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#include <stdio.h>

int top=-1;

void push(int arr[],int value){
    if(top>4){
        printf("\nstack overflow cant insert the element");
    }
    else{
        ++top;
        arr[top]=value;
        printf("\nSuccessfully pushed the element %d",arr[top]);
    }
}

void pop(int arr[]){
    if(top==1){
        printf("\nstack underflow no element to pop\n");
    }
    else{
        printf("\none Element was popped %d\n",arr[top]);
        top--;
    }
}

void display(int arr[]){
    printf("The elements are \n");
    for(int i=top;i>=0;i--){

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        printf("%d\n",arr[i]);
    }
}

void main(){

    int stack[5];

    void operations(){

        int choice;

        int value;

        printf("\n Enter your choice \n");

        printf("Enter 1 to push\n Enter 2 to pop\n Enter 3 to display\n Enter 4 for exit\n");

        scanf("%d",&choice);

        switch(choice){
case 1:

            printf("Enter the element to push ");

            scanf("%d",&value);

            push(stack,value);

            operations();

            break;
case 2:

            pop(stack);

            operations();

            break;

case 3:

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display(stack);

operations();

break;

case 4:

    printf("You have exited");

}

}

operations();

}

```

```

C:\Users\Admin\Desktop\OCT28AMC\Stack.exe
Enter the element to push 3
Successfully pushed the element 3
Enter your choice
Enter 1 to push
Enter 2 to pop
Enter 3 to display
Enter 4 for exit
1
Enter the element to push 8
Successfully pushed the element 8
Enter your choice
Enter 1 to push
Enter 2 to pop
Enter 3 to display
Enter 4 for exit
1
Enter the element to push 56
Successfully pushed the element 56
Enter your choice
Enter 1 to push
Enter 2 to pop
Enter 3 to display
Enter 4 for exit
1
Enter the element to push 83
Successfully pushed the element 83
Enter your choice
Enter 1 to push
Enter 2 to pop
Enter 3 to display
Enter 4 for exit
1
Enter the element to push 100
Successfully pushed the element 100
Enter your choice
Enter 1 to push
Enter 2 to pop
Enter 3 to display
Enter 4 for exit
1
Enter the element to push 30
Successfully pushed the element 30
Enter your choice
Enter 1 to push
Enter 2 to pop
Enter 3 to display
Enter 4 for exit
1
Enter the element to push 40
stack overflow cant insert the element
Enter your choice
Enter 1 to push
Enter 2 to pop
Enter 3 to display
Enter 4 for exit

```