libmt19937 Overview

PlayStation®Vita Programmer Tool Runtime Library Release 3.50

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1 Library Overview

Overview

The Mersenne Twister library (libmt19937) is used for generating a pseudo random number using the MT19937 algorithm.

Files

The following files are required to use libmt19937.

Filename	Description
libmt19937.h	Header file
libSceMt19937.a	Static link library file
libSceMt19937_stub.a	Stub library file
libSceMt19937_stub_weak.a	weak import stub library file
libmt19937.suprx	PRX module file

2 Usage Procedure

Basic Usage Procedure

(1) Initialize random number sequence

The `sceMt19937Init()` function is used to initialize the random number sequence.

```
SceMt19937Context ctx;

sceMt19937Init(&ctx, seed);
```

A 32-bit seed used for initializing the random number sequence is passed in the *`seed`* argument. The seed is used to initialize the state of the `SceMt19937Context` structure, and enables pseudo random numbers to be subsequently obtained by calling the `sceMt19937UInt()` function.

(2) Obtain random number

The `sceMt19937UInt()` function is used to generate a pseudo random number.

```
res = sceMt19937UInt(&ctx);
```

When the `sceMt19937UInt()` function is called, it is passed a pointer to the `SceMt19937Context` structure. This is the structure that was previously initialized by the `sceMt19937Init()` function. Since libmt19937 does not maintain any internal state, any number of random number sequences can be generated by preparing multiple `SceMt19937Context` structures.

Saving and Obtaining a Random Number Sequence

If the contents of the `SceMt19937Context` structure are saved in advance, the same random number sequence can be regenerated later.