STACK USING ARRAY

```
#include<stdio.h>
#include<stdlib.h>
#define MAX=100;
int top=-1,stack[100],choice,i,x,size;
void push(int);
void pop();
void diplay();
int main(){
	printf("Enter the size of the stack:\n");
	scanf("%d",&size);
	while(1){
		printf("----MENU----\n");
		printf("1.Push an element in stack\n");
		printf("2.Pop an element in stack\n");
		printf("3.Display\n");
		printf("4.Exist\n");
		printf("Enter the choice:\n");
		scanf("%d",&choice);
		switch(choice){
			case 1:
				printf("Enter the number to push in the stack:\n");
				scanf("%d",&x);
				push(x);
				break;
			case 2:
				pop();
				break;
			case 3:
				display();
```

```
                    break;
                case 4:
                    printf("\nExiting program.\n");
                exit(0);
                default:
                    printf("\nInvalid choice.\n");
                }
        }
}
void push(value){
   if(top==size-1) {
      printf("\nStack Overflow.\n",value);
   } else{
      top++;
      stack[top] = value;
      printf("%d pushed into stack.\n", value);
   }
}
void pop() {
   if (top==-1){
      printf("\nStack Underflow.\n");
   } else{
      printf("%d popped from stack.\n",stack[top]);
      top--;
   }
}
void display(){
   if(top==-1){
      printf("\nStack is empty!\n");
   } else{
```

```
        printf("\nStack elements are:\n");
        for(i=top;i>=0;i--){
            printf("%d\n",stack[i]);
        }
    }
}
```

OUTPUT:

```
Enter the size of the stack:
5
----MENU----
1.Push an element in stack
2.Pop an element in stack
3.Display
4.Exist
Enter the choice:
1
Enter the number to push in the stack:
2
2 pushed into stack.
----MENU----
1.Push an element in stack
2.Pop an element in stack
3.Display
4.Exist
Enter the choice:
1
Enter the number to push in the stack:
4
4 pushed into stack.
----MENU----
1.Push an element in stack
2.Pop an element in stack
3.Display
4.Exist
Enter the choice:
1
Enter the number to push in the stack:
6
6 pushed into stack.
----MENU----
1.Push an element in stack
2.Pop an element in stack
3.Display
4.Exist
Enter the choice:
1
Enter the number to push in the stack:
7
```