CIRCULAR QUEUE:

```
#include<stdio.h>
#define que_size 5

int item,front=0,rear=-1,q[que_size],count=0;
void insertrear()
{
	if(count==que_size)
	{
		printf("queue overflow");
		return;
	}
	rear=(rear+1)%que_size;
	q[rear]=item;
	count++;
}
int deletefront()
{
	if(count==0) return -1;
	item = q[front];
	front=(front+1)%que_size;
	count=count-1;
	return item;
}
void displayq()
{
```

```
        int i,f;
        if(count==0)
        {
                printf("queue is empty\n");
                return;
        }
        f=front;
        printf("contents of queue \n");
        for(i=1;i<=count;i++)
        {
                printf("%d\n",q[f]);
                f=(f+1)%que_size;
        }
}
void main()
{
        int choice;
        for(;;)
        {
                printf("\n1.Insert rear \t2.Delete front \t3.Display \t4.exit \n ");
                printf("Enter the choice : ");
                scanf("%d",&choice);
                switch(choice)
                {
                        case 1:printf("Enter the item to be inserted :");
                               scanf("%d",&item);
```

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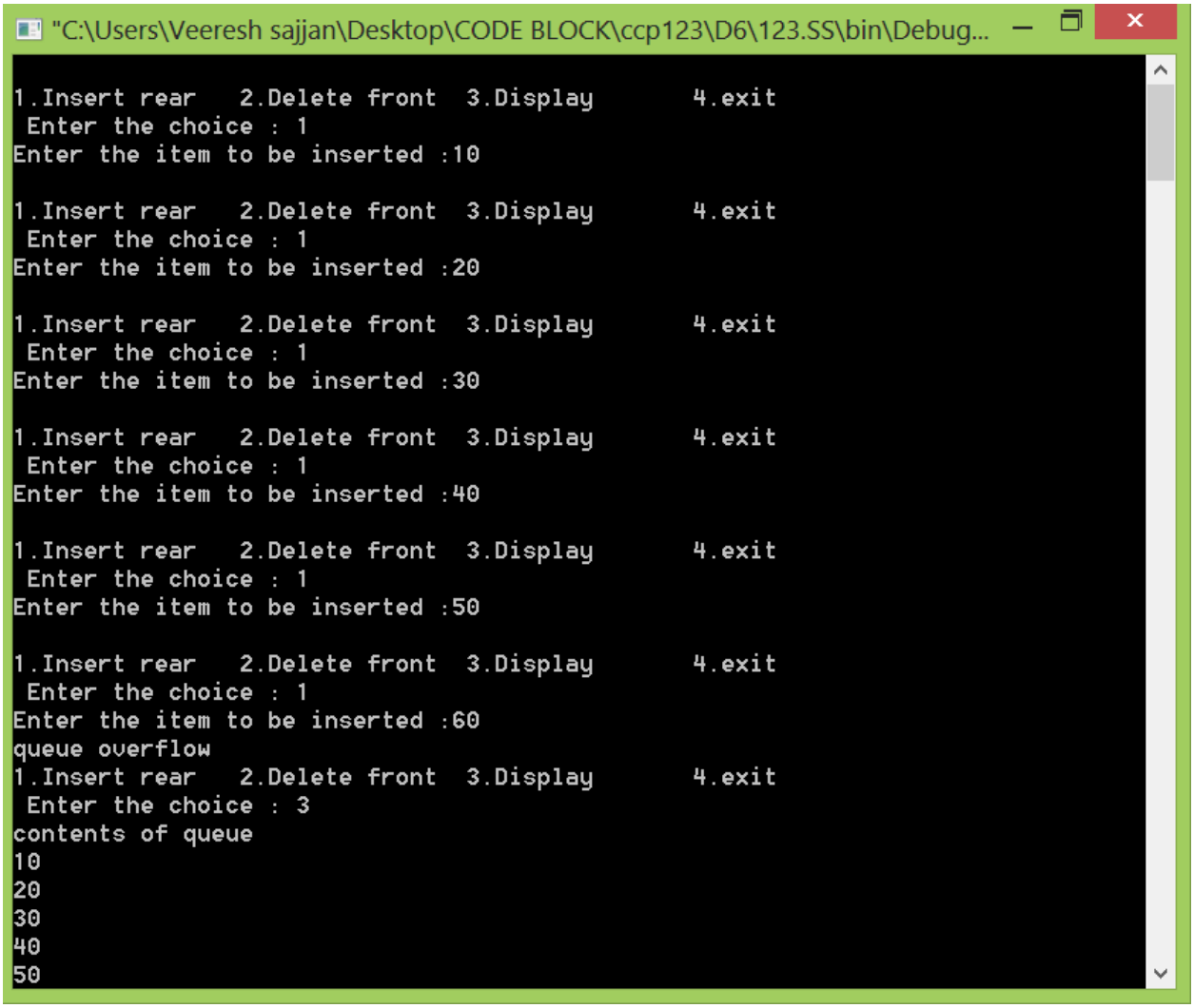
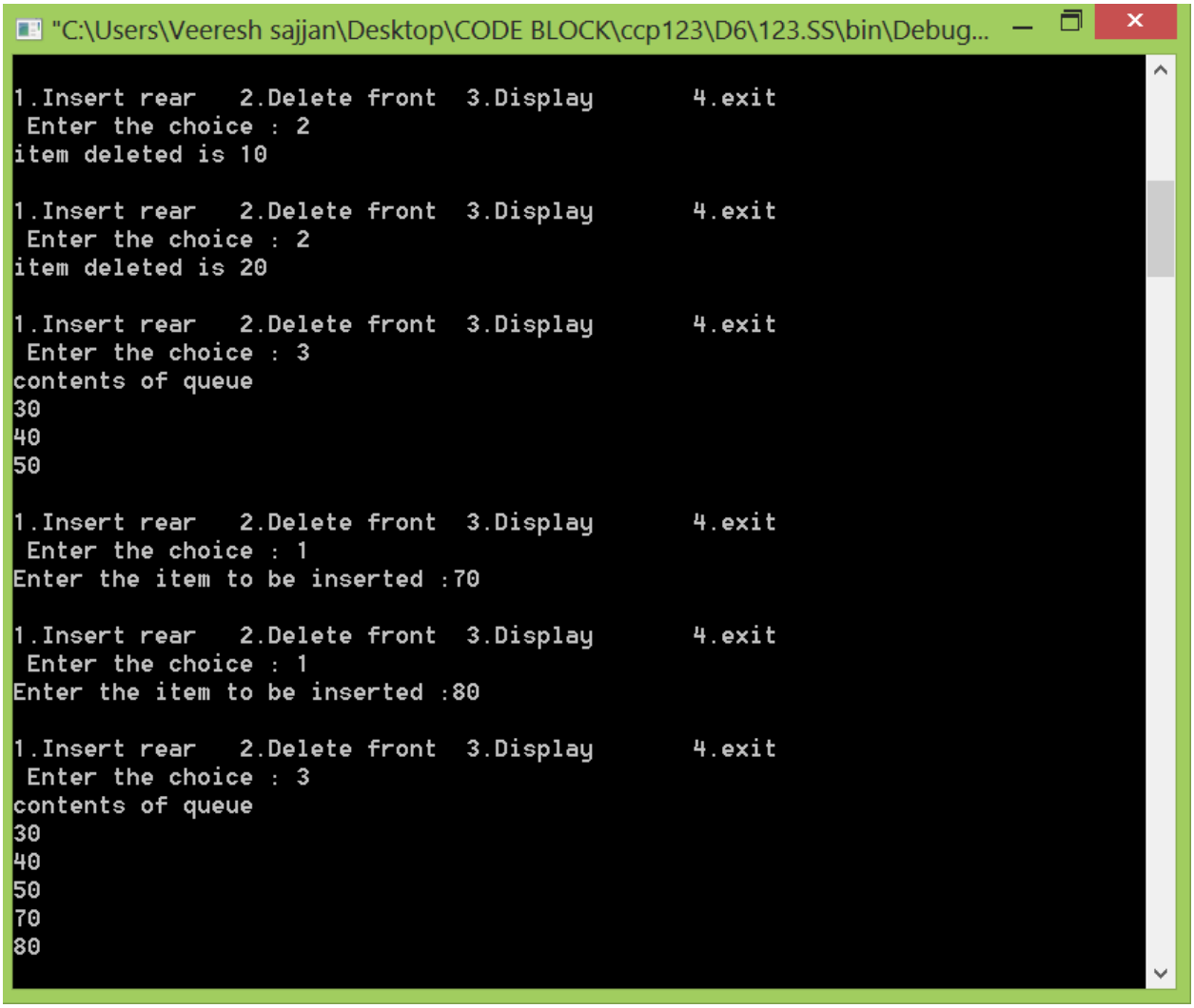
                    insertrear();
                    break;
                case 2:item=deletefront();
                        if(item==-1)
                        printf("queue is empty\n");
                        else
                        printf("item deleted is %d \n",item);
                        break;
