

$$f(x) = \begin{cases} f(x+1) + x & \text{if } x < 5 \\ x^2 & \text{otherwise} \end{cases}$$

```

public class RecursionDemo
{
    public static void main (String[] args)
    {
        System.out.println (f(2));    // 34 is displayed
    }
    public static int f(int x)
    {
        if (x < 5)
            return f(x+1) + x;
        else
            return x * x;
    }
}

```

stack frame #1 x=2	$f(2) = f(2+1) + 2$ $= f(3) + 2$	
stack frame #2 x=3	$= f(3+1) + 3$ $= f(4) + 3$	+ 2
stack frame #3 x=4	$= f(4+1) + 4$ $= f(5) + 4$	+ 3 + 2
stack frame #4 x=5	$= 5 * 5 + 4$ $= 34$	+ 3 + 2