

```

int a=10, static int b=2;

printf(“a=%d, b=%d”,a,b);

a++;

b++;

}

```

Output:a= 10 b= 2

a=10 b= 3

Recursion

When function calls itself (inside function body) again and again then it is called as recursive function. In recursion calling function and called function are same. It is powerful technique of writing complicated algorithm in easiest way. According to recursion problem is defined in term of itself. Here statement with in body of the function calls the same function and same times it is called as circular definition. In other words recursion is the process of defining something in form of itself.

Syntax:

```

main ()
{
    rec(); /*function call*/
    rec();
    rec();
}

```

Ex:- /*calculate factorial of a no.using recursion*/

```

int fact(int);

void main()

```

```

    {
        int num;
        printf("enter a number");
        scanf("%d",&num);
        f=fact(num);
        printf("factorial is =%d\n",f);
    }
    fact (int num)
    {
        If (num==0||num==1)
return 1;
else
return(num*fact(num-1));
    }

```

Lecture Note: 18

Monolithic Programming

The program which contains a single function for the large program is called monolithic program. In monolithic program not divided the program, it is huge long pieces of code that jump back and forth doing all the tasks like single thread of execution, the program requires. Problem arise in monolithic program is that, when the program size increases it leads inconvenience and difficult to maintain