

#### 4 kyu Twice linear

Java:

```
import java.util.TreeSet;
class DoubleLinear {

    public static int dblLinear (int n) {
        TreeSet<Integer> treeSet = new TreeSet<>();
        treeSet.add(1);

        for (int i = 0; i < n; i++) {
            int x = treeSet.pollFirst();
            treeSet.add(2 * x + 1);
            treeSet.add(3 * x + 1);
        }
        return treeSet.pollFirst();
    }
}
```

#### 4 kyu 80's Kids #7: She's a Small Wonder

Java:

```
import java.util.HashSet;
public class Robot {
    private HashSet<String> knownWords = new HashSet<>();
    public String learnWord(String word){
        knownWords.add("thank");
        knownWords.add("you");
        knownWords.add("for");
        knownWords.add("teaching");
        knownWords.add("me");
        knownWords.add("i");
        knownWords.add("do");
        knownWords.add("not");
        knownWords.add("understand");
        knownWords.add("the");
        knownWords.add("input");
        knownWords.add("already");
        knownWords.add("know");
        knownWords.add("word");
        if (knownWords.contains(word.toLowerCase()))
            return "I already know the word "+word;

        else if (!(word.toLowerCase().matches("[a-zA-Z]+")))
            return "I do not understand the input";

        else knownWords.add(word.toLowerCase());
        return "Thank you for teaching me "+word;
    }
}
```

### 6 kyu Detect Pangram

Java:

```
import java.util.HashSet;

public class PangramChecker {

    public boolean check(String sentence){
        HashSet<Character> hashSet = new HashSet<Character>();
        String str = sentence.toLowerCase().replaceAll("[^a-z]", "");
        for(int i = 0; i<str.length(); i++){
            hashSet.add(str.charAt(i));
        }
        if(hashSet.size()==26){
            return true;
        }else{
            return false;
        }
    }
}
```

### 6 kyu Your order, please

Java:

```
import java.util.ArrayList;

public class Order {

    public static String order(String words) {
        String wordsInOrder = "";
        if(words.equals(" "))
            return " ";
        String splitWords[] = words.split(" ");
        for(int x = 1; x<=9; x++){
            for(int y = 0; y<splitWords.length; y++){
                if(splitWords[y].contains(String.valueOf(x)) && x != splitWords.length){
                    wordsInOrder+=splitWords[y]+ " ";
                }
                if(splitWords[y].contains(String.valueOf(x)) && x==splitWords.length){
                    wordsInOrder+=splitWords[y];
                }
            }
        }
        return wordsInOrder;
    }
}
```

### 6 kyu Which are in?

Java:

```
import java.util.HashSet;
import java.util.TreeSet;

public class WhichAreIn {

    public static String[] inArray(String[] array1, String[] array2) {
        TreeSet<String> substring = new TreeSet<>();
        for(int i = 0; i<array1.length; i++){
            for(int y = 0; y<array2.length; y++){
                if(array2[y].contains(array1[i])){
                    substring.add(array1[i]);
                }
            }
        }
        String subWords[] = new String[substring.size()];
        return substring.toArray(subWords);
    }
}
```