## Aim:

Write a program to find the power of a given number using recursion process.

At the time of execution, the program should print the message on the console as:

```
Enter a number :
```

For example, if the user gives the **input** as:

```
Enter a number : 5
```

Next, the program should print the message on the console as:

```
Enter power :
```

For example, if the user gives the **input** as:

```
Enter power : 4
```

then the program should **print** the result as:

```
5 to the power of 4 is : 625
```

**Note:** Write the recursive function **power()** in `Program905a.c`.

## Source Code:

`Program905.c`

```c
#include <stdio.h>
#include "Program905a.c"
void main() {
    int m, n;
    printf("Enter a number : ");
    scanf("%d", &m);
    printf("Enter power : ");
    scanf("%d", &n);
    printf("%d to the power of %d is : %d\n", m, n, power(m, n));
}
```

`Program905a.c`

```c
int power(int x,int y);
int power(int x,int y)
{
    if(y==0)
    return 1;
    else
    return(x*power(x,y-1));
}
```

## Execution Results - All test cases have succeeded!

| Test Case - 1 |
|---|
| User Output |
| Enter a number : 3 |
| Enter power : 4 |
| 3 to the power of 4 is : 81 |

| Test Case - 2 |
|---|
| User Output |
| Enter a number : 4 |
| Enter power : 3 |
| 4 to the power of 3 is : 64 |