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Stream - Computer Science & Engineering

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Subject - DSA Lab

File Edit Selection View Go Run Terminal Help doubleendedqueue.c - DSA lab - Visual Studio Code

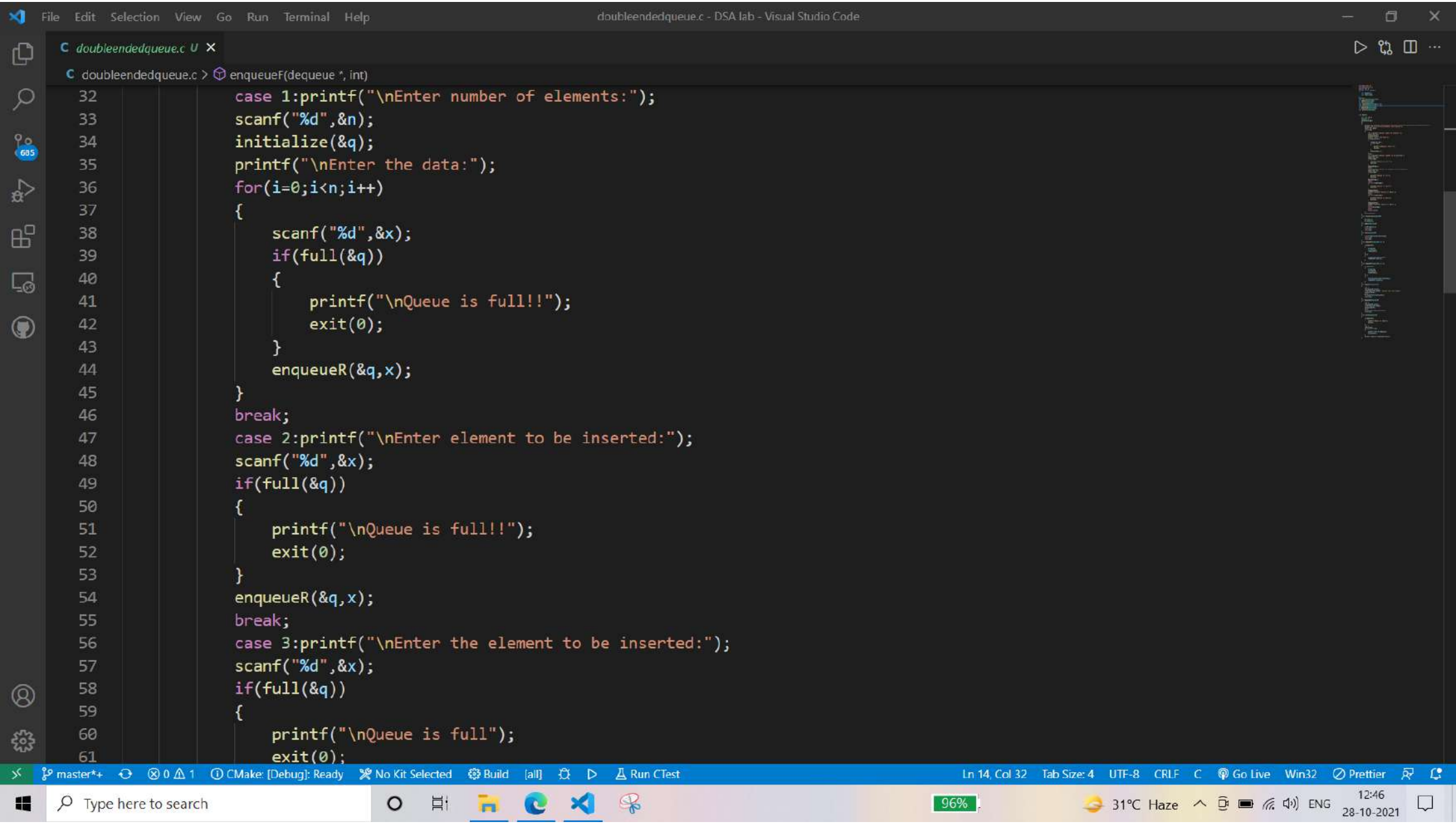
doubleendedqueue.c U

doubleendedqueue.c > enqueueF(dequeue *, int)

```c
#include<stdio.h>
#include<process.h>
#define MAX 30
typedef struct dequeue
{
    int data[MAX];
    int rear,front;
}
dequeue;
void initialize(dequeue*p);
int empty(dequeue*p);
int full(dequeue*p);
void enqueueR(dequeue*p,int x);
void enqueueF(dequeue*p,int x);
int dequeueF(dequeue*p);
int dequeueR(dequeue*p);
void print(dequeue*p);


void main()
{
    int i,x ,op,n;
    dequeue q;
    initialize(&q);
    do
    {
        printf("\n1.Create\n2.Insert(rear)\n3.Insert(front)\n4.Delete(rear)\n5.Delete(front)");
        printf("\n6.Print\n7.Exit\n\nEnter your choice:");
        scanf("%d",&op);
        switch(op)
```

