functions Practice

Problem : find factorial of n.

$$n! = n * (n-1) * (n-2) * --- 1$$

I/P : $n = 5$

O/P : $5! = 5*4*3*2*1 = 120$

Scanner - - - -

```
int fac = 1;
for (int i = n ; i >= 1 ; i--) {
    fac = fac * i;
}
sout (fac);
```

$fac = 1$

I^{st} iter^n $fac = fac * 5 = 1 * 5 = 5$

IInd iter^n $fac = fac * 4 = 5 * 4 = 20$

IIIrd iter^n $fac = fac * 3 = 20 * 3 = 60$

$\vdots$

```
int calcfac (int n) {
    int fac = 1;
    for (int i = n; i >= 1; i--) {
        fac = fac * i;
    }
    return fac;
}

psv main (...) {

    scanner -- --

    int ans = calcfac(n),
    sout(ans);
}
```