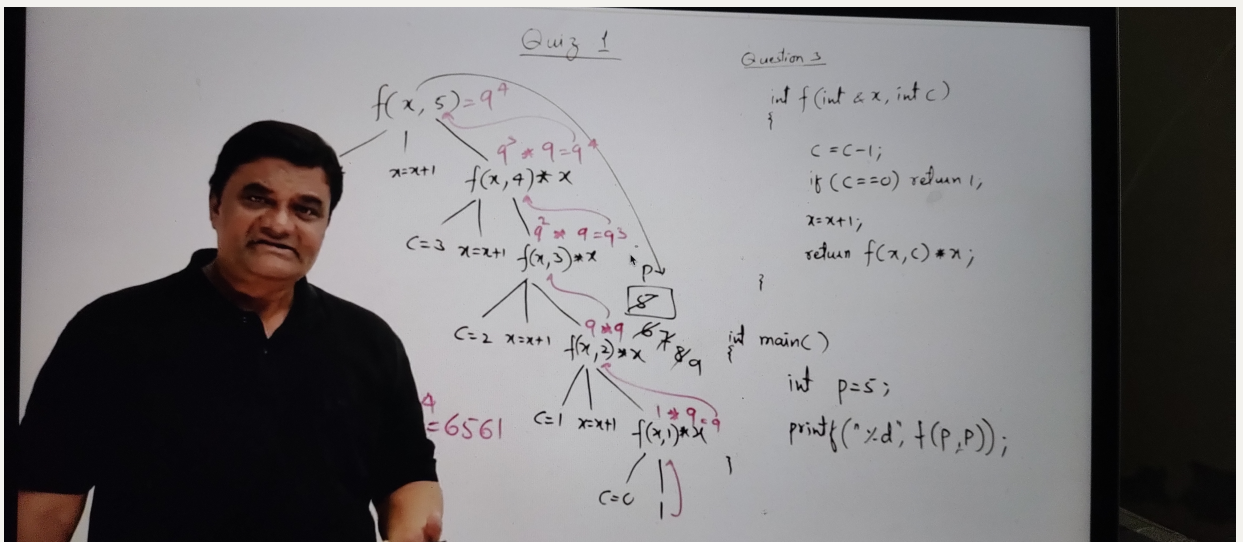# Recursion

- While tracing a recursion function that has a **reference parameter** in it's input then don't replace that with it's value instead keep it as that, let's say x and in the end (returning time) replace x with it's current value
  Eg:

```
int f (int &x, int c)
{
    c = c - 1;
    if (c = = 0) return 1;
    x = x + 1;
    return f(x,c) * x;
}


int p=5;
f(p,p);
```


- Tail recursions can easily be converted into iterative loops