```
                n! = n * (n-1)!

                5! = 5 * ( 4 )!  --> 5 * 24

                4! = 4 * ( 3 )! --> 4 * 6

                3! = 3 * ( 2 )! --> 3 * 2

                2! = 2 *  ( 1 )! --> 2 * 1

                1! = 1 *  ( 0 )!  --> 1 * 1


                0! = 1  --> terminating condtion

                x^0 --> 1

                2^5 --> 2 * 2^4  --> 2 * 16

                2^4 --> 2 * 2^3  --> 2 * 8

                2^3 --> 2 * 2^2  --> 2 * 4

                2^2 --> 2 * 2^1  --> 2 * 2

                2^1 --> 2 * 2^0 --> 2 * 1


                1    1   2  3  5  8


120

            5
int myfact( int num)
{
        int result;

        if(num==0) // terminating condition
            return 1;
        else
            result = num * myfact(num-1);
                 5  * myfact(4) --> 5 * 24

    return result; //120


}


            4
int myfact( int num)
{
        int result;

        if(num==0) // terminating condition
```

```
            return 1;
        else
            result = num * myfact(num-1);
                 4  * myfact(3)  --> 4 * 6

    return result; //24


}

            3
int myfact( int num)
{
        int result;

        if(num==0) // terminating condition
            return 1;
        else
            result = num * myfact(num-1);
                 3  * myfact(2) --> 3 * 2

    return result; // 6


}


            2
int myfact( int num)
{
        int result;

        if(num==0) // terminating condition
            return 1;
        else
            result = num * myfact(num-1);
                 2  * myfact(1)  --> 2 * 1

    return result;  // 2


}


            1
int myfact( int num)
{
        int result;

        if(num==0) // terminating condition
            return 1;
        else
            result = num * myfact(num-1);
                 1  * myfact(0)  --> 1 * 1

    return result;  // 1


}
```

```
int myfact( int num)
{
        int result;

        if(num==0) // terminating condition
            return 1;
        else
            result = num * myfact(num-1);


    return result;


}
```

main