master*+ ⊗ 0 ⚠ 1 CMake: [Debug]: Ready No Kit Selected Build [all] Run CTest Ln 14, Col 32 Tab Size: 4 UTF-8 CRLF C


File Edit Selection View Go Run Terminal Help
doubleendedqueue.c - DSA lab - Visual Studio Code
doubleendedqueue.c U
doubleendedqueue.c > enqueueF(dequeue *, int)
case 1:printf("\nEnter number of elements:");
scanf("%d",&n);
initialize(&q);
printf("\nEnter the data:");
for(i=0;i<n;i++)
{
scanf("%d",&x);
if(full(&q))
{
printf("\nQueue is full!!");
exit(0);
}
enqueueR(&q,x);
}
break;
case 2:printf("\nEnter element to be inserted:");
scanf("%d",&x);
if(full(&q))
{
printf("\nQueue is full!!");
exit(0);
}
enqueueR(&q,x);
break;
case 3:printf("\nEnter the element to be inserted:");
scanf("%d",&x);
if(full(&q))
{
printf("\nQueue is full");
exit(0);
master*+ 0 1 CMake: [Debug]: Ready No Kit Selected Build [all] Run CTest
Ln 14, Col 32 Tab Size: 4 UTF-8 CRLF C Go Live Win32 Prettier
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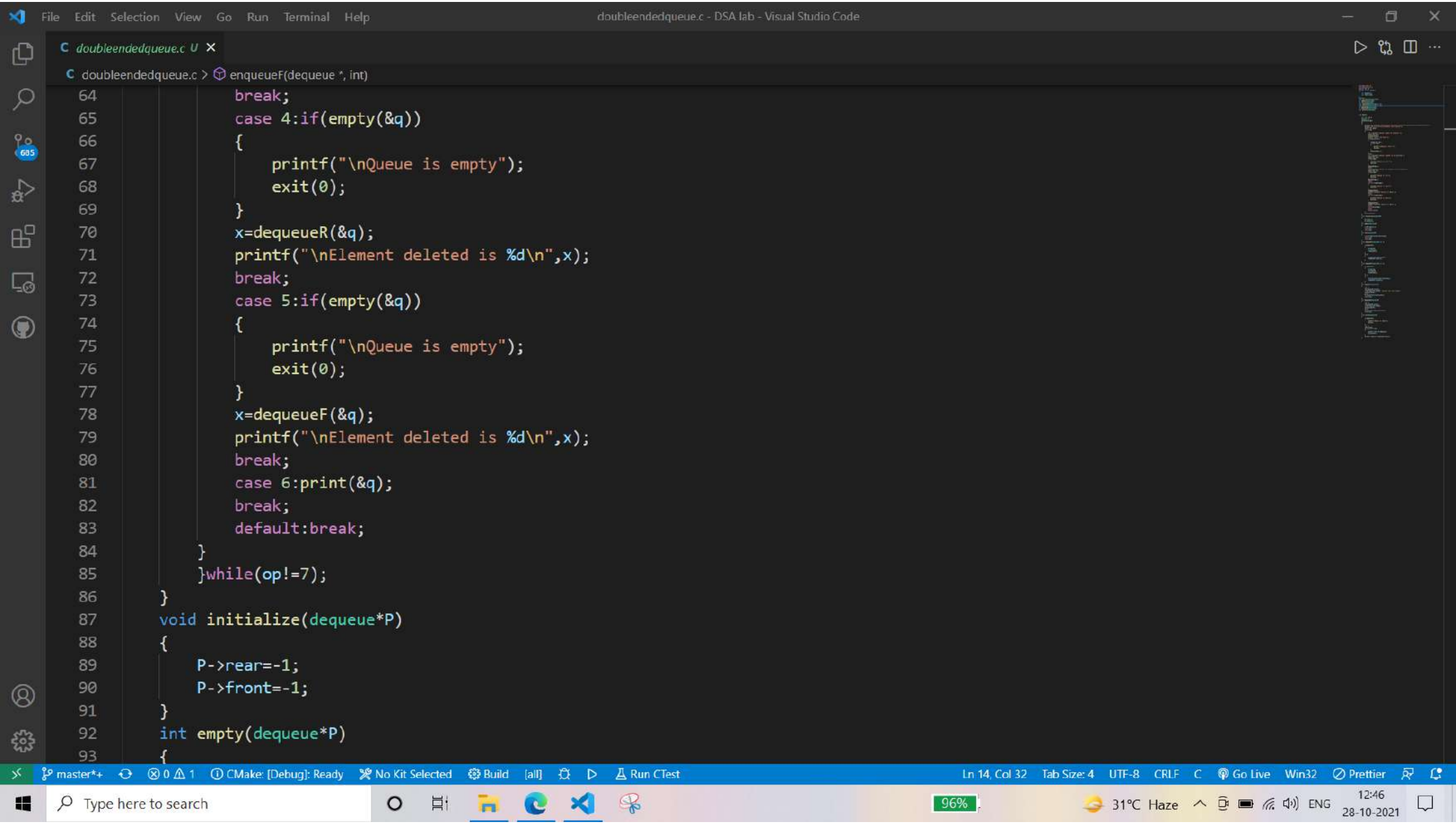
28-10-2021


