

rCountEvenDigits

Write a **recursive** C function that counts the number of even digits in a specified positive number (bigger than 0), *num*. For example, if *num* is 105006, then the function will return 4; and if *num* is 1357, the function will return 0. Write the recursive function in two versions. The function **rCountEvenDigits1()** computes and returns the result. The function **rCountEvenDigits2()** passes the result through the pointer parameter, *result*. The function prototypes are given as follows:

```
int rCountEvenDigits1(int num);
void rCountEvenDigits2(int num, int *result);
```

A sample program template is given below to test the function:

```
#include <stdio.h>
int rCountEvenDigits1(int num);
void rCountEvenDigits2(int num, int *result);
int main()
{
    int number, result;

    printf("Enter the number: \n");
    scanf("%d", &number);
    printf("rCountEvenDigits1(): %d\n", rCountEvenDigits1(number));
    rCountEvenDigits2(number, &result);
    printf("rCountEvenDigits2(): %d\n", result);
    return 0;
}
int rCountEvenDigits1(int num)
{
    /* Write your code here */
}
void rCountEvenDigits2(int num, int *result)
{
    /* Write your code here */
}
```

Some sample input and output sessions are given below:

- (1) Test Case 1:
Enter the number:
105006
rCountEvenDigits1(): 4
rCountEvenDigits2(): 4
- (2) Test Case 2:
Enter the number:
23453
rCountEvenDigits1(): 2
rCountEvenDigits2(): 2
- (3) Test Case 3:
Enter the number:
135
rCountEvenDigits1(): 0
rCountEvenDigits2(): 0