**/\*ARRAY IMPLEMENTATION OF QUEUE\*/**

import java.util.\*;

public class queue\_linked

{

Node front, rear;

int currsize;

public queue\_linked()

{

front=null;

rear=null;

currsize=0;

}

public boolean isEmpty()

{

return(currsize==0);

}

public int dequeue()

{

if(isEmpty())

{

rear=null;

System.out.println("No elements available in the Queue");

return-1;

}

else

{

int data=front.data;

front=front.next;

currsize--;

System.out.println(data+"remove from the Queue");

return data;

}

}

void DisplayList()

{

if(isEmpty())

{

System.out.println("No elements available in the Queue");

}

else

{

Node ptr=front;

while(ptr!=rear.getNext())

{

System.out.println(ptr.getData()+"");

ptr=ptr.getNext();

}

}

}

public void enqueue(int data)

{

Node oldRear=rear;

rear=new Node();

rear. data=data;

rear.next=null;

if(isEmpty())

{

front=rear;

}

else

{

oldRear.next=rear;

}

currsize++;

System.out.println(data+"added from the Queue");

}

public static void main(String args[])

{

queue\_linked queue=new queue\_linked();

while(true)

{

System.out.println("IMPLEMENTATION OF QUEUE ADT USING LINKED LIST");

System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

System.out.println("\n1...Enqueue\n2...Dequeue\n3...Display Element\n4...Exit");

Scanner myobj=new Scanner(System.in);

System.out.println("\n Enter your choice:");

int choice=Integer.parseInt(myobj.nextLine());

switch(choice)

{

case 1:

System.out.println("\n Enter the value to insert:");

int val=Integer.parseInt(myobj.nextLine());

queue.enqueue(val);

break;

case 2:

queue.dequeue();

break;

case 3:

queue.DisplayList();

break;

case 4:

System.exit(0);

}

}

}

private class Node

{

int data;

Node next;

public Node getNext()

{

return next;

}

public int getData()

{

return data;

}

}

}

**OUTPUT**:

IMPLEMENTATION OF QUEUE ADT USING LINKED LIST

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1...Enqueue

2...Dequeue

3...Display Element

4...Exit

Enter your choice:

1

Enter the value to insert:

23

23added from the Queue

IMPLEMENTATION OF QUEUE ADT USING LINKED LIST

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1...Enqueue

2...Dequeue

3...Display Element

4...Exit

Enter your choice:

1

Enter the value to insert:

44

44added from the Queue

IMPLEMENTATION OF QUEUE ADT USING LINKED LIST

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1...Enqueue

2...Dequeue

3...Display Element

4...Exit

Enter your choice:

1

Enter the value to insert:

67

67added from the Queue

IMPLEMENTATION OF QUEUE ADT USING LINKED LIST

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1...Enqueue

2...Dequeue

3...Display Element

4...Exit

Enter your choice:

1

Enter the value to insert:

87

87added from the Queue

IMPLEMENTATION OF QUEUE ADT USING LINKED LIST

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1...Enqueue

2...Dequeue

3...Display Element

4...Exit

Enter your choice:

1

Enter the value to insert:

98

98added from the Queue

IMPLEMENTATION OF QUEUE ADT USING LINKED LIST

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1...Enqueue

2...Dequeue

3...Display Element

4...Exit

Enter your choice:

3

23

44

67

87

98

IMPLEMENTATION OF QUEUE ADT USING LINKED LIST

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1...Enqueue

2...Dequeue

3...Display Element

4...Exit

Enter your choice:

2

23remove from the Queue

IMPLEMENTATION OF QUEUE ADT USING LINKED LIST

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1...Enqueue

2...Dequeue

3...Display Element

4...Exit

Enter your choice:

2

44remove from the Queue

IMPLEMENTATION OF QUEUE ADT USING LINKED LIST

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1...Enqueue

2...Dequeue

3...Display Element

4...Exit

Enter your choice:

3

67

87

98

IMPLEMENTATION OF QUEUE ADT USING LINKED LIST

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1...Enqueue

2...Dequeue

3...Display Element

4...Exit

Enter your choice:

4