Experiment - 7

* Perform primitive operations on stack

→

```
#include <stdio.h>
#include<stdlib.h>
#define MAX 5

int stack[MAX], top=-1;

void push(int value){
  if(top==MAX-1){
    printf("stack overflow! Cant push %d\n",value);
  }else{
    stack[++top]=value;
    printf("%d pushed into stack\n",value);
  }
}
void pop(){
  if(top==-1){
    printf("Stack Underflow! Nothing to pop\n");
  }else{
    printf("%d popped from stack\n",stack[top--]);
  }
}
void display(){
  if(top==-1){
    printf("stack is empty\n");
  }else{
    printf("Stack elements:");
    for(int i=top;i>=0;i--){
    printf("%d",stack[i]);
    }
```

```
    printf("\n");
}
{
int main(){
 int choice, value;
 while(1){
  printf("1. Push\n 2 pop\n 3 Display\n 4. Exit
  scanf("%d", &choice);

switch (choice){
case 1:
    printf("Enter value to push: ");
    scanf("%d", &value);
    push(value);
    break;
case 2:
     pop();
     break;
case 3;
   display();
    break;
case 4:
   exit(0);
default:
   printf("\n valid choice! Try again.\n");
}
}
 return 0;
}
```

Output :

Stack menu
1) Push
2) Pop
3) Display
4) Exit
Enter your choice : 1
Enter value to push : 34
34 push into stack

---Stack menu---
1) Push
2) Pop
3) Displays
4) Exit.
Enter your choice : 1
Enter value to push : 34
34 push into stack.

Stack menu
Enter your choice : 1
Enta value to push : 69
69 pushed into stack

---Stack Menu---
Enter your choice : 3
Stack element : 69 34 34

Stack Menu...
Enter your choice : 2
69 popped from stack

. . . Stack Menu . . .
Enter your choice : 3
Stack element : 5 4 3 4

Stack Menu
Enter your choice : 4