Double Ended Queue

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#include<stdio.h>
#include<conio.h>
#define SIZE 100

void enQueue(int);
int deQueueFront();
int deQueueRear();
void enQueueRear(int);
void enQueueFront(int);
void display();

int queue[SIZE];
int rear = 0, front = 0;

int main()
{
    char ch;
    int choice1, choice2, value;
    printf("\n******* Type of Double Ended Queue *******\n");
     do
     {
          printf("\n1.Input-restricted deque \n");
          printf("2.output-restricted deque \n");
          printf("\nEnter your choice of Queue Type : ");
          scanf("%d",&choice1);
          switch(choice1)
          {
               case 1:
                    printf("\nSelect the Operation\n");
                    printf("1.Insert\n2.Delete from Rear\n3.Delete from 
Front\n4. Display");
                    do
                    {
                       printf("\nEnter your choice for the operation in c deque: 
");

                       scanf("%d",&choice2);
                       switch(choice2)
                       {
                          case 1: enQueueRear(value);
                                  display();
                                  break;
                          case 2: value = deQueueRear();
                                  printf("\nThe value deleted is %d",value);
                                  display();
                                  break;
                          case 3: value=deQueueFront();
                                  printf("\nThe value deleted is %d",value);
                                  display();
                                  break;
                          case 4: display();
                                  break;
                          default:printf("Wrong choice");
                       }
                       printf("\nDo you want to perform another operation (Y/N): 
");

                       ch=getch();
                    }while(ch=='y'||ch=='Y');
                    getch();
                    break;

               case 2 :
                   printf("\n---- Select the Operation ----\n");
                   printf("1. Insert at Rear\n2. Insert at Front\n3. Delete\n4.
Display");
                   do
                   {
                      printf("\nEnter your choice for the operation: ");
                      scanf("%d",&choice2);
                      switch(choice2)
                      {
                         case 1: enQueueRear(value);
                                 display();
                                 break;
                         case 2: enQueueFront(value);
                                 display();
                                 break;
                         case 3: value = deQueueFront();
                                 printf("\nThe value deleted is %d",value);
                                 display();
                                 break;
                         case 4: display();
                                 break;
                         default:printf("Wrong choice");
                       }
                       printf("\nDo you want to perform another operation (Y/N):
");

                       ch=getch();
                    } while(ch=='y'||ch=='Y');
                    getch();
                    break ;
            }
            printf("\nDo you want to continue(y/n):");
            ch=getch();
      }while(ch=='y'||ch=='Y');
}

void enQueueRear(int value)
{
     char ch;
     if(front == SIZE/2)
      {
            printf("\nQueue is full!!! Insertion is not possible!!! ");
            return;
      }
      do
      {
            printf("\nEnter the value to be inserted:");
            scanf("%d",&value);
            queue[front] = value;
            front++;
            printf("Do you want to continue insertion Y/N");
            ch=getch();
      }while(ch=='y');
}

void enQueueFront(int value)
{
     char ch;
     if(front==SIZE/2)
      {
            printf("\nQueue is full!!! Insertion is not possible!!!");
            return;
      }
      do
      {
            printf("\nEnter the value to be inserted:");
            scanf("%d",&value);
            rear--;
            queue[rear] = value;
            printf("Do you want to continue insertion Y/N");
            ch = getch();
      }
      while(ch == 'y');
}
int deQueueRear()
{
     int deleted;
     if(front == rear)
     {
            printf("\nQueue is Empty!!! Deletion is not possible!!!");
            return 0;
     }
     front--;
     deleted = queue[front+1];
     return deleted;
}
int deQueueFront()
{
     int deleted;
     if(front == rear)
     {
            printf("\nQueue is Empty!!! Deletion is not possible!!!");
            return 0;
     }
     rear++;
     deleted = queue[rear-1];
     return deleted;
}

void display()
{
     int i;
     if(front == rear)
        printf("\nQueue is Empty!!! Deletion is not possible!!!")
     else{
        printf("\nThe Queue elements are:");
        for(i=rear; i < front; i++)
        {
           printf("%d\t ",queue[i]);
        }
     }
}
```