

## 牛客网-华为机试练习题 42

### 题目描述

Jessi初学英语，为了快速读出一串数字，编写程序将数字转换成英文：

如22: twenty two, 123: one hundred and twenty three。

说明：

数字为正整数，长度不超过九位，不考虑小数，转化结果为英文小写；

输出格式为twenty two；

非法数据请返回“error”；

关键字提示: and, billion, million, thousand, hundred。

方法原型: public static String parse(long num)

### 输入描述:

输入一个long型整数

### 输出描述:

输出相应的英文写法

示例1

输入

2356 输出

two thousand three hundred and fifty six

### 解决代码

```
import java.io.BufferedReader;
import java.io.IOException;
import java.io.InputStreamReader;
import java.util.HashMap;

public class Main {

    static HashMap<Integer, String> dict = new HashMap<>();
    static {
        dict.put(0, "zero");
        dict.put(1, "one");
        dict.put(2, "two");
        dict.put(3, "three");
        dict.put(4, "four");
```

```

dict.put(5, "five");
dict.put(6, "six");
dict.put(7, "seven");
dict.put(8, "eight");
dict.put(9, "nine");
dict.put(10, "ten");
dict.put(11, "eleven");
dict.put(12, "twelve");
dict.put(13, "thirteen");
dict.put(14, "fourteen");
dict.put(15, "fifteen");
dict.put(16, "sixteen");
dict.put(17, "seventeen");
dict.put(18, "eighteen");
dict.put(19, "nineteen");
}

public static void main(String[] args) throws IOException {
    BufferedReader br = new BufferedReader(new InputStreamReader(System.in));
    String str;

    while ((str = br.readLine()) != null) {
        if(str.length() > 0 && str.length() <= 9 && !str.contains(".")) {
            int num = Integer.valueOf(str);
            System.out.println(parse(num));
        }
    }
}

public static String parse(int num){//翻译数字为英文
    int len = String.valueOf(num).length();
    if(len == 1){
        return dict.get(num);
    }else if(len == 2){
        if(num <= 19) return dict.get(num);
        else if(num < 30){
            return num % 10 != 0 ? "twenty " + dict.get(num % 10): "twenty";
        }else if(num < 40){
            return num % 10 != 0 ? "thirty " + dict.get(num % 10): "thirty";
        }else if(num < 50){
            return num % 10 != 0 ? "forty " + dict.get(num % 10): "forty";
        }else if(num < 60){
            return num % 10 != 0 ? "fifty " + dict.get(num % 10): "fifty";
        }else if(num < 70){
            return num % 10 != 0 ? "sixty " + dict.get(num % 10): "sixty";
        }else if(num < 80){
            return num % 10 != 0 ? "seventy " + dict.get(num % 10): "seventy";
        }else if(num < 90){
            return num % 10 != 0 ? "eighty " + dict.get(num % 10): "eighty";
        }else if(num < 100){
            return num % 10 != 0 ? "ninety " + dict.get(num % 10): "ninety";
        }
    }else if(len == 3){//hundred
        String str = parse(num/100) + " hundred ";
        num -= num/100*100;
        if(num != 0) {
            str += "and " + parse(num);
        }
        return str.trim();
    }else if(len == 4 || len == 5 || len == 6){//thousand

```

```

String str = parse(num/1000) + " thousand ";
num -= num/1000*1000;
if(num != 0) {
    //if (num < 100) str += "and ";
    str += parse(num);
}
return str.trim();
}else if(len == 7 || len == 8 || len == 9){//million hundred thousand
String str = parse(num/1000000) + " million ";
num -= num/1000000*1000000;
if(num != 0){
    if (num < 100000) str += "and ";
    str+= parse(num);
}
return str.trim();
}
return "error";
}
}

```