```
> 
> with(StringTools) :
> ?StringTools
> Plain := "HELLO I MUST GO";
```
$$Plain := \text{"HELLO I MUST GO"} \tag{1}$$

```
> CharacterMap("I OHELMUSTG", "MBAQXPmustg", Plain);
```
$$\text{"QXPPABMBmustBgA"} \tag{2}$$

```
> CharacterMap("MBAQXPmustg", "I OHELMUSTG", %);
```
$$\text{"HELLO I MUST GO"} \tag{3}$$

```
> Alphabet := "ABCDEFGHIJKLMNOPQRSTUVWXYZ";
  Cryptabet := "thequickbrownfxjmpsvlazydg";
```
$$Alphabet := \text{"ABCDEFGHIJKLMNOPQRSTUVWXYZ"}$$
$$Cryptabet := \text{"thequickbrownfxjmpsvlazydg"} \tag{4}$$

```
> 
> length(Cryptabet);
```
$$26 \tag{5}$$

```
> Plain := "HELLO, THIS IS STUPID.";
```
$$Plain := \text{"HELLO, THIS IS STUPID."} \tag{6}$$

```
> crypt := CharacterMap(Alphabet, Cryptabet, Plain);
```
$$crypt := \text{"kuwwx, vkbs bs svljbq."} \tag{7}$$

```
> CharacterMap( Cryptabet, Alphabet, crypt);
```
$$\text{"HELLO, THIS IS STUPID."} \tag{8}$$

```
> 
```
Caesar Cipher: Shift by 3 letters.
```
> Alphabet := "ABCDEFGHIJKLMNOPQRSTUVWXYZ";
  Cryptabet := "DEFGHIJKLMNOPQRSTUVWXYZABC";
```
$$Alphabet := \text{"ABCDEFGHIJKLMNOPQRSTUVWXYZ"}$$
$$Cryptabet := \text{"DEFGHIJKLMNOPQRSTUVWXYZABC"} \tag{9}$$

```
> crypt := CharacterMap(Alphabet, Cryptabet, Plain);
```
$$crypt := \text{"KHOOR, WKLV LV VWXSLG."} \tag{10}$$

```
> CharacterMap( Cryptabet, Alphabet, crypt);
```
$$\text{"HELLO, THIS IS STUPID."} \tag{11}$$

```
> Alphabet := " ABCDEFGHIJKLMNOPQRSTUVWXYZ";
```
$$Alphabet := \text{" ABCDEFGHIJKLMNOPQRSTUVWXYZ"} \tag{12}$$

```
> SearchText("H", Alphabet);
```
$$9 \tag{13}$$

```
> Alphabet + 12;
```
$$\text{" ABCDEFGHIJKLMNOPQRSTUVWXYZ"} + 12 \tag{14}$$

```
> Alphabet[12];
```
$$\text{"K"} \tag{15}$$

```
> data := [1, 2, 3, cat];
```
$$data := [1, 2, 3, cat] \tag{16}$$
```
> data[4];
```
$$cat \tag{17}$$
```
> length(Alphabet);
```
$$27 \tag{18}$$
```
> length("yabba dabba do");
```
$$14 \tag{19}$$
```
> letter := "Y";
```
$$letter := "Y" \tag{20}$$
```
> SearchText(letter, Alphabet);
```
$$26 \tag{21}$$
```
> SearchText(letter, Alphabet) + 3 mod 27;
```
$$2 \tag{22}$$
```
> Alphabet[SearchText(letter, Alphabet) + 3 mod 27];
```
$$"A" \tag{23}$$
```
> Plain := "YABBA DABBA DO";
```
$$Plain := "YABBA DABBA DO" \tag{24}$$
```
> Alphabet[SearchText(Plain[1], Alphabet) + 3 mod 27];
```
$$"A" \tag{25}$$
```
> Alphabet[SearchText(Plain[2], Alphabet) + 3 mod 27];
```
$$"D" \tag{26}$$
```
> seq( Alphabet[SearchText(Plain[i], Alphabet) + 3 mod 27], i = 1 ..length(Plain));
```
$$"A", "D", "E", "E", "D", "C", "G", "D", "E", "E", "D", "C", "G", "R" \tag{27}$$
```
> nops(Plain);
```
$$1 \tag{28}$$
```
> crypt := cat( seq( Alphabet[SearchText(Plain[i], Alphabet) + 3 mod 27], i = 1
    ..length(Plain)));
```
$$crypt := "ADEEDCGDEEDCGR" \tag{29}$$
```
> cat("dog", "mouse");
```
$$"dogmouse" \tag{30}$$
```
> cat(seq( Alphabet[SearchText(crypt[i], Alphabet) - 3 mod 27], i = 1
    ..length(crypt)));
```
$$"YABBA DABBA DO" \tag{31}$$
```
> Caesar := Plain → cat( seq( Alphabet[SearchText(Plain[i], Alphabet) + 3
    mod 27], i = 1 ..length(Plain)));
```
$$Caesar := Plain \to cat\left(seq\left(Alphabet_{\left(SearchText\left(Plain_i, Alphabet\right) + 3\right) \bmod 27}, i = 1 \right.\right. \tag{32}$$
$$\left.\left. ..length(Plain)\right)\right)$$

> $vvv := Caesar(\text{"VENI VIDI VICI"});$

$$vvv := \text{"YHQLCYLGLCYLFL"} \tag{33}$$

> $unCaesar := cry \rightarrow cat(\ seq(\ Alphabet[\ SearchText(cry[i],\ Alphabet) - 3\ \textbf{mod}\ 27],\ i$
$= 1 ..length(cry)\ )\ )\ :$

> $unCaesar(vvv);$

$$\text{"VENI VIDI VICI"} \tag{34}$$

> $Julius := (text,\ shift) \rightarrow cat(\ seq(\ Alphabet[\ SearchText(text[i],\ Alphabet) + shift$
$\textbf{mod}\ 27],\ i = 1 ..length(text)\ )\ )\ :$

> $Julius(\text{"VENI VIDI VICI"}, 9);$

$$\text{"DNWRIDRMRIDRLR"} \tag{35}$$

> $Julius(\%, -9);$

$$\text{"VENI VIDI VICI"} \tag{36}$$

>