

Random

INHERITS FROM

Object

CLASS DESCRIPTION

The Random class provides services for random number generation and die rolling. It implements its own random number generator with a cycle length of 8.8 trillion. The algorithm used by the Random class is that given in the article:

^aA Highly Random Random±Number Generator^o by T.A. Elkins
Computer Language, Volume 6, Number 12 (December 1989), Pages 59-65
Published by:
Miller Freeman Publications
500 Howard Street
San Francisco, CA 94105
(415) 397-1881

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That said, I do welcome comments, suggestions, and bug reports. I want to use this in some of my own projects, so I'm very interested in making sure it works correctly. Feel free to drop me an email or letter with your comments.

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INSTANCE VARIABLES

<i>Declared in Random</i>	int	h1, h2, h3;
h1, h2, h3	The current seed values	

METHOD TYPES

Creating and freeing instances	+ alloc - free
Initializing a new instance	- init - initSeeds:::
Seed operations	- newSeeds - setSeeds::: - getSeeds:::
	Getting random numbers - rand - randMax: - randMin:max: - percent
Rolling dice	- rollDie: - roll:die: - rollBest:of:die:

Archiving

- read:
- write:

CLASS METHODS

alloc

+ **alloc**

Returns a new instance.

INSTANCE METHODS

free

- **free**

Frees the memory occupied by the Random and returns **nil**.

getSeeds:::

- **getSeeds:**(int *)s1 :(int *)s2 :(int *)s3

Puts the values of the seeds into the integer variables pointed to.

See also: ± **setSeeds:::**

init

- **init**

Initializes the Random with seeds from the milliseconds count of the system clock (uses **newSeeds**).

See also: ± **initSeeds:::**, ± **newSeeds**

initSeeds:::

- **initSeeds:**(int)s1 :(int)s2 :(int)s3

Initializes the Random with the seeds given (uses **setSeeds**).

See also: ± **init**, ± **newSeeds**, ± **setSeeds:::**

newSeeds

- **newSeeds**

Sets the seeds from the milliseconds count of the system clock.

See also: \pm **init**

percent

- (float)**percent**

Returns a float in the range [0.0, 1.0].

rand

- (int)**rand**

Returns an int in the range [0, 32767].

randMax:

- (int)**randMax:**(int)*max*

Returns an int in the range [0, *max*].

randMin: max:

- (int)**randMin:**(int)*min* **max:**(int)*max*

Returns an int in the range [*min*, *max*].

read:

- **read:**(NXTypedStream *)*stream*

Reads a Random from *stream*.

See also: - **write:**

rollDie:

- (int)**rollDie:**(int)*numSides*

Returns an int in the range [1, *numSides*].

roll: die:

- (int)**roll**:(int)*numRolls* **die**:(int)*numSides*

Returns an int in the range [*numRolls*, *numRolls* * *numSides*].

rollBest: of: die:

- (int)**rollBest**:(int)*numWanted* **of**:(int)*numRolls* **die**:(int)*numSides*

Returns the sum of the best *numWanted* rolls..

setSeeds:::

- **setSeeds**:(int)*s1* :(int)*s2* :(int)*s3*

Sets the seeds to the values given.

See also: ± **getSeeds:::**

write:

- **write**:(NXTypedStream *)*stream*

Writes a Random to *stream*.

See also: - **read**: