Assignment 2

Title - Write a program for array implementation of Stack (with structure pointer)

Aim - Perform functions such as push, pop and display on a array using structure pointers in C. ~~Use~~ Implement a Stack.

Theory

A stack follows LIFO principle which means the last element ~~in~~entering ~~#~~ is the first one to leave the stack.
We use structs and functions to ~~emula~~ use stacks in C

Push - It adds an element to the top of the stack which will be the firstone out

a[5] =

0	1	2	3	4
1	4	5		

top variable has one added to it

Push the number 7

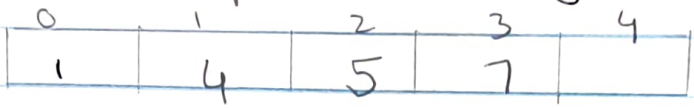
a[5] =

0	1	2	3	4
1	4	5	7	

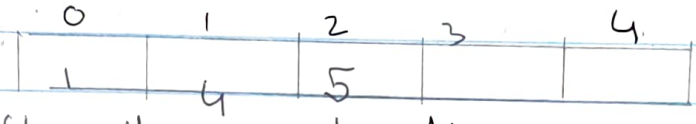
is the result after the push function is performed.

It ~~removes~~ adds the last element to the array, it increases the number of ~~filled~~ used spaces in the array by one.

Pop - It removes the last element from the array and marks that space as unused. It takes the last number added out of the array It reduces the top varible by one.



Pop remove the last number (Number 7)



Result after the pop function is performed

~~Conclusion~~ The display function iterates over the array from the oldest to newest entry. It uses ~~with~~ structure pointers in all the functions.

Conclusion

All fundamental stack operations - push, pop and display were ~~dis~~ performed by passing the structure address to functions.

The stack structure has to be correctly implemented using structure pointers in C.