File Edit Selection View Go Run Terminal Help
doubleendedqueue.c - DSA lab - Visual Studio Code
doubleendedqueue.c U
doubleendedqueue.c > enqueueF(dequeue *, int)
break;
case 4:if(empty(&q))
{
printf("\nQueue is empty");
exit(0);
}
x=dequeueR(&q);
printf("\nElement deleted is %d\n",x);
break;
case 5:if(empty(&q))
{
printf("\nQueue is empty");
exit(0);
}
x=dequeueF(&q);
printf("\nElement deleted is %d\n",x);
break;
case 6:print(&q);
break;
default:break;
}
}while(op!=7);
}
void initialize(dequeue*P)
{
P->rear=-1;
P->front=-1;
}
int empty(dequeue*P)
{
master*+ 0 1 CMake: [Debug]: Ready No Kit Selected Build [all] Run CTest
Ln 14, Col 32 Tab Size: 4 UTF-8 CRLF C Go Live Win32 Prettier
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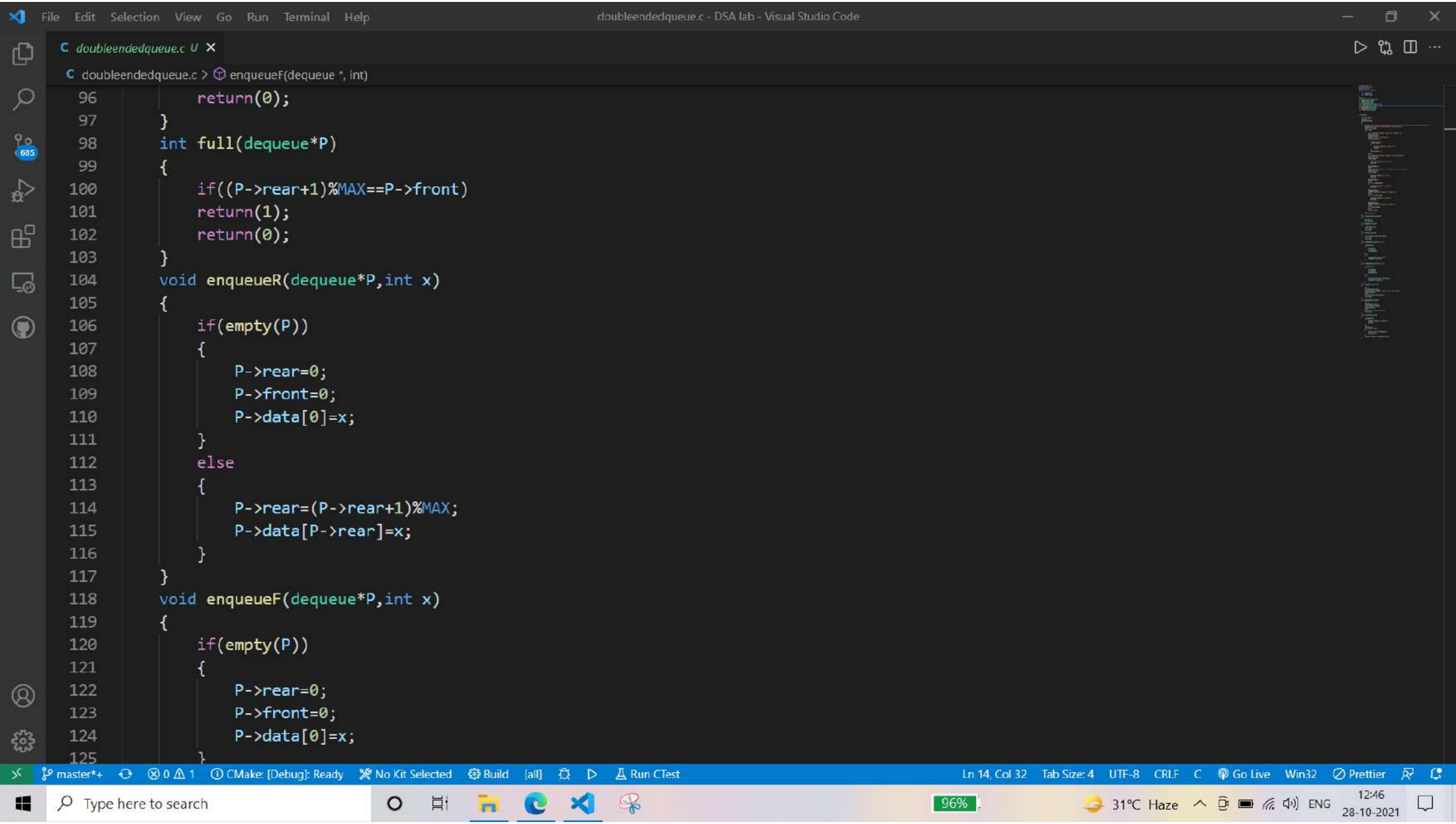
File Edit Selection View Go Run Terminal Help
doubleendedqueue.c - DSA lab - Visual Studio Code
doubleendedqueue.c U
doubleendedqueue.c > enqueueF(dequeue *, int)
return(0);
}
int full(dequeue*P)
{
if((P->rear+1)%MAX==P->front)
