


Shuffle an Array

Shuffle a deck of cards

- In i^{th} iteration, choose a random element from remainder of deck and put at index i
 - choose random integer r between i and $N-1$
 - swap values in positions r and i

Array index	0	1	2	3	4	5	6	7	8	9
Value	9♣	3♣	4♣	5♣	6♣	7♣	8♣	2♣	10♣	J♣




random integer = 7

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random integer = 3

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Array index	0	1	2	3	4	5	6	7	8	9
Value	9♣	5♣	J♣	3♣	6♣	7♣	8♣	2♣	10♣	4♣




random integer = 9

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Value	9♣	5♣	J♣	4♣	6♣	7♣	8♣	2♣	10♣	3♣




random integer = 9

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Value	9♣	5♣	J♣	4♣	8♣	7♣	6♣	2♣	10♣	3♣



random integer = 6

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Value	9♣	5♣	J♣	4♣	8♣	3♣	6♣	2♣	10♣	7♣

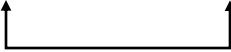
random integer = 9

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random integer = 8

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Array index	0	1	2	3	4	5	6	7	8	9
Value	9♣	5♣	J♣	4♣	8♣	3♣	10♣	7♣	6♣	2♣



random integer = 9

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Array index	0	1	2	3	4	5	6	7	8	9
Value	9♣	5♣	J♣	4♣	8♣	3♣	10♣	7♣	6♣	2♣




random integer = 8

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Value	9♣	5♣	J♣	4♣	8♣	3♣	10♣	7♣	6♣	2♣



random integer = 9

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Value	9♣	5♣	J♣	4♣	8♣	3♣	10♣	7♣	6♣	2♣