# crypting

# **Hashes and Crypto in GAP**

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### **Chapter 1**

## **CryptinG Functions**

#### 1.1 Internal Types and Functions

#### 1.1.1 IsSHA256State (for IsObject)

#### 1.1.2 CRYPTING\_SHA256\_State\_Family

▷ CRYPTING\_SHA256\_State\_Family

(global variable)

#### 1.1.3 CRYPTING\_SHA256\_State\_Type

▷ CRYPTING\_SHA256\_State\_Type

(global variable)

#### 1.1.4 CRYPTING\_HexStringIntPad

▷ CRYPTING\_HexStringIntPad(int, pad, length)

(function)

Call **Reference:** HexStringInt on the argument int then pad the string on the left to length using padding letter pad

#### 1.1.5 CRYPTING\_HexStringIntPad8

▷ CRYPTING\_HexStringIntPad8(int)

(function)

Call **Reference:** HexStringInt on the argument *int* then pad the string on the left to length 8 using padding letter 0.

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#### 1.2 Hash functions

#### 1.2.1 **SHA256String**

▷ SHA256String(string)

(function)

Compute the SHA256 hash of the argument string in IsStringRep

#### **1.3 HMAC**

#### 1.3.1 HMACSHA256

 $\triangleright$  HMACSHA256(key, string)

(function)

Compute the HMAC SHA256 given a  ${\it key}$  and a  ${\it string}$  in IsStringRep.

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