Class LotteryTicket

java.lang.Object
    LotteryTicket

```
public class LotteryTicket
extends java.lang.Object
```

Represents a lottery ticket, with six numbers between 1 and 49.

Field Summary

Fields

Modifier and Type	Field	Description
`private static int`	`MAX_NUMBER`	The largest possible number (49) on any ticket
`private static int`	`MIN_NUMBER`	The smallest possible number (1) on any ticket
`static int`	`NUMBER_QTY`	The quantity of numbers (6) on each ticket
`private int[]`	`numbers`	Six numbers between 1 and 49 with no duplicates, in unsorted order.
`private int`	`ticketId`	A unique identifier for the ticket.

Constructor Summary

Constructors

Constructor	Description
`LotteryTicket(int ticketIdIn)`	Constructs a lottery ticket given a ticket id.

Method Summary

All Methods | Instance Methods | Concrete Methods

Modifier and Type	Method	Description
`private void`	`chooseRandomNumbers()`	Generates six pseudo-random integers between 1 and 49 without duplicates, populating the numbers array with these integer values.
`int`	`countWinningNumbers(int[] winningNumbers)`	Repeatedly uses the linear search algorithm to check each of this ticket's numbers against the winning numbers.
`private boolean`	`duplicateNumber(int i)`	Uses the linear search algorithm to check if numbers[i] is a duplicate of numbers[j] for all values of j that are less than i.
`int[]`	`getNumbers()`	Accessor method that returns a reference to the numbers array
`int`	`getTicketId()`	Accessor method for ticket id
`java.lang.String`	`toString()`	Returns a String to display the status of a lottery ticket

Methods inherited from class java.lang.Object

`clone, equals, finalize, getClass, hashCode, notify, notifyAll, wait, wait, wait`

Field Detail

ticketId

```
private int ticketId
```

A unique identifier for the ticket. Once set for a given ticket, this value does not change.

numbers

```
private int[] numbers
```

Six numbers between 1 and 49 with no duplicates, in unsorted order. Once set for a given ticket, these values do not change.

NUMBER_QTY

```
public static final int NUMBER_QTY
```

The quantity of numbers (6) on each ticket

See Also:

Constant Field Values

MIN_NUMBER

```
private static final int MIN_NUMBER
```

The smallest possible number (1) on any ticket

See Also:

Constant Field Values

MAX_NUMBER

```
private static final int MAX_NUMBER
```

The largest possible number (49) on any ticket

See Also:

Constant Field Values

Constructor Detail

LotteryTicket

```
public LotteryTicket(int ticketIdIn)
```

Constructs a lottery ticket given a ticket id. The six numbers are generated by calling chooseRandomNumbers()

Parameters:

`ticketIdIn` - The given ticket id

Method Detail

getTicketId

```
public int getTicketId()
```

Accessor method for ticket id

Returns:

The ticketId

getNumbers

```
public int[] getNumbers()
```

Accessor method that returns a reference to the numbers array

Returns:

A reference to the numbers array

toString

```
public java.lang.String toString()
```

Returns a String to display the status of a lottery ticket

Overrides:

`toString` in class `java.lang.Object`

Returns:

A String that displays ticket id and the 6 numbers in the format like this example "1005: 16 6 3 31 10 26"

chooseRandomNumbers

```
private void chooseRandomNumbers()
```

Generates six pseudo-random integers between 1 and 49 without duplicates, populating the numbers array with these integer values. Inclusion of this method helps to simplify the code for the constructor.

duplicateNumber

```
private boolean duplicateNumber(int i)
```

Uses the linear search algorithm to check if numbers[i] is a duplicate of numbers[j] for all values of j that are less than i. In other words, checks to see if the most recently generated number is a duplicate of any of the previously generated numbers. Inclusion of this method simplifies the code for selecting random numbers for the ticket.

Parameters:

`i` - The index of the most recently generated number

Returns:

true if a duplicate is found, false otherwise.

countWinningNumbers

```
public int countWinningNumbers(int[] winningNumbers)
```

Repeatedly uses the linear search algorithm to check each of this ticket's numbers against the winning numbers.

Parameters:

`winningNumbers` - An array of six integers representing the winning numbers for a lottery draw. These will be six numbers between 1 and 49 without duplicates, in unsorted order.

Returns:

The quantity of numbers on this ticket that match a winning number; this result will always be between 0 and 6