```
main().
{ int a[1000];
  scanf("%d", &n);
  length=1, a[0]=1;
  length=large_FACT(a,n);
  for(i=length-1;
      i>=0;i--)
  printf("%d", a[i]);
}
```

```
int large_FACT(int a[], int x)
{ a[0]=1; length=1;
  for(i=2; i<=x; i++)
  length=multiply_big_no(a, x, length)
  return(length);
}
```

```
int multiply_big_no(int a[], int k,
                    int l)
{ c=0
  for(i=0; i<l; i++)
  { mult = a[i]*k + c
    a[i] = mult%10;
    c = mult/10;
  }
  while(c>0)
  { a[l]=c%10;
    l++;
    c=c/10;
  }
  a[l]=c; l++; return(l);
}
```

length 1
a[0] = 1

5	6	7	2	1

× 15

5

3	7	5	2	4

c = 3 + 1

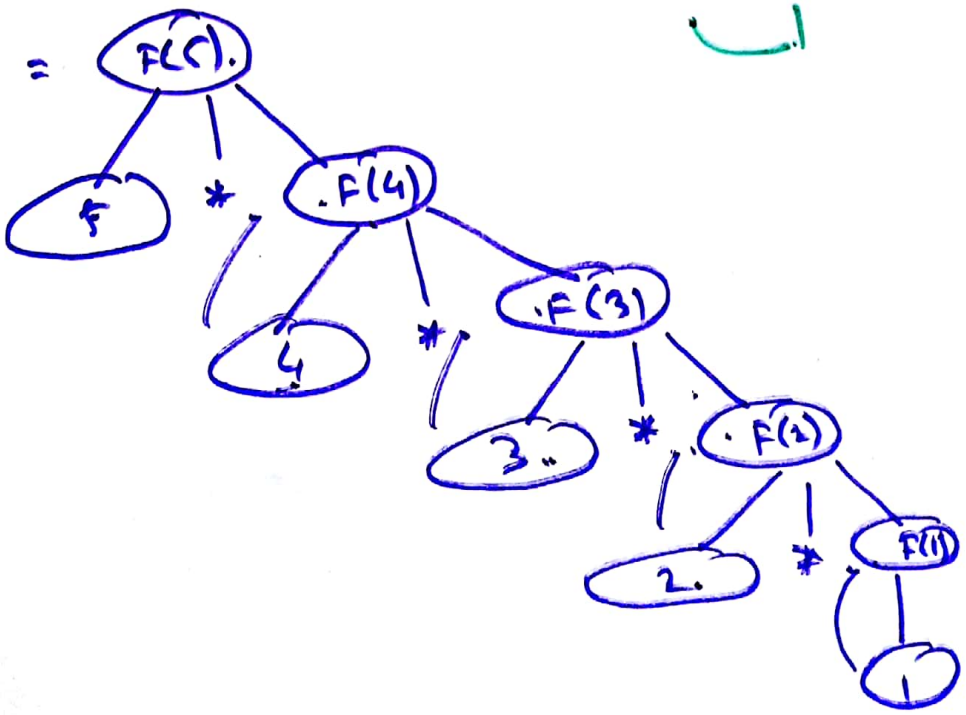
Function calls itself - Recursion

```
long int fact(int n)
{
  if (n==1)
    return 1;
  else
  {
    FACT = n * fact(n-1);
    return(FACT);
  }
}
```

n = 5

FACT = 5 * (FACT(n-1)) * 4 * (FACT 3) * (FACT 2) * 2 * (FACT(1))

120 =



No of people doing odd no. of handshakes in every.

```
Fib[0] = 1; fib[1] = 1;
for(i=2; i<n; i++)
    Fib[i] = Fib[i-1] + Fib[i-2];
```

```
Fib(n).
{ if((n==0) || (n==1)).
    Fib(n) = 1.
  Fib(n) = Fib(n-1) + fib(n-2).
}.
```

relevant