Class java.util.Random

```
java.lang.Object
   |
   +----java.util.Random
```

---

public class **Random**
extends Object

A Random class generates a stream of pseudo−random numbers.

To create a new random number generator, use one of the following methods:

```
new Random()
new Random(long seed)
```

The form `new Random()` initializes the generator to a value based on the current time. The form `new Random(long seed)` seeds the random number generator with a specific initial value; use this if an application requires a repeatable stream of pseudo−random numbers.

The random number generator uses a 48−bit seed, which is modified using a linear congruential formula. See Donald Knuth, *The Art of Computer Programming, Volume 2*, Section 3.2.1. The generator's seed can be reset with the following method:

```
setSeed(long seed)
```

To create a pseudo−random number, use one of the following functions:

```
nextInt()
nextLong()
nextFloat()
nextDouble()
nextGaussian()
```

See Also:
random
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Constructor Index

o **Random**()
Creates a new random number generator.
o **Random**(long)
Creates a new random number generator using a single `long` seed.

Method Index

o **nextDouble**()
Generates a pseudorandom uniformally distributed `double` value between 0.0 and 1.0.
o **nextFloat**()
Generates a pseudorandom uniformally distributed `float` value between 0.0 and 1.0.
o **nextGaussian**()
Generates a pseudorandom Gaussian distributed `double` value with mean 0.0 and standard deviation 1.0.
o **nextInt**()
Generates a pseudorandom uniformally distributed `int` value.
o **nextLong**()
Generate a pseudorandom uniformally distributed `long` value.
o **setSeed**(long)
Sets the seed of the random number generator using a single `long` seed.

Constructors

o **Random**

```
public Random()
```

Creates a new random number generator. Its seed will be initialized to a value based on the current time.

o **Random**

```
public Random(long seed)
```

Creates a new random number generator using a single `long` seed.
Parameters:
seed – the initial seed
See Also:
setSeed

Methods

o **setSeed**

```
public synchronized void setSeed(long seed)
```

Sets the seed of the random number generator using a single `long` seed.

Parameters:

seed – the initial seed

o **nextInt**

```
public int nextInt()
```

Generates a pseudorandom uniformally distributed `int` value.

Returns:

an integer value.

o **nextLong**

```
public long nextLong()
```

Generate a pseudorandom uniformally distributed `long` value.

Returns:

A long integer value

o **nextFloat**

```
public float nextFloat()
```

Generates a pseudorandom uniformally distributed `float` value between 0.0 and 1.0.

Returns:

a `float` between 0.0 and 1.0 .

o **nextDouble**

```
public double nextDouble()
```

Generates a pseudorandom uniformally distributed `double` value between 0.0 and 1.0.

Returns:

a `float` between 0.0 and 1.0 .

o **nextGaussian**

```
public synchronized double nextGaussian()
```

Generates a pseudorandom Gaussian distributed `double` value with mean 0.0 and standard deviation 1.0.

Returns:

a Gaussian distributed `double`.