```
#include<stdio.h>
int a[20],i,c,key,front=-1,rear=-1,size;
void insertf();
void insertr();
void deletef();
void deleter();
void display();
void main()
{
	printf("Enter the size of Queue :");
	scanf("%d",&size);
	do{
		printf("\nMENU\n1.Insert at front\n2.Insert at rear\n3.Delete at front\n4.Delete at
rear\n5.Display\n6.Exit\nEnter your choice :\n");
		scanf("%d",&c);
		switch(c)
		{
			case 1:insertf();
			break;
			case 2:insertr();
			break;
			case 3:deletef();
			break;
			case 4:deleter();
			break;
			case 5:display();
			break;
			case 6:break;
			default :printf("Enter a valid choice");
		}
	}while(c!=6);
}
void insertf()
{
	printf("Enter the element to be inserted :");
	scanf("%d",&key);
	if(front==0)
	{
		//for(i=rear;i>=0;i--)
		//{
		//	a[i+1]=a[i];
		//}
		printf("The element cannot be inserted");
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	}
	else if(front==-1&&rear==-1)
	{
		front=0;
		rear=0;
		a[0]=key;
	}
	else
	{
		front--;
		a[front]=key;
	}
}
void insertr()
{
	printf("Enter the element to be inserted :");
	scanf("%d",&key);
	if(rear==size-1)
	{
		printf("The queue is full");
	}
	else if(front==-1&&rear==-1)
	{
		front=0;
		rear=0;
		a[0]=key;
	}
	else
	{
		a[++rear]=key;
	}
}
void deletef()
{
	if(front==-1&&rear==-1)
	{
		printf("Queue is empty");
	}
	else if(front==rear)
	{
		printf("The deleted element is %d",a[front]);
		front=-1;
		rear=-1;
	}
```

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	else
	{
		printf("The deleted element is %d",a[front++]);
	}
}
void deleter()
{
	if(front==-1&&rear==-1)
	{
		printf("Queue is empty");
	}
	else if(front==rear)
	{
		printf("The deleted element is %d",a[rear]);
		front=-1;
		rear=-1;
	}
	else
	{
		printf("The deleted element is %d",a[rear--]);
	}
}
void display()
{
	if(front==-1&&rear==-1)
	{
		printf("Queue is empty");
	}
	else
	{
		for(i=front;i<=rear;i++)
		{
			printf("\t%d",a[i]);
		}
	}
}
```