

Frame
Number

#4 **main ()**

#3 **fact (3)**

#2 **fact (2)**

#1 **fact (1)**

#0 **fact (0)**

#-1

i = 3
f = ?

n = 3

n = 2

n = 1

n = 0

Red Zone

```
int fact( int n )  
{  
    if( 0 == n ) {  
        return 1;      ← PC  
    }  
    else {  
        return n * fact( n - 1 );  
    }  
}
```

```
main()  
{  
    int i;  
    for( i = 0 ; i < 10 ; i++ ) {  
        int f = fact( i );  
        printf( "%d! = %d\n", i, f );  
    }  
}
```

FP

SP

Direction of
stack growth

