Static and Global Variable in Recursion

- A stack is created as , for every call each time a new variable will be created inside the memory and it'll have its value this is also know as local variable of a function

Example:

```
int func (int n)
{

  Static int x =0;           // static variables in recursion

    if(n>0)
    {
        x++

        return fun(n-1)+ x ;
        }
    return 0;

}
main()
{
    int a = 5;
    printf("%d", fun(a));

}
```

- If static variables are inside recursive function don't show them in each tracing tree write them in global or outside variable and maintain a single copy of it

```
int x = 0;                 // global variable in recursion

int func (int n)
{
    if(n>0)
    {
        x++

        return fun(n-1)+ x ;
        }
    return 0;
```

```c
}
main()
{
    int a = 5;
    printf("%d", fun(a));

}
```