LTCE

Aim : The aim of this assembly program is to implement string operations such as (overlaping, non-overlapping block tranfer / string search / string length)

Theory -

String operations are essential in memory in many programming applications especially in data processing & manipulation string operations involves manipulating string of character including copying, comparing & searching for specific character or pattern assembly language provide efficient ways of performing string operations as it allows direct access to memory & bitwise operation.

Algorithm -

- Overlaping strings -

1) check if the source & destination string are the same if they are the algorithm return the string unchanged.
2) Determine the length of string to copy
3) If the source string address is greater than the destination string address copy the string from right to left.
4) Move each char of the string to the destination address ~~by~~ one by one.

- Non overlapping string -

1) Determine the length of the string to copy
2) Move each char of the string to the destination address one by one.

- Block transfer -

1) Determine the length of the block of data to transfer.
2) Move each byte of the block of data to destination address one by one.

- String length

1) Set a counter variable to zero.
2) Loop through each char of the string incrementing the counter variable by one char.
3) Return the value of the counter variable as the length of string.

Conclusion -

Successfully implemented string operations using assembly programming.