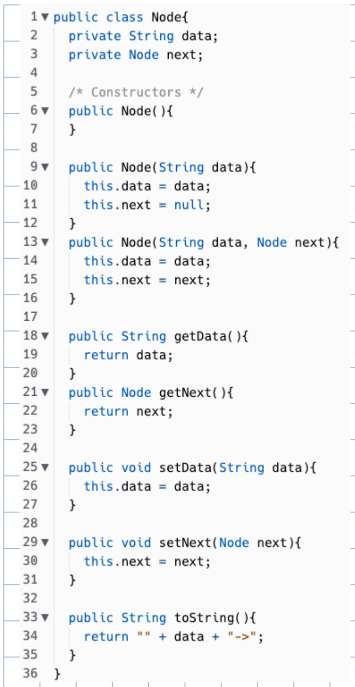
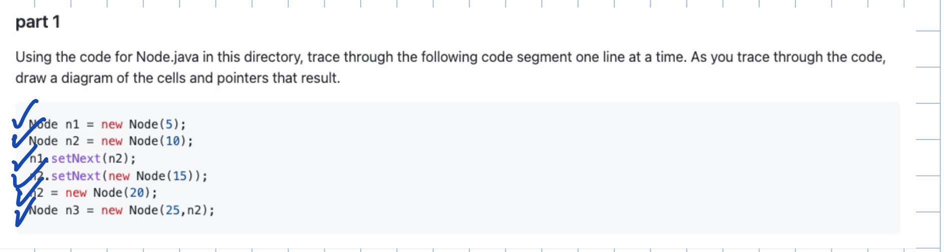


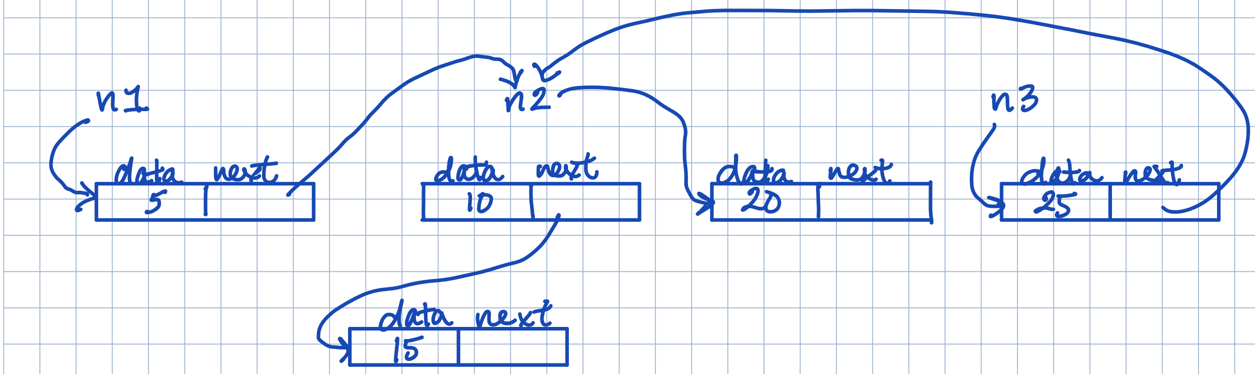
```
public class Node{
  private String data;
  private Node next;

  /* Constructors */
  public Node(){
  }

  public Node(String data){
    this.data = data;
    this.next = null;
  }
  public Node(String data, Node next){
    this.data = data;
    this.next = next;
  }

  public String getData(){
    return data;
  }
  public Node getNext(){
    return next;
  }

  public void setData(String data){
    this.data = data;
  }

  public void setNext(Node next){
    this.next = next;
  }

  public String toString(){
    return "" + data + "->";
  }
}
```



part 1

Using the code for Node.java in this directory, trace through the following code segment one line at a time. As you trace through the code, draw a diagram of the cells and pointers that result.

