

5. Write a C program to find Factorial of a given number using Recursion

```
#include <stdio.h>
```

```
unsigned long long factorial(int n) {
```

```
    if (n == 0 || n == 1) {
```

```
        return 1;
```

```
    } else {
```

```
        return n * factorial(n - 1);
```

```
    }
```

```
}
```

```
int main() {
```

```
    int num;
```

```
    unsigned long long result;
```

```
    printf("Enter a positive integer: ");
```

```
    scanf("%d", &num);
```

```
    if (num < 0) {
```

```
        printf("Factorial of a negative number doesn't exist.\n");
```

```
    } else {
```

```
        result = factorial(num);
```

```
        printf("Factorial of %d = %llu\n", num, result);
```

```
    }
```

```
    return 0;
```

```
}
```

main.c	Output
<pre>1 #include &lt;stdio.h&gt; 2 unsigned long long factorial(int n) { 3     if (n == 0    n == 1) { 4         return 1; 5     } else { 6         return n * factorial(n - 1); 7     } 8 } 9 int main() { 10    int num; 11    unsigned long long result; 12    printf("Enter a positive integer: "); 13    scanf("%d", &amp;num); 14    if (num &lt; 0) { 15        printf("Factorial of a negative number doesn't exist.\n"); 16    } else { 17        result = factorial(num); 18        printf("Factorial of %d = %llu\n", num, result); 19    } 20    return 0; 21 } 22</pre>	<pre>Enter a positive integer: 5 Factorial of 5 = 120  === Code Execution Successful ===</pre>