```
import java.util.*;

public class AdvLabAgram {

   public static final String ref = "A23456789TJQK";
   public static final String ref2 = "SHDC";

   public static void main(String[] args) {
      Scanner console = new Scanner(System.in);
      System.out.println("Input 1:");
      System.out.println(agram(console.nextLine()));
      System.out.println("Input 2:");
      System.out.println(agram(console.nextLine()));
      System.out.println("Input 3:");
      System.out.println(agram(console.nextLine()));
      System.out.println("Input 4:");
      System.out.println(agram(console.nextLine()));
      System.out.println("Input 5:");
      System.out.println(agram(console.nextLine()));
   }

   public static String agram(String input) {
      String output = "";
      String[] cards = new String[6];
      int cardCount = 0;
      for (int i = 3; i <= 23; i += 4) {
         cards[cardCount] = input.substring(i, i + 2);
         cardCount++;
      }
      boolean sameSuit = false;
      for (int i = 1; i < 6; i++) {
         if (cards[0].charAt(1) == cards[i].charAt(1)) {
            sameSuit = true;
         }
      }
      if (sameSuit) {
         if (!lowestCardGreater(input.substring(4, 5), cards).equals("NA")) {
            output = lowestCardGreater(input.substring(4, 5), cards);
         } else {
            output = lowestCard(input.substring(4, 5), cards);
         }
      } else {
         output = lowestCard(cards);
      }

      return output;
   }

   public static String lowestCard(String suit, String[] cards) {
      String low = "";
      int count = 1;
      while (low.length() != 2) {
         if (cards[count].substring(1, 2).equals(suit)) {
            low = cards[count];
         }
         count++;
      }
      for (int i = 1; i < 6; i++) {
         if (cards[i].substring(1, 2).equals(suit)
               && ref.indexOf(low.substring(0, 1)) > ref.indexOf(cards[i].substring(0, 1))) {
            low = cards[i];
         }
      }
      return low;
   }

   public static String lowestCardGreater(String suit, String[] cards) {
      String low = cards[0];
      int lowCheck = 0;
      for (int i = 1; i < 6; i++) {
         if (cards[i].substring(1, 2).equals(suit)) {
            lowCheck++;
         }
      }
```

```
      int count = 1;
      while (count != 6) {
         if (cards[count].substring(1, 2).equals(suit)
               && ref.indexOf(low.substring(0, 1)) < ref.indexOf(cards[count].substring(0, 1))) {
            low = cards[count];
         }
         count++;
      }
      for (int i = 1; i < 6; i++) {
         if (cards[i].substring(1, 2).equals(suit)
               && ref.indexOf(low.substring(0, 1)) > ref.indexOf(cards[i].substring(0, 1))
               && ref.indexOf(cards[i].substring(0, 1)) > ref.indexOf(cards[0].substring(0, 1))) {
            low = cards[i];
         }
      }
      if (lowCheck == 1) {
         return "NA";
      }
      return low;
   }

   public static String lowestCard(String[] cards) {
      String low = cards[1];
      for (int i = 1; i < 6; i++) {
         if (ref.indexOf(low.substring(0, 1)) > ref.indexOf(cards[i].substring(0, 1))) {
            low = cards[i];
         }
      }
      for (int i = 1; i < 6; i++) {
         if (ref2.indexOf(low.substring(1, 2)) < ref2.indexOf(cards[i].substring(1, 2))
               && cards[i].substring(0, 1).equals(low.substring(0,1))) {
            low = cards[i];
         }
      }
      return low;
   }

}
```