**Problem 04:**

**Implementation of queue using linked list**

**Code:**

class QNode {

int key;

QNode next;

public QNode(int key)

{

this.key = key;

this.next = null;

}

}

class Queue {

QNode front, rear;

public Queue()

{

this.front = this.rear = null;

}

void enqueue(int key)

{

QNode temp = new QNode(key);

if (this.rear == null) {

this.front = this.rear = temp;

return;

}

this.rear.next = temp;

this.rear = temp;

}

void dequeue()

{

if (this.front == null)

return;

QNode temp = this.front;

this.front = this.front.next;

if (this.front == null)

this.rear = null;

}

}

public class Test {

public static void main(String[] args)

{

Queue q = new Queue();

q.enqueue(10);

q.enqueue(20);

q.dequeue();

q.dequeue();

q.enqueue(30);

q.enqueue(40);

q.enqueue(50);

q.dequeue();

System.out.println("Queue Front : " + q.front.key);

System.out.println("Queue Rear : " + q.rear.key);

}

}