            case 3:displayq();
                        break;
            default:exit(0);
            }
        }

}
```


"C:\Users\Veeresh sajjan\Desktop\CODE BLOCK\ccp123\D6\123.SS\bin\Debug...
1.Insert rear 2.Delete front 3.Display 4.exit
Enter the choice : 1
Enter the item to be inserted :10
1.Insert rear 2.Delete front 3.Display 4.exit
Enter the choice : 1
Enter the item to be inserted :20
1.Insert rear 2.Delete front 3.Display 4.exit
Enter the choice : 1
Enter the item to be inserted :30
1.Insert rear 2.Delete front 3.Display 4.exit
Enter the choice : 1
Enter the item to be inserted :40
1.Insert rear 2.Delete front 3.Display 4.exit
Enter the choice : 1
Enter the item to be inserted :50
1.Insert rear 2.Delete front 3.Display 4.exit
Enter the choice : 1
Enter the item to be inserted :60
queue overflow
1.Insert rear 2.Delete front 3.Display 4.exit
Enter the choice : 3
contents of queue
10
20
30
40
50


"C:\Users\Veeresh sajjan\Desktop\CODE BLOCK\ccp123\D6\123.SS\bin\Debug...
1.Insert rear 2.Delete front 3.Display 4.exit
Enter the choice : 2
item deleted is 10
1.Insert rear 2.Delete front 3.Display 4.exit
Enter the choice : 2
item deleted is 20
1.Insert rear 2.Delete front 3.Display 4.exit
Enter the choice : 3
contents of queue
30
40
50
1.Insert rear 2.Delete front 3.Display 4.exit
Enter the choice : 1
Enter the item to be inserted :70
1.Insert rear 2.Delete front 3.Display 4.exit
Enter the choice : 1
Enter the item to be inserted :80
1.Insert rear 2.Delete front 3.Display 4.exit
Enter the choice : 3
contents of queue
30
40
50
70
80