

**Assignment No.2**

**DSA LAB**

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**Code of Queue using linked list:**

package queues;

public class Queues {

public static void main(String[] args) {

Queue q = new Queue();

System.out.println(" insert item ----------------");

q.enqueue(1);

q.enqueue(2);

q.enqueue(3);

q.enqueue(4);

System.out.println("----------------------------");

q.peek();

System.out.println(" -----------------------");

System.out.println(" display item ");

q.display();

System.out.println("--------------------------");

System.out.println(" removing item from list ");

q.dequeue();

q.dequeue();

q.dequeue();

q.dequeue();

}

}

class Node

{

int data;

Node next;

public Node(int data)

{

this.data = data;

this.next = null;

}

}

class Queue

{

Node rear = null, front = null;

public void enqueue(int item)

{

Node node = new Node(item);

System.out.println(" "+ item);

if (front == null) {

front = node;

rear = node;

} else {

rear.next = node;

rear = node;

}

}

public void dequeue()

{

if (front == null) {

System.out.println("\nQueue Underflow");

}

else{

Node temp = front;

System.out.println(" "+ temp.data);

front = front.next;

if (front == null) {

rear = null;

}

int item = temp.data;

}

}

public int peek() {

if (front != null) {

System.out.println(" front item : "+ front.data);

} else {

System.out.println(" list is empty");

}

return -1;

}

public void display() {

Node temp = front;

while(temp.next!= null)

{

System.out.println(" "+temp.data);

temp=temp.next;

}

System.out.println(" "+temp.data);

}

}