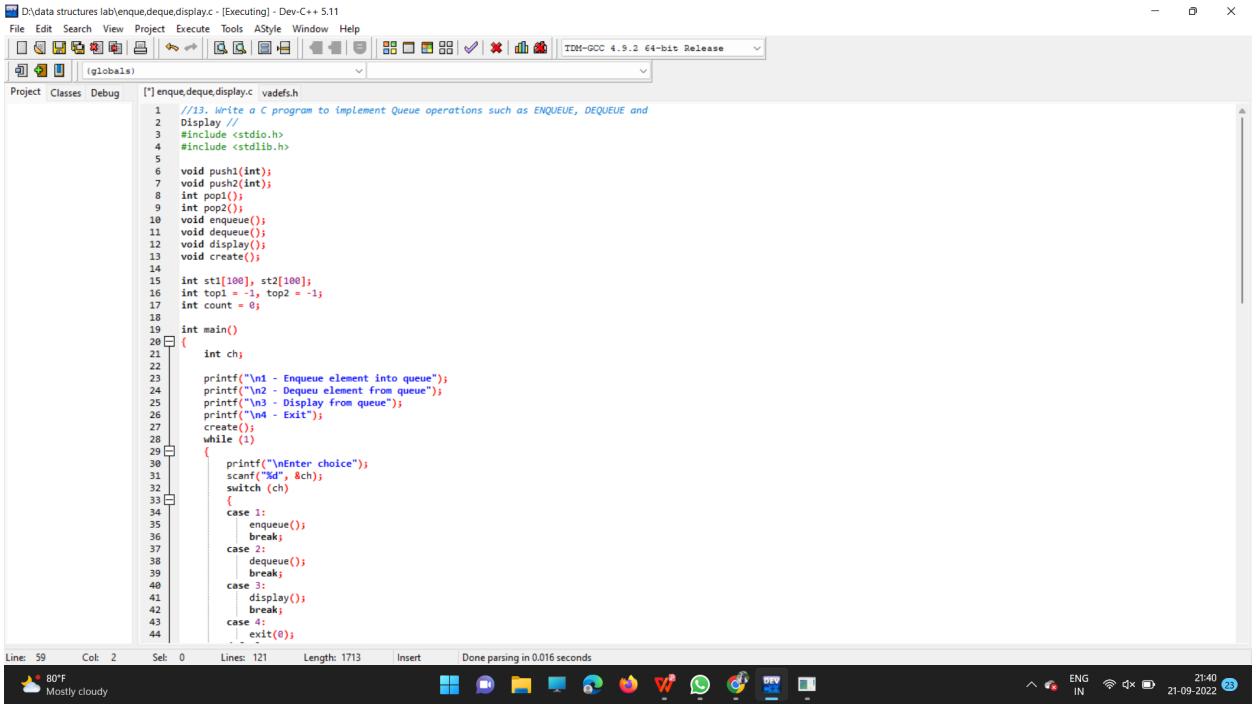
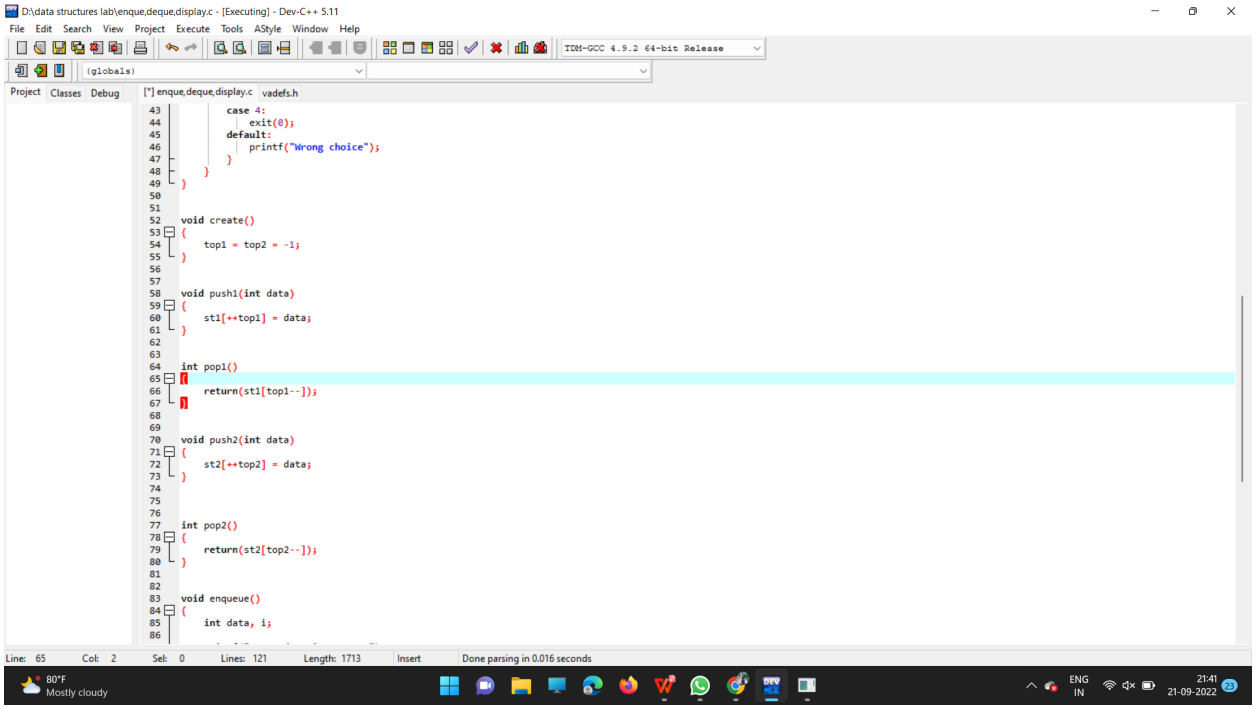
// 13. Write a C program to implement Queue operations such as ENQUEUE, DEQUEUE and Display

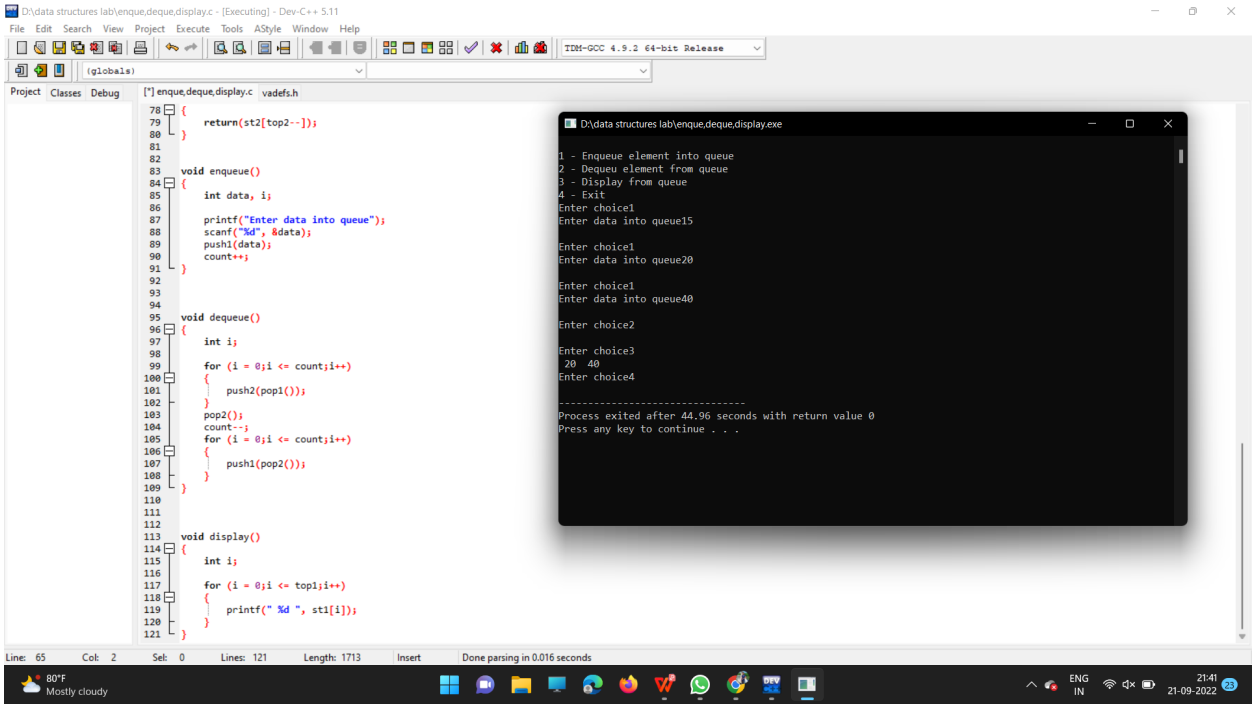
```
#include <stdio.h>
#include <stdlib.h>

void push1(int);
void push2(int);
int pop1();
int pop2();
void enqueue();
void dequeue();
void display();
void create();

int st1[100], st2[100];
int top1 = -1, top2 = -1;
int count = 0;

int main()
{
    int ch;

    printf("\n1 - Enqueue element into queue");
    printf("\n2 - Dequeu element from queue");
    printf("\n3 - Display from queue");
    printf("\n4 - Exit");
    create();
    while (1)
    {
        printf("\nEnter choice");
        scanf("%d", &ch);
        switch (ch)
        {
        case 1:
            enqueue();
            break;
        case 2:
            dequeue();
            break;
        case 3:
            display();
            break;
        case 4:
            exit(0);
```

```
        default:
            printf("Wrong choice");
        }
    }
}


void create()
{
    top1 = top2 = -1;
}


void push1(int data)
{
    st1[++top1] = data;
}


int pop1()
{
    return(st1[top1--]);
}


void push2(int data)
{
    st2[++top2] = data;
}



int pop2()
{
    return(st2[top2--]);
}


void enqueue()
{
    int data, i;

    printf("Enter data into queue");
    scanf("%d", &data);
```

```
    push1(data);
    count++;
}



void dequeue()
{
    int i;

    for (i = 0;i <= count;i++)
    {
        push2(pop1());
