

RomanNum

Write a C function romanNum() that takes in a string str as parameter that contains a Roman number, converts the Roman number into the corresponding decimal number and returns the decimal number to the calling function. Assume that the user will key in a Roman number between I (i.e. 1) and XXX (i.e. 30), and no error checking on user input is required. The decimal numbers for the Roman numbers from I to X are given as follows: I = 1, II = 2, III = 3, IV = 4, V = 5, VI = 6, VII = 7, VIII = 8, IX = 9 and X = 10.

A sample program template is given below:

```
#include <stdio.h>
#define TRUE 1
#define FALSE 0
int romanNum(char *str);
int main()
{
    int num;
    char roman[10];
    printf("Enter a Roman number: \n");
    scanf("%s", roman);
    num = romanNum(roman);
    printf("romanNum(): %d\n", num);
    return 0;
}
int romanNum(char *str)
{
    /* Write your code here */
}
```

Some test input and output sessions are given below:

(1) Test Case 1

```
Enter a Roman number:
III
romanNum(): 3
```

(2) Test Case 2

```
Enter a Roman number:
IX
romanNum(): 9
```

(3) Test Case 3

```
Enter a Roman number:
XXIV
romanNum(): 24
```

(4) Test Case 4

```
Enter a Roman number:
XXVI
romanNum(): 26
```

(5) Test Case 5

```
Enter a Roman number:
```

XXIX

romanNum(): 29

```
#include <stdio.h>
#define TRUE 1
#define FALSE 0
int romanNum(char *str);
int main()
{
    int num;
    char roman[10];
    printf("Enter a Roman number: \n");
    scanf("%s",roman);
    num = romanNum(roman);
    printf("romanNum(): %d\n", num);
    return 0;
}
int romanNum(char *str)
{
    int i = 0;
    int num = 0;

    while(str[i]!='\0')
    {
        if(str[i]=='X')
        {
            num = num +10;
            i++;
            continue;
        }
        else if(str[i]=='I')
        {
            if(str[i+1]=='V')
            {
                num = num +4;
                i=i+2;
                continue;
            }
            else if(str[i+1]=='X')
            {
                num = num +9;
                i=i+2;
                continue;
            }
            else
            {
                num = num +1;
                i++;
                continue;
            }
        }
        else if(str[i]=='V')
        {
            num = num + 5;
            i++;
            continue;
        }
    }
    return num;
}
```