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HOME

October 11, 2021

STACK IMPLEMENTATION USING ARRAY

```
1. #include<stdio.h>
 2. #include<stdlib.h>
 3. #define N 5
 4.
 5. //FUNCTIONS
 6. void push();
 7. void pop();
 8. void peep();
9. void change();
10. void Display();
11.
12.
13. //GLOBAL
14. int stack[N];
15. int top=0;
16.
17. //DRIVER PROGRAM
18. int main(){
19.
            int choice=0;
20.
            while(choice!=6){
21.
                     printf("\n***STACK MENU***\n\n");
22.
                     printf("\n1. PUSH");
23.
                     printf("\n2. POP");
24.
                     printf("\n3. PEEK");
25.
                     printf("\n4. CHANGE");
26.
                     printf("\n5. DISPLAY");
27.
                     printf("\n6. EXIT");
28.
                     printf("\nENTER CHOICE ");
29.
                     scanf("%d",&choice);
```

```
30.
                              switch(choice){
31.
                                       case 1:
32.
                                                push();
33.
                                                break;
34.
                                       case 2:
35.
                                                pop();
36.
                                                break;
37.
                                       case 3:
38.
                                                peep();
39.
                                                break;
40.
                                       case 4:
41.
                                                change();
42.
                                                break;
43.
                                       case 5:
44.
                                                Display();
45.
                                                break;
46.
                                       case 6:
47.
                                                exit(0);
48.
                                       default:
49.
                                                printf("\nERROR:-> WRONG CHOICE ");
50.
                                                break;
51.
                              }
52.
             }
53.
             return 0;
54. }
55.
56. //TO PUSH THE ELEMENTS IN STACK
57. void push(){
58.
             int x;
59.
             if(top==N){
60.
                      printf("\noverFLOW ON PUSH");
61.
             }
62.
             else{
                      printf("ENTER X ");
63.
64.
                      scanf("%d",&x);
65.
                     top++;
66.
                      stack[top]=x;
67.
                     Display();
68.
             }
69. }
70.
71. //TO POP THE FIRST ELEMENT FROM THE STACK
72. void pop(){
73.
             if(top==0){
74.
                      printf("\n UNDERFLOW ON POP");
```

```
75.
             }
 76.
             else{
 77.
                      printf("\n%d Deleted",stack[top]);
 78.
                      top--;
 79.
             }
 80. }
 81.
 82. //TO SEE ELEMENT AT GIVEN POSITION (LIFO)
 83. void peep(){
 84.
             int pos,x;
 85.
             printf("ENTER POSITION ");
 86.
             scanf("%d",&pos);
 87.
             if(top-pos+1<=0){
                      printf("\nUNDERFLOW ON PEEP");
 88.
 89.
             }
 90.
             else if(top-pos+1>N){
                      printf("\noverFLOW ON PEEP");
 91.
 92.
             }
 93.
             else{
 94.
                      x=stack[top-pos+1];
95.
                      printf("%d",x);
96.
             }
97. }
98.
99. //TO CHANGE ELEMENT AT GIVEN POSITION (LIFO)
100. void change(){
101.
             int pos,x;
             printf("ENTER POSITION ");
102.
             scanf("%d",&pos);
103.
             if(top-pos+1<=0){
104.
                      printf("\nUNDERFLOW ON CHANGE");
105.
106.
             }
107.
             else if(top-pos+1>N){
108.
                      printf("\nOVERFLOW ON CHANGE");
109.
             }
             else{
110.
111.
                      printf("ENTER X ");
112.
                      scanf("%d",&x);
113.
                      stack[top-pos+1]=x;
114.
             }
115. }
116.
117.
118. //TO DISPLAY STACK
119. void Display(){
```



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```
What's your Limit ? 5
Enter 1 Data 10
Enter 2 Data 20
Enter 3 Data 30
Enter 4 Data 40
Enter 5 Data 50
What's your limit? 5
Enter 1 Data 5
Enter 2 Data 15
Enter 3 Data 25
Enter 4 Data 35
Enter 5 Data 45
Sorted successfully
    15 20 25 30 35 40 45 50
```

MERGE SORT

Share Post a Comment

Enter your Limit 5
Enter 1 Data 20
Enter 2 Data 10
Enter 3 Data 40
Enter 4 Data 30
Enter 5 Data 25
Data Shorted Successfully
10 20 25 30 40

WRITE A C PROGRAM FOR SORTING USING SHELL SORT

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What's Your limit ? 5
Enter 1 Data 50
Enter 2 Data 20
Enter 3 Data 60
Enter 4 Data 90
Enter 5 Data 10
Sorted successfully
10 20 50 60 90

WRITE A C PROGRAM USING QUICK SORT(PARTITION EXCHANGE SORT) METHOD

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Shorted array is
-5 15 30 40 50
------Process exited after 0.01619 seconds with return value 0
Press any key to continue . . .

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| 12345678 |
|---|
| Process exited after 0.01401 seconds with return value 0 Press any key to continue |
| |
| |
| |
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HOW TO IMPLEMENT MERGE SORT IN C

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