return(1);
return(0);
}
void enqueueR(dequeue*P,int x)
{
if(empty(P))
{
P->rear=0;
P->front=0;
P->data[0]=x;
}
else
{
P->rear=(P->rear+1)%MAX;
P->data[P->rear]=x;
}
}
void enqueueF(dequeue*P,int x)
{
if(empty(P))
{
P->rear=0;
P->front=0;
P->data[0]=x;
master*+ 0 1 CMake: [Debug]: Ready No Kit Selected Build [all] Run CTest
Ln 14, Col 32 Tab Size: 4 UTF-8 CRLF C Go Live Win32 Prettier
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ENG
12:46
28-10-2021

File Edit Selection View Go Run Terminal Help doubleendedqueue.c - DSA lab - Visual Studio Code

doubleendedqueue.c U

doubleendedqueue.c > enqueueF(dequeue *, int)

```
126         else
127         {
128             P->front=(P->front-1+MAX)%MAX;
129             P->data[P->front]=x;
130         }
131     }
132     int dequeueF(dequeue*P)
133     {
134         int x;
135         x=P->data[P->front];
136         if(P->rear==P->front) //delete the last element
137         initialize(P);
138         else
139         P->front=(P->front+1)%MAX;
140         return(x);
141     }
142     int dequeueR(dequeue*P)
143     {
144         int x;
145         x=P->data[P->rear];
146         if(P->rear==P->front)
147         initialize(P);
148         else
149         P->rear=(P->rear-1+MAX)%MAX;
150         return(x);
151     }
152     void print(dequeue*P)
153     {
154         if(empty(P))
155         {
```

master*+ ⊗ 0 ⚠ 1 CMake: [Debug]: Ready No Kit Selected Build [all] Run CTest Ln 14, Col 32 Tab Size: 4 UTF-8 CRLF C Go Live Win32 Prettier

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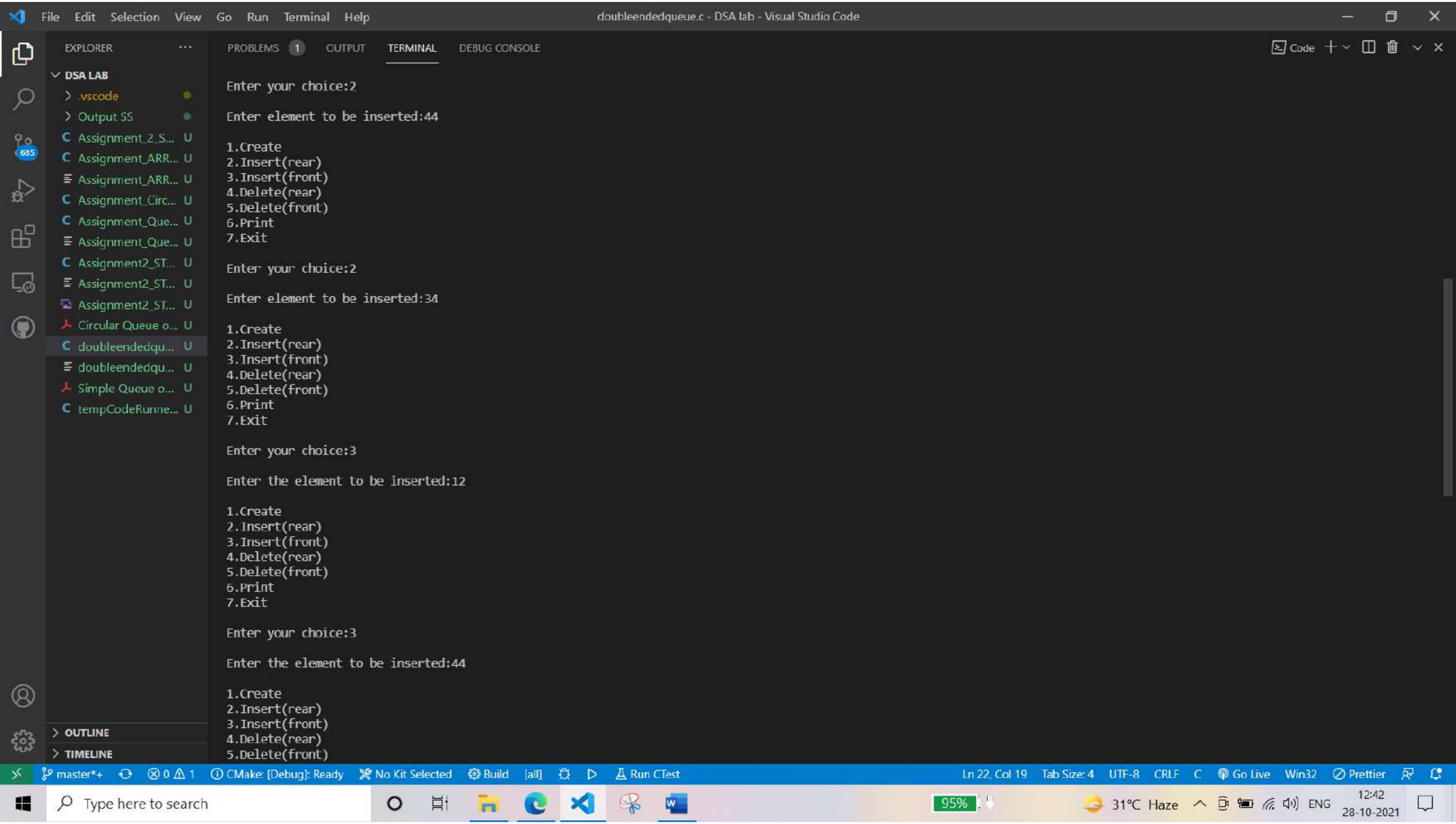
File Edit Selection View Go Run Terminal Help
doubleendedqueue.c - DSA lab - Visual Studio Code
EXPLORER
DSA LAB
.vscode
Output SS
Assignment_2_S... U
Assignment_ARR... U
Assignment_ARR... U
Assignment_Circ... U
Assignment_Que... U
Assignment_Que... U
Assignment2_ST... U
Assignment2_ST... U
Assignment2_ST... U
Circular Queue o... U
doubleendedqu... U
doubleendedqu... U
Simple Queue o... U
tempCodeRunne... U
OUTLINE
