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Random

This is an efficient random number generation function based on the paper Fast Random Integer Generation in an Interval by Daniel Lemire, as well as the Golang’s rand/v2 package.

Internally, it uses the Chacha8 cipher to generate random numbers. It is a cryptographically secure pseudo-random number generator (CSPRNG) that is also very fast.

Usage

```

test {
  let r = @random Rand::new()
  assert_eq(r uint(limit=10), 7)
  assert_eq(r uint(limit=10), 0)
  assert_eq(r uint(limit=10), 5)
  assert_eq(r int(), 1064320769)
  assert_eq(r double(), 0.3318940049218405)
  assert_eq(r int(limit=10), 0)
  assert_eq(r uint(), 311122750)
  assert_eq(r int64(), 2043189202271773519)
  assert_eq(r int64(limit=10), 8)
  assert_eq(r uint64(), 3951155890335085418)
  let a = [1, 2, 3, 4, 5]
  r shuffle(a length(), (i, j) => {
    let t = a[i]
    a[i] = a[j]
    a[j] = t
  })
  assert_eq(a, [2, 1, 4, 3, 5])
}
```