



## COMSATS University Islamabad, Lahore Campus

Block-C, Department of Computer Science

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### LabTask

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#### Problem Statement :

Another modification to the Card Shuffling and Dealing Simulation (Fig 7.10) from your textbook. In the previous modification you were required to find five cards of consecutive face values without considering which suite these cards belonged to. Now, in addition to having consecutive face values, the cards must belong to the same suite. Your program should continue calling the shuffle method until the required sequence is found.

Two sample runs of the program are given below to help you understand what the expected output is:

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C:\school\FA22\OOP\example\_code\code\card\_shuff\_seq>java DeckOfCardsTest

**Sequence found at index 18 after 100414 shuffles**

**It took 2023 milli seconds to find it**

Eight of Hearts   Ten of Hearts   Three of Clubs   Jack of Hearts  
Nine of Hearts   Ace of Diamonds   Five of Spades   Six of Hearts  
Ten of Clubs   Ace of Clubs   Queen of Clubs   Queen of Hearts  
Jack of Spades   Seven of Diamonds   Seven of Clubs   King of Spades  
Four of Clubs   **Deuce of Diamonds   Three of Diamonds   Four of Diamonds**  
**Five of Diamonds   Six of Diamonds**   Six of Spades   Nine of Clubs  
King of Diamonds   Eight of Spades   Seven of Hearts   Four of Hearts  
Eight of Clubs   Queen of Spades   Seven of Spades   Ace of Hearts  
Ten of Diamonds   Queen of Diamonds   Deuce of Spades   Ace of Spades  
Deuce of Hearts   Jack of Diamonds   Five of Clubs   Six of Clubs  
Deuce of Clubs   Four of Spades   Three of Spades   Nine of Spades

King of Clubs    Three of Hearts    Five of Hearts    Ten of Spades  
King of Hearts    Nine of Diamonds    Eight of Diamonds    Jack of Clubs

C:\school\FA22\OOP\example\_code\code\card\_shuff\_seq>java DeckOfCardsTest

**Sequence found at index 6 after 415293 shuffles**

**It took 7644 milli seconds to find it**

King of Diamonds    Queen of Hearts    Three of Hearts    Six of Diamonds  
Nine of Diamonds    **Seven of Hearts**    **Eight of Hearts**    **Nine of Hearts**  
**Ten of Hearts**    **Jack of Hearts**    Eight of Diamonds    Four of Spades  
Ten of Diamonds    Deuce of Hearts    Jack of Clubs    Ace of Hearts  
Three of Diamonds    Five of Spades    Six of Clubs    Eight of Clubs  
Deuce of Spades    Ace of Clubs    Seven of Spades    Seven of Clubs  
Five of Clubs    Four of Diamonds    Ace of Spades    Ten of Clubs  
King of Hearts    Four of Clubs    Queen of Clubs    Jack of Diamonds  
Six of Spades    Ace of Diamonds    King of Spades    Ten of Spades  
Deuce of Clubs    Six of Hearts    Five of Diamonds    Eight of Spades  
Seven of Diamonds    Three of Clubs    King of Clubs    Queen of Spades  
Deuce of Diamonds    Nine of Clubs    Four of Hearts    Jack of Spades  
Three of Spades    Queen of Diamonds    Nine of Spades    Five of Hearts

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Use following code to calculate time:

```
long startTime = System.currentTimeMillis();  
long elapsedTime = System.currentTimeMillis() - startTime;
```

The submission should follow the usual guidelines of comments, indentation and filename being your SID.

**Due Date :**