TIMELINE
PROBLEMS 1
OUTPUT
TERMINAL
DEBUG CONSOLE
Code
Enter your choice:2
Enter element to be inserted:44
1.Create
2.Insert(rear)
3.Insert(front)
4.Delete(rear)
5.Delete(front)
6.Print
7.Exit
Enter your choice:2
Enter element to be inserted:34
1.Create
2.Insert(rear)
3.Insert(front)
4.Delete(rear)
5.Delete(front)
6.Print
7.Exit
Enter your choice:3
Enter the element to be inserted:12
1.Create
2.Insert(rear)
3.Insert(front)
4.Delete(rear)
5.Delete(front)
6.Print
7.Exit
Enter your choice:3
Enter the element to be inserted:44
1.Create
2.Insert(rear)
3.Insert(front)
4.Delete(rear)
5.Delete(front)
master*+
0 1
CMake: [Debug]: Ready
No Kit Selected
Build
[all]
Run CTest
Ln 22, Col 19
Tab Size: 4
UTF-8
CRLF
C
Go Live
Win32
Prettier
Type here to search
95%
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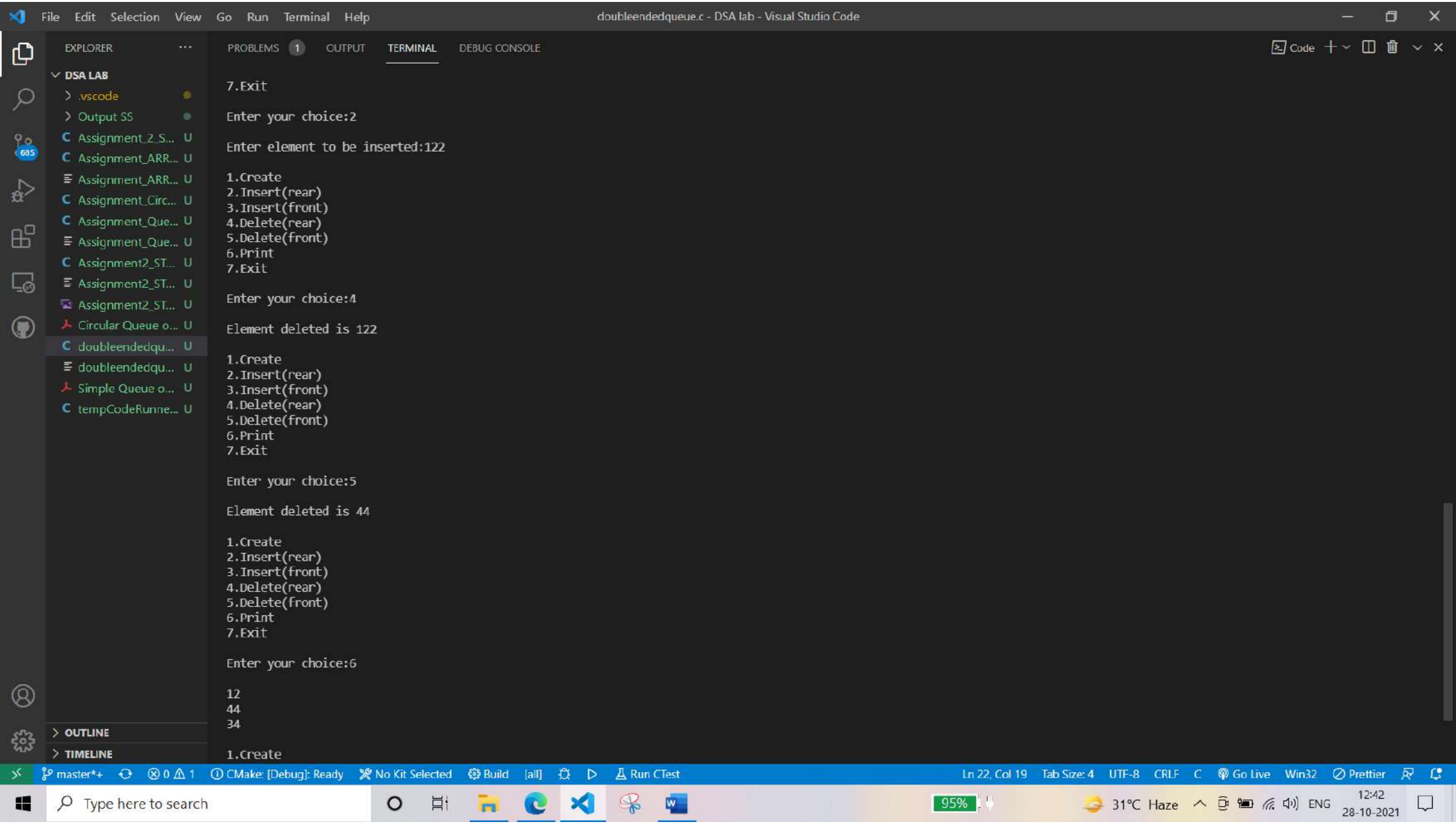
28-10-2021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doubleendedqueue.c - DSA lab - Visual Studio Code
EXPLORER
DSA LAB
.vscode
Output SS
