1.Linear Queue

```
#include <stdio.h>
int q[50],rear=-1,front=-1,max=50;
void enqueue();
void dequeue();
void display();
void main()
{
int ch;
printf("Press-1.insert, 2.delete, 3.Display and 4.Exit\n");
while(ch!=4)
{
printf("Enter choice:");
scanf("%d",&ch);
switch(ch){
case 1:
enqueue();
break;
case 2:
dequeue();
break;
case 3:
display();
break;
}
}
printf("Exited");

}
```

```
void enqueue()
{
int item;
if(rear==max-1)
printf("Queue overflow\n");
else
{ if(front==-1)
front=0;
printf("Insert an element:");
scanf("%d",&item);
rear+=1;
q[rear]=item;
}
}
void dequeue()
{
if(front==-1||front>rear)
printf("Queue underflow\n");
else
{
printf("Deleted element is:%d\n",q[front]);
front+=1;
}
}
void display()
{
int i;
```

```
if(front==-1)
printf("Queue is empty");
else
{
printf("Queue is:\n");
for(i=front;i<=rear;i++)
printf("%d\t",q[i]);
printf("\n");
}
}
```

Output: