# Encryption for Salt and Password

NOTE: If we change the salt or password, old values will not be able to be decrypted, so we would need to keep the old ones temporarily until everything is converted to use the new ones.

To change the salt or password change the Items defined in CryptUtil.GetElement().

Items 1 and 3 are the password and items 2 and 4 are the salt.

Take the new salt or password split the string into two parts.

It does not matter how many spaces each Item variable has at the beginning and end.

Starting with Item3 for the password and Item4 for the salt, pick the first character and place it in the variable's string. Pick the next character and place it in Item1's or Item2's string. Alternate like this until you've reached the end of the string.

The odd numbered characters in the first string and even numbered characters in the second string (the first character is 0/even).

Salt is always an odd number of characters in length and the last character in the first Item is discarded.

If I wanted a password of 0123456789

Set item1 to “ 13579 “

Set item3 to “ 02468“

If I wanted a salt of “abcdefghijk”

Set item2 to “ bdfhj1 “

Set item4 to “ acegik”

## How it works

To get the salt call GetElement(4).

To get the password call GetElement(2).

Get element 2 combines Item1 and Item3.

Get element 4 combines Item2 and Item4.

Combining items:

It removes leading and trailing spaces.

Then it adds the two strings.

Adds the first letter of string B then the first letter of string A.

Adds the second letter of string B then the second letter of string A.

And so on.

Salt is an odd number of characters long so the last letter from Item 2 is trimmed from the salt before it is returned.