Assignment_2_S... U
Assignment_ARR... U
Assignment_ARR... U
Assignment_Circ... U
Assignment_Que... U
Assignment_Que... U
Assignment2_ST... U
Assignment2_ST... U
Assignment2_ST... U
Circular Queue o... U
doubleendedqu... U
doubleendedqu... U
Simple Queue o... U
tempCodeRunne... U
OUTLINE
TIMELINE
PROBLEMS 1
OUTPUT
TERMINAL
DEBUG CONSOLE
Code
7.Exit
Enter your choice:2
Enter element to be inserted:122
1.Create
2.Insert(rear)
3.Insert(front)
4.Delete(rear)
5.Delete(front)
6.Print
7.Exit
Enter your choice:4
Element deleted is 122
1.Create
2.Insert(rear)
3.Insert(front)
4.Delete(rear)
5.Delete(front)
6.Print
7.Exit
Enter your choice:5
Element deleted is 44
1.Create
2.Insert(rear)
3.Insert(front)
4.Delete(rear)
5.Delete(front)
6.Print
7.Exit
Enter your choice:6
12
44
34
1.Create
master*+
0 1
CMake: [Debug]: Ready
No Kit Selected
Build
[all]
Run CTest
Ln 22, Col 19
Tab Size: 4
UTF-8
CRLF
C
Go Live
Win32
Prettier
Type here to search
95%
31°C Haze
ENG
12:42
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