    }
    pop2();
    count--;
    for (i = 0;i <= count;i++)
    {
        push1(pop2());
    }
}



void display()
{
    int i;

    for (i = 0;i <= top1;i++)
    {
        printf(" %d ", st1[i]);
    }
}
```


D:\data structures lab\enque,deque,display.c - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 4.9.2 64-bit Release
(globals)
Project Classes Debug
[*] enque,deque,display.c vadefs.h
//13. Write a C program to implement Queue operations such as ENQUEUE, DEQUEUE and
Display //
#include <stdio.h>
#include <stdlib.h>
void push1(int);
void push2(int);
int pop1();
int pop2();
void enqueue();
void dequeue();
void display();
void create();
int st1[100], st2[100];
int top1 = -1, top2 = -1;
int count = 0;
int main()
{
int ch;
printf("\n1 - Enqueue element into queue");
printf("\n2 - Dequeu element from queue");
printf("\n3 - Display from queue");
printf("\n4 - Exit");
create();
while (1)
{
printf("\nEnter choice");
scanf("%d", &ch);
switch (ch)
{
case 1:
enqueue();
break;
case 2:
dequeue();
break;
case 3:
display();
break;
case 4:
exit(0);
Line: 59 Col: 2 Sel: 0 Lines: 121 Length: 1713 Insert Done parsing in 0.016 seconds
80°F
Mostly cloudy
ENG
IN
21:40
21-09-2022


D:\data structures lab\enque,deque,display.c - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 4.9.2 64-bit Release
(globals)
Project Classes Debug
[*] enque,deque,display.c vadefs.h
case 4:
exit(0);
default:
printf("Wrong choice");
}
}
}
void create()
{
top1 = top2 = -1;
}
void push1(int data)
{
