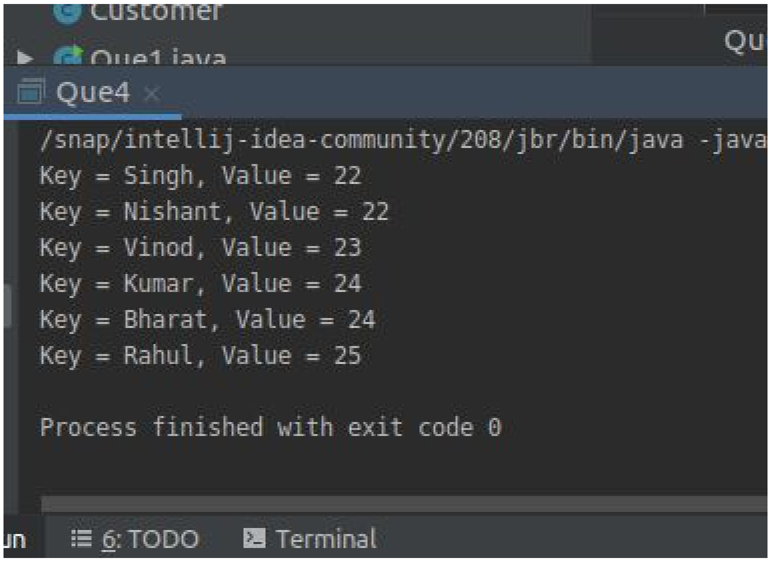
3.Write a method that takes a string and print the number of occurrence of each character characters in the string.



```
/snap/intellij-idea-community/208/jbr/bin/java -javaagent:/snap/int
Occurences of each character in vinod kumar singh:   : 2
Occurences of each character in vinod kumar singh: a : 1
Occurences of each character in vinod kumar singh: d : 1
Occurences of each character in vinod kumar singh: g : 1
Occurences of each character in vinod kumar singh: h : 1
Occurences of each character in vinod kumar singh: i : 2
Occurences of each character in vinod kumar singh: k : 1
Occurences of each character in vinod kumar singh: m : 1
Occurences of each character in vinod kumar singh: n : 2
Occurences of each character in vinod kumar singh: o : 1
Occurences of each character in vinod kumar singh: r : 1
Occurences of each character in vinod kumar singh: s : 1
Occurences of each character in vinod kumar singh: u : 1
Occurences of each character in vinod kumar singh: v : 1

Process finished with exit code 0
```

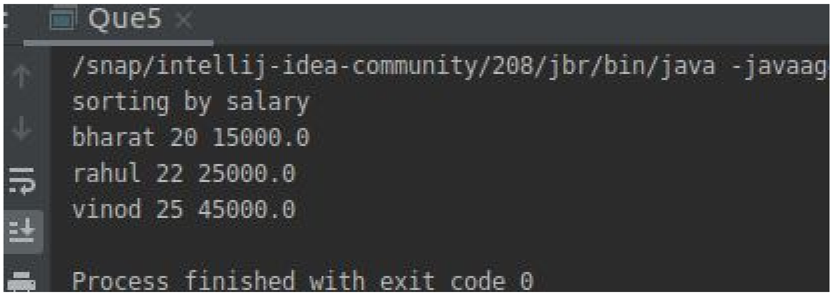
4. Write a program to sort HashMap by value.



```
/snap/intellij-idea-community/208/jbr/bin/java -java
Key = Singh, Value = 22
Key = Nishant, Value = 22
Key = Vinod, Value = 23
Key = Kumar, Value = 24
Key = Bharat, Value = 24
Key = Rahul, Value = 25

Process finished with exit code 0
```

