Use the remainder as the hash code.

"Generator polynomial" polynomial is commonly called the "magic (divisor) polynomial" and is used for calculating - uses polynomial arithmetic mod 2: all coefficients are either 0 or 1. Note: the coefficients of both polynomials are either 0 or 1.

Divide the corresponding polynomial by a "magic" polynomial.

\[ [0]y + \cdots + u^n x \times [1 - u]y + u^n x \times [u] \]

Let \( k[n] \) denote the \( n \)th bit of the key.

Hash Functions: Cyclic Redundancy Check (CRC)
The implementation can be reduced to repeated table lookup. (The table is dependent on the generator polynomial.)

* Easy to apply to any size key.

- The hash codes.
- A single-bit difference between two keys yields large differences between
  - The CRC algorithm makes a good hash function.

  "burst" errors (up to the degree of the generator polynomial)
  - errors where an odd number of bits are affected
  - two-bit errors
  - single-bit errors

- With a well-chosen generator polynomial, it is possible to detect ALL: and transmission by unreliable media.

* The CRC algorithm is widely used for detection of errors in data storage

Hash Functions: CRC (cont'd)
as those provided by the Java library class java.util.HashMap. This method is supported principally for the benefit of hash tables such as

```java
public int hashCode() {
    public boolean equals(Object obj) {
        public String toString() {
            public final Class getCursor() {
        }
```