

DAY 36

INTERVIEW BIT PROBLEMS :

1. Largest Number

Given a list of non negative integers, arrange them such that they form the largest number.

For example:

Given [3, 30, 34, 5, 9], the largest formed number is 9534330.

Note: The result may be very large, so you need to return a string instead of an integer.

CODE :

PYTHON

```
from functools import cmp_to_key
class Solution:
    # @param A : tuple of integers
    # @return a strings
    def largestNumber(self, A):
        # Convert to string once, for proper comparison a+b vs b+a
        A = map(str, A)
        key = cmp_to_key(lambda a,b: 1 if a+b >= b+a else -1)
        res = ''.join(sorted(A, key= key, reverse=True))
        # Must left trim 0, apparently
        res = res.lstrip('0')
        return res if res else '0'
```

JAVA

```
public class Solution {
    public String largestNumber(final List<Integer> a) {
        List<String> out= new ArrayList<String>();
        for(Integer i : a){
            out.add(String.valueOf(i));
        }

        Collections.sort(out, new MyComparator());

        StringBuffer sb = new StringBuffer();
        for(String s : out){
            if("0".equals(s) && sb.length() != 0) {
                continue;
            }
            sb.append(s);
        }

        return sb.toString();
    }
}
```

```
    }  
}
```

```
class MyComparator implements Comparator<String>{  
    @Override  
    public int compare(String s1, String s2){  
        String first = s1 + s2;  
        String second = s2 + s1;  
        return second.compareTo(first);  
    }  
}
```