

```

public int compareTo(NGram other) {
    if (this.data.equals(other.data)){
        return 0;
    }
    Iterator thisiterator = this.data.iterator();
    Iterator otheriterator = other.data.iterator();
    while (thisiterator.hasNext()){
        String nexti = thisiterator.next().toString();
        String nextx = otheriterator.next().toString();
        for (int i=0; i<nexti.length(); i++){
            if (nexti.charAt(i) > nextx.charAt(i)){
                return 1;
            }
            else if (nexti.charAt(i) < nextx.charAt(i)){
                return -1;
            }
        }
    }
    return -1;
}

@Override
public boolean equals(Object o) {
    if (! (o instanceof NGram)) {
        return false;
    }
    if (( (NGram)o).data.size() == this.data.size()) {
        Iterator thisiterator = this.data.iterator();
        Iterator otheriterator = ((NGram) o).data.iterator();
        while (thisiterator.hasNext() && otheriterator.hasNext()){
            if (! thisiterator.next().equals(otheriterator.next())){
                return false;
            }
        }
        return true;
    }
    return false;
}

@Override
public int hashCode() {
    int result = 0;
    for (String i : this.data) {
        result = result * 37;
        if (i != null) {
            result += i.hashCode();
        }
    }
    return result*37;
}

```