



## Experiment Title – 2.2

**Student Name:** YANA SRIVASTAVA

**UID:** 20BCS2279

**Branch:** BE-CSE

**Section/Group:** 20BCS-WM-906/B

**Semester:** 5<sup>th</sup>

**Date of Performance:** 04/10/2022

**Subject Name:** PBLJ LAB

**Subject Code:** 21 CSP-321

**1. Aim/Overview of the practical:** Playing cards during travel is a fun filled experience. For this game they wanted to collect all four unique symbols. Can you help these guys to collect unique symbols from a set of cards?

Create Card class with attributes symbol and number. From our main method collect each card details (symbol and number) from the user.

Collect all these cards in a set, since set is used to store unique values or objects.

Once we collect all four different symbols display the first occurrence of card details in alphabetical order.

**2. Software/Hardware Requirements:** IntelliJ

**3. Algorithm/pseudo code:**

Step1: create class Main.

Step2: in main method create list of integer name card value.

Step3: apply hashmap map.

Step4: make variable first Entry.

Step5: check the frequency of cards.

Step6: if it is more than 1 then print not unique.

Step7: If it is 1 then unique.

#### 4. Steps for experiment/practical/Code:

```
package com.chirag;

import java.util.Scanner;

import java.util.Set;

import java.util.TreeSet;

//Card class implementing Comparable for storing it in TreeSet

class Card

    implements Comparable<Card> {

    char symbol;

    int number;

    public Card(char s, int n) {

        this.symbol = s;

        this.number = n;

    }

    @Override

    public String toString() {

        return symbol + " " + number;

    }

    @Override
```

```
public int compareTo(Card o) {  
    return (this.symbol - o.symbol);  
}  
}  
public class Main {  
  
    public static void main(String[] args) {  
        try (Scanner sc = new Scanner(System.in);)  
        {  
            System.out.println("Enter number of cards: "); int n = sc.nextInt();  
            sc.nextLine();  
            Set<Card> cards = new TreeSet<Card>();  
  
            for (int i = 0; i < n; ++i) {  
                System.out.println("Enter card " + (i + 1) + ":");  
                char s = sc.next().charAt(0);  
                int num = sc.nextInt();  
                sc.nextLine();  
                cards.add(new Card(s, num));  
            }  
  
            System.out.println(cards.size() + " symbols gathered in " + n + " cards");  
        }  
    }  
}
```

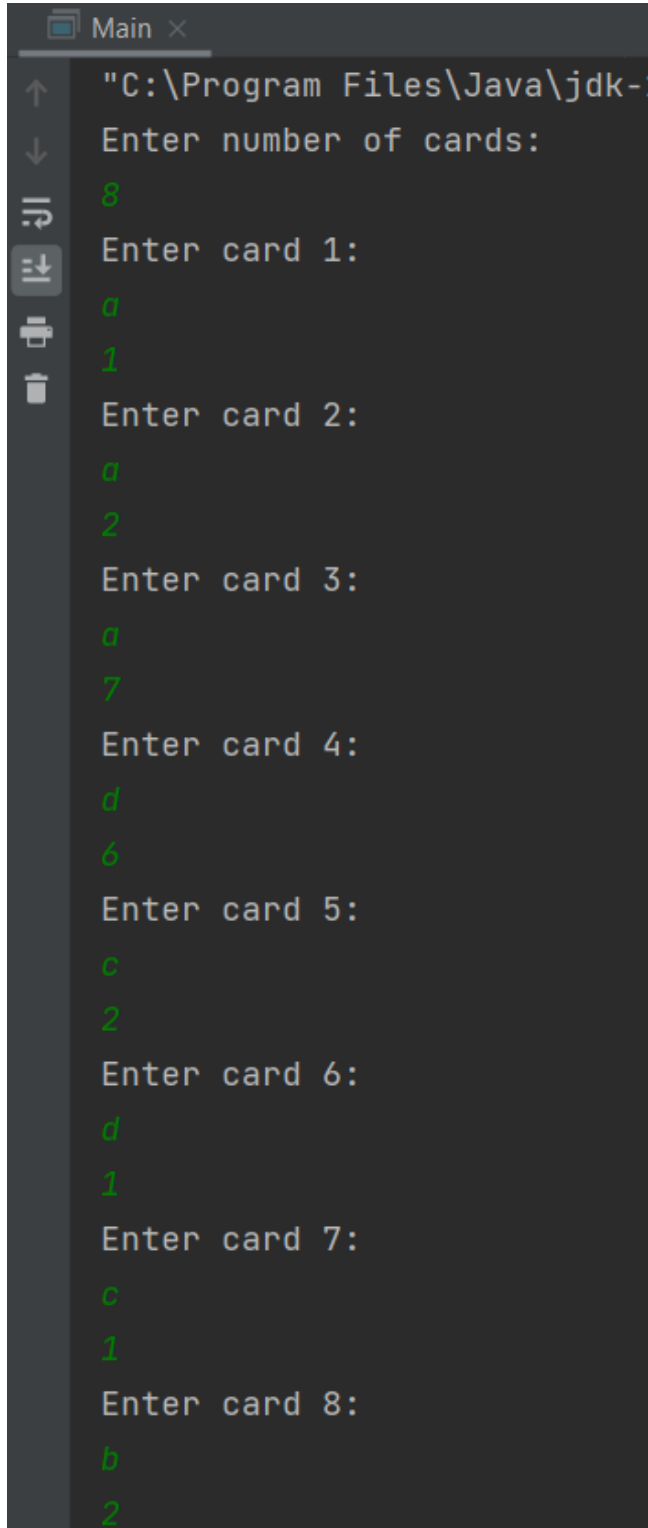


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```
System.out.println("Crads in set are: ");  
  
for (Card card : cards) {  
  
    System.out.println(card.toString());  
  
}  
  
}  
  
}  
  
}
```

## 5. Result/Output/Writing Summary:



```

Main x
"C:\Program Files\Java\jdk-11.0.10\bin\java.exe"
Enter number of cards:
8
Enter card 1:
a
1
Enter card 2:
a
2
Enter card 3:
a
7
Enter card 4:
d
6
Enter card 5:
c
2
Enter card 6:
d
1
Enter card 7:
c
1
Enter card 8:
b
2

```

SCREENSHOT - 1

```
2
4 sybmols gathered in 8 crads
Crads in set are:
a 1
b 2
c 2
d 6

Process finished with exit code 0
```

**SCREENSHOT - 2**

**Learning outcomes (What I have learnt):**

- 1. Using class and objects in java.**
- 2. Using Comparable in java.**
- 3. Using TreeSet Handling in java.**
- 4. Using for-each loop in java.**