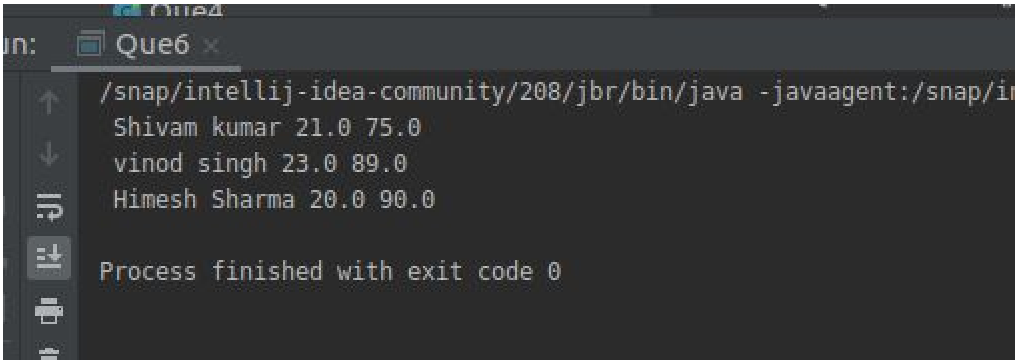
5. Write a program to sort Employee objects based on highest salary using Comparator. Employee class{ Double Age; Double Salary; String Name



```
/snap/intellij-idea-community/208/jbr/bin/java -javaag
sorting by salary
bharat 20 15000.0
rahul 22 25000.0
vinod 25 45000.0

Process finished with exit code 0
```

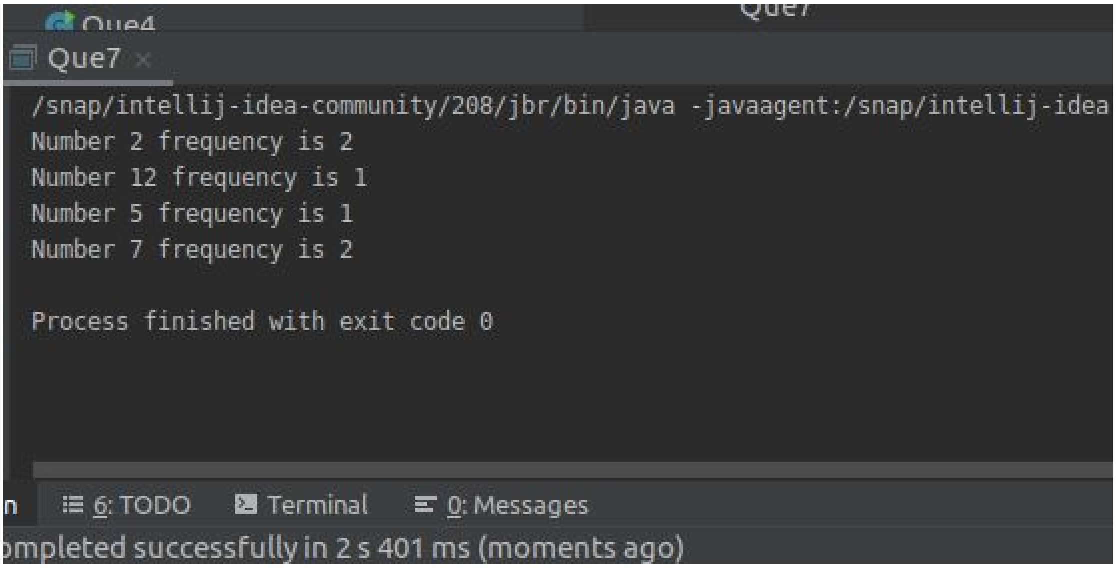
6. Write a program to sort the Student objects based on Score , if the score are same then sort on First Name . Class Student{ String Name; Double Score; Double Age



```
/snap/intellij-idea-community/208/jbr/bin/java -javaagent:/snap/i
 Shivam kumar 21.0 75.0
 vinod singh 23.0 89.0
 Himesh Sharma 20.0 90.0

Process finished with exit code 0
```

7.Print the elements of an array in the decreasing frequency if 2 numbers have same frequency then print the one which came first.



```
/snap/intellij-idea-community/208/jbr/bin/java -javaagent:/snap/intellij-idea
Number 2 frequency is 2
Number 12 frequency is 1
Number 5 frequency is 1
Number 7 frequency is 2

Process finished with exit code 0
```

ompleted successfully in 2 s 401 ms (moments ago)

8. Design a Data Structure SpecialStack that supports all the stack operations like push(), pop(), isEmpty(), isFull() and an additional operation getMin() which should return minimum element from the SpecialStack. (Expected complexity O(1))