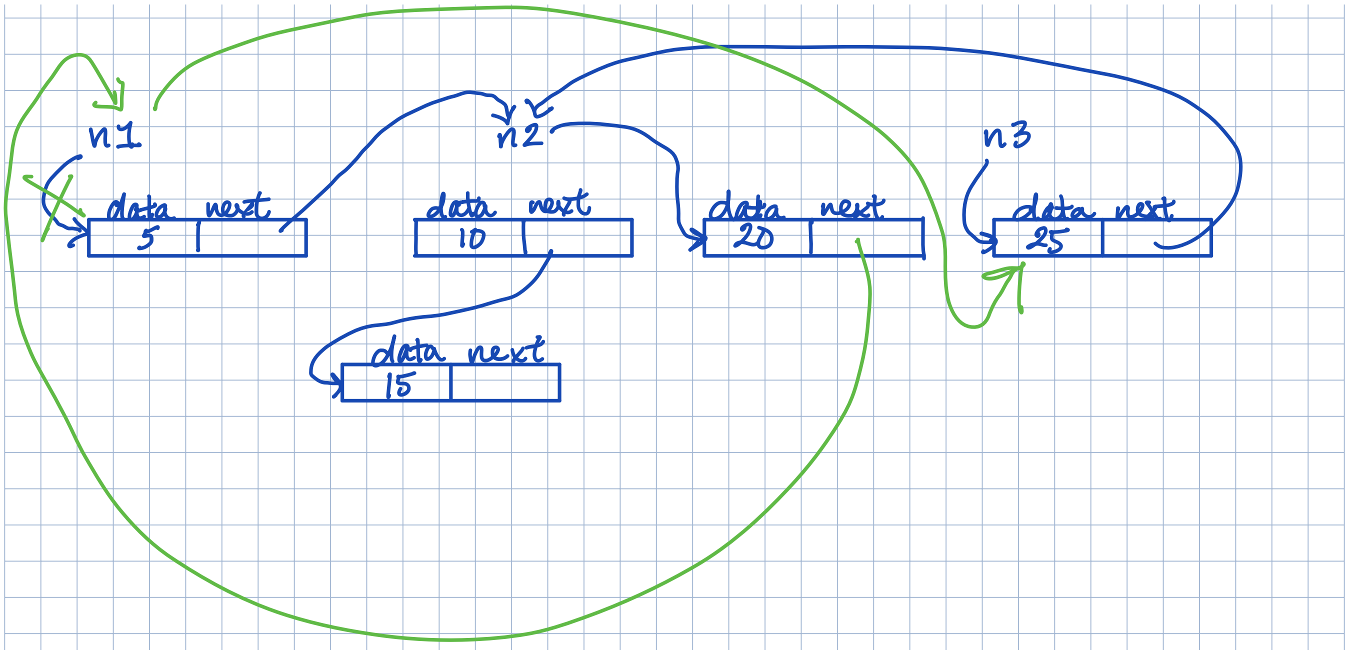
```
Node n1 = new Node(5);
Node n2 = new Node(10);
n1.setNext(n2);
n2.setNext(new Node(15));
n2 = new Node(20);
Node n3 = new Node(25,n2);
```

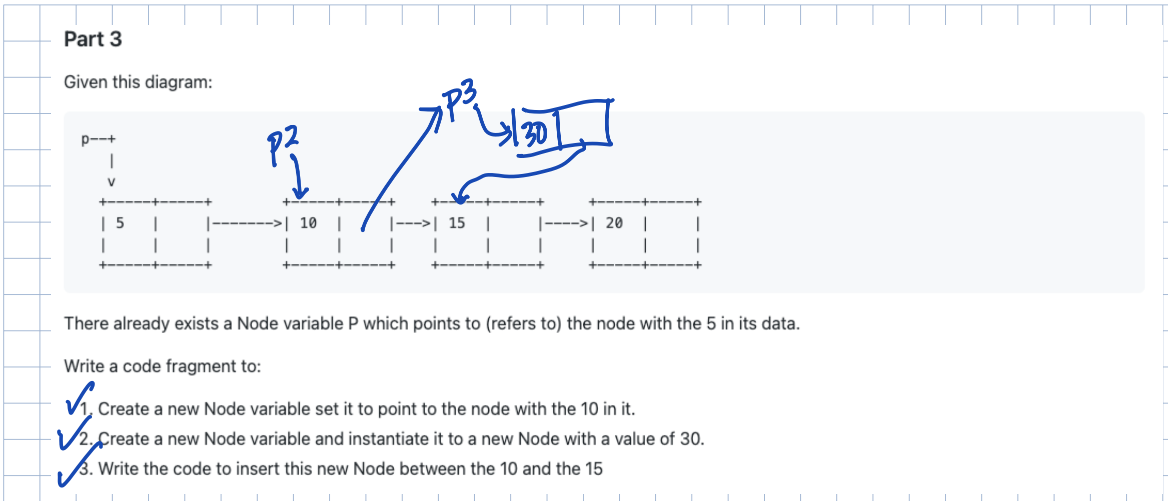


Part 2

Copy over your diagram from part 1 and continue to modify it by tracing through these lines of code:

```
n2.setNext(n1);
n1=n3;
```





Part 3

Given this diagram:

```
p--+
   |
   v
+-----+-----+        +-----+-----+      +-----+-----+      +-----+-----+
| 5   |     |------->| 10  |     |--->| 15  |     |----->| 20  |     |
|     |     |        |     |     |    |     |     |      |     |     |
+-----+-----+        +-----+-----+      +-----+-----+      +-----+-----+
```

There already exists a Node variable P which points to (refers to) the node with the 5 in its data.

Write a code fragment to:

✓ 1. Create a new Node variable set it to point to the node with the 10 in it.
✓ 2. Create a new Node variable and instantiate it to a new Node with a value of 30.
✓ 3. Write the code to insert this new Node between the 10 and the 15

```
Node p2 = p.getNext();

Node p3 = new Node(30);

p3.setNext(p2.getNext());
p2.setNext(p3);
```