# 1- Task One

public static int fact(intnum) {

if (num == 0) // base case

return 1;

else // recursive case

return num \* fact(num – 1);

}

Trace fact(5);

Show how the execution works in detailed steps, tracing :

- Each time there is a call to function fact()

- And when the function returns how are the values affecting the final result.

# 2- Task Two

Write a recursive function that prints the numbers 1...n

in descending order (big value first):

- What would be the small change on the code to make it prints in ascending order?

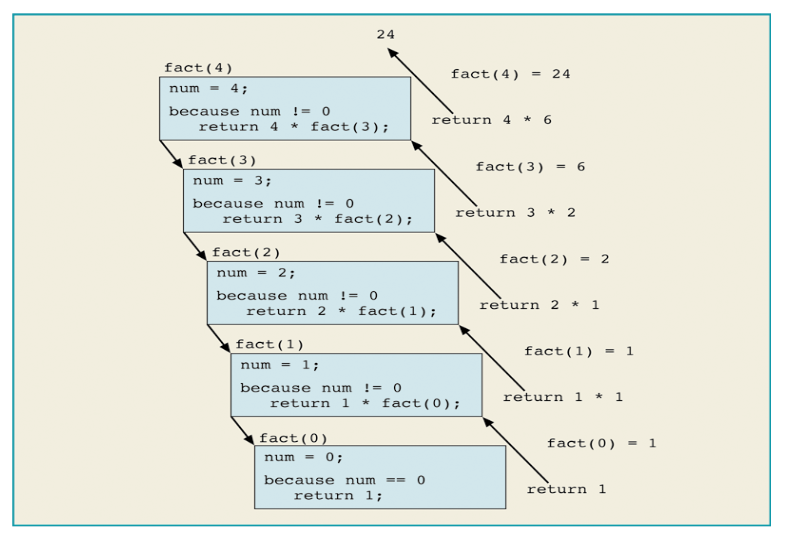
public void descending(int n)

# 3- Task three

Write a recursive function convert a decimal number into a binary number, printing the binary number

public static void decToBin(int num)

**Solutions:**



public void descending(int n) {

if (n <= 0)

return;

System.out.println(n); // switch lines to make it asc

descending(n-1); // …

}

public static void decToBin(int num)

{

if(num > 0)

{

decToBin(num / 2);

System.out.print(num % 2);

}

}