



## Experiment-2.2

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1. **Aim:** Create a program to collect unique symbols from a set of cards using set interface.
2. **Objective:** 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.

### 3. Algorithm/Approach/Code:

```
import java.util.*;

class Cards {
    String symbol;

    public Cards(String symbol) {
        this.symbol = symbol;
    }

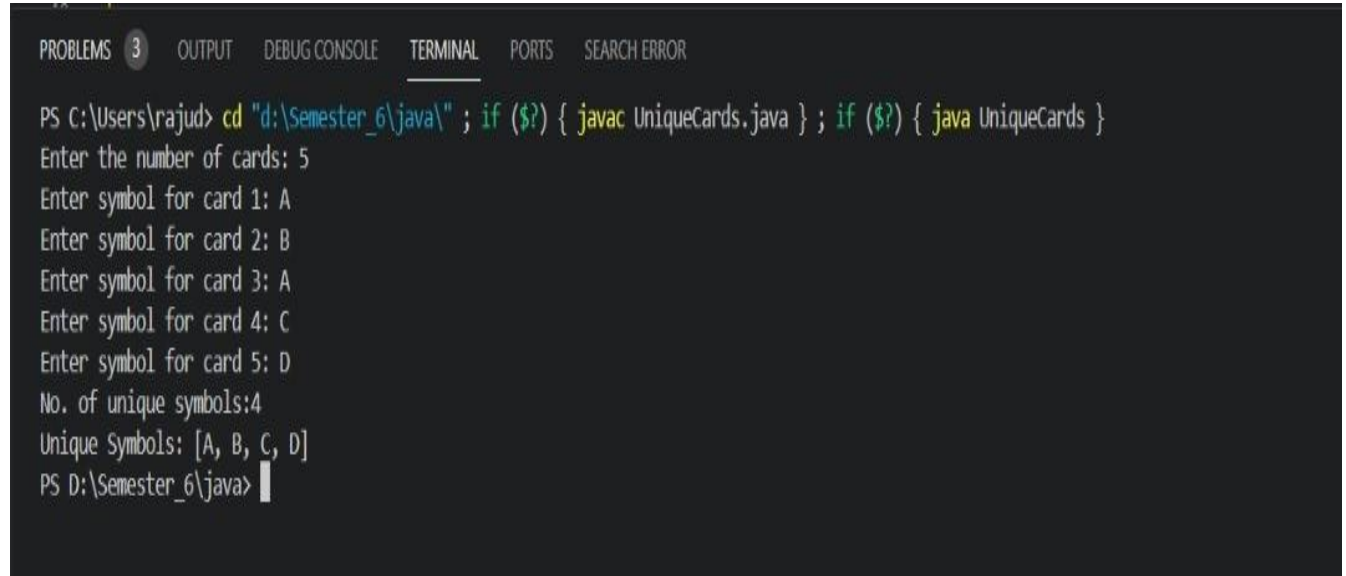
    public String getSymbol() {
        return symbol;
    }
}
```

```
}  
}
```

```
public class UniqueCards {  
    public static Set<String> collectUniqueSymbols(Cards[] cards) {  
        Set<String> uniqueSymbols = new HashSet<>();  
        for (Cards card : cards) {  
            uniqueSymbols.add(card.getSymbol());  
        }  
        return uniqueSymbols;  
    }  
  
    public static void main(String[] args) {  
        Scanner sc = new Scanner(System.in);  
        System.out.print("Enter the number of cards: ");  
        int num = sc.nextInt();  
        sc.nextLine();  
  
        Cards[] cards = new Cards[num];  
        for (int i = 0; i < num; i++) {  
            System.out.print("Enter symbol for card " + (i + 1) + ": ");  
            String symbol = sc.nextLine();  
            cards[i] = new Cards(symbol);  
        }  
  
        Set<String> uniqueSymbols = collectUniqueSymbols(cards);  
        System.out.println("No. of unique symbols:"+uniqueSymbols.size());  
        System.out.println("Unique Symbols: " + uniqueSymbols);  
    }  
}
```

```
}  
}
```

## 4. Output:



```
PROBLEMS 3 OUTPUT DEBUG CONSOLE TERMINAL PORTS SEARCH ERROR  
PS C:\Users\rajud> cd "d:\Semester_6\java\" ; if ($?) { javac UniqueCards.java } ; if ($?) { java UniqueCards }  
Enter the number of cards: 5  
Enter symbol for card 1: A  
Enter symbol for card 2: B  
Enter symbol for card 3: A  
Enter symbol for card 4: C  
Enter symbol for card 5: D  
No. of unique symbols:4  
Unique Symbols: [A, B, C, D]  
PS D:\Semester_6\java>
```

## 5. Learning Outcomes:

- 1) Array of card object to store multiple card Information
- 2) OOps concept
- 3) Switch Statements