st1[++top1] = data;
}
int pop1()
{
return(st1[top1--]);
}
void push2(int data)
{
st2[++top2] = data;
}
int pop2()
{
return(st2[top2--]);
}
void enqueue()
{
int data, i;
Line: 65 Col: 2 Sel: 0 Lines: 121 Length: 1713 Insert Done parsing in 0.016 seconds
80°F
Mostly cloudy
ENG
IN
21:41
21-09-2022


D:\data structures lab\enque,deque,display.c - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 4.9.2 64-bit Release
(globals)
Project Classes Debug
[*] enque,deque,display.c
vadefs.h
78 {
79 return(st2[top2--]);
80 }
81
82
83 void enqueue()
84 {
85 int data, i;
86
87 printf("Enter data into queue");
88 scanf("%d", &data);
89 push1(data);
90 count++;
91 }
92
93
94
95 void dequeue()
96 {
97 int i;
98
99 for (i = 0;i <= count;i++)
100 {
101 push2(pop1());
102 }
103 pop2();
104 count--;
105 for (i = 0;i <= count;i++)
106 {
107 push1(pop2());
108 }
109 }
110
111
112
113 void display()
114 {
115 int i;
116
117 for (i = 0;i <= top1;i++)
118 {
119 printf(" %d ", st1[i]);
120 }
121 }
D:\data structures lab\enque,deque,display.exe
1 - Enqueue element into queue
2 - Dequeu element from queue
3 - Display from queue
4 - Exit
Enter choice1
Enter data into queue15
Enter choice1
Enter data into queue20
Enter choice1
Enter data into queue40
Enter choice2
Enter choice3
20 40
Enter choice4
Process exited after 44.96 seconds with return value 0
Press any key to continue . . .
Line: 65 Col: 2 Sel: 0 Lines: 121 Length: 1713 Insert Done parsing in 0.016 seconds
80°F
Mostly cloudy
ENG
IN
21:41
21-09-2022