

## UTILITY FUNCTIONS :

### 1. decimalToBinary-

This function is used to convert a decimal number to its binary form

Parameters	Datatype	Description
n	int	Decimal number

Return:

(str) : binary representation of n

Called by:

- PRG
- GEN
- ENC
- DEC
- CBC\_MAC
- fixedLengthHash
- variableLengthHash
- HMAC

Caller of:

None

### 2. binaryToDecimal-

This function is used to convert a binary string to its decimal form

Parameters	Datatype	Description
b	str	binary representation of n

Return:

(int): Decimal of b

Called by:

- PRG
- GEN
- ENC
- DEC

- CBC\_MAC
- fixedLengthHash
- variableLengthHash
- HMAC

Caller of:

None

### 3. lengthExpand-

This function is used to return desired polynomial expansion of seed length (say n) of PRG input

Parameters	Datatype	Description
n	int	Bit size of seed

Return:

(int): expanded poly(n) length that pseudorandom output will be of

Called by:

Code block to test PRG

Caller of:

None

### 4. msgToBinary-

This function is used to convert a plaintext into its binary form

Parameters	Datatype	Description
msg	str	String consisting of plaintext

Return:

(str): Conversion of plaintext to binary representation

Called by:

- ENC
- HMAC

Caller of:

None

## 5. binaryToMsg-

This function converts a binary string to message string

Parameters	Datatype	Description
binary	str	plaintext

Return:

(str): String representation of plaintext

Called by:

- DEC

Caller of:

None