

Integer to Roman

Given an integer, convert it to a roman numeral.

Input is guaranteed to be within the range from 1 to 3999.

Solution 1

```
public static String intToRoman(int num) {  
    String M[] = {"", "M", "MM", "MMM"};  
    String C[] = {"", "C", "CC", "CCC", "CD", "D", "DC", "DCC", "DCCC", "CM"}  
;  
    String X[] = {"", "X", "XX", "XXX", "XL", "L", "LX", "LXX", "LXXX", "XC"}  
;  
    String I[] = {"", "I", "II", "III", "IV", "V", "VI", "VII", "VIII", "IX"}  
;  
    return M[num/1000] + C[(num%1000)/100] + X[(num%100)/10] + I[num%10];  
}
```

written by [fabrizio3](#) original link [here](#)

Solution 2

Reference: <http://blog.csdn.net/beiyeqingting/article/details/8547565>

```
public class Solution { public String intToRoman(int num) {
```

```
    int[] values = {1000,900,500,400,100,90,50,40,10,9,5,4,1};  
    String[] strs = {"M","CM","D","CD","C","XC","L","XL","X","IX","V","IV","I"};
```

```
    StringBuilder sb = new StringBuilder();
```

```
    for(int i=0;i<values.length;i++) {  
        while(num >= values[i]) {  
            num -= values[i];  
            sb.append(strs[i]);  
        }  
    }
```

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

```
}
```

```
}
```

written by [Lucifer27](#) original link [here](#)

Solution 3

```
String[] romanPieces={"", "I", "II", "III", "IV", "V", "VI", "VII", "VIII", "IX",  
"", "X", "XX", "XXX", "XL", "L", "LX", "LXX", "LXXX", "XC",  
"", "C", "CC", "CCC", "CD", "D", "DC", "DCC", "DCCC", "CM",  
"", "M", "MM", "MMM", "MMMM"}; return  
romanPieces[num/1000+30]+romanPieces[(num/100)%10+20]  
+romanPieces[(num/10)%10+10]+romanPieces[num%10];
```

written by [bing10](#) original link [here](#)

From [LeetCoder](#).