



SIMATS
ENGINEERING



SIMATS
Saveetha Institute of Medical And Technical Sciences
(Declared as Deemed to be University under Section 3 of UGC Act 1956)

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COURSE NAME : DATA STRUCTURES FOR MODERN COMPUTING SYSTEMS

COURSE CODE : CSA0302

7. WRITE A C PROGRAM TO PERFORM FACTORIAL WITH RECURSIVE FUNCTION

C PROGRAMMING CODE:

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

```
int fact(int n) {  
    if (n == 0) return 1;  
    return n * fact(n - 1);  
}
```

```
int main() {  
    int n;  
    printf("Enter a number: ");  
    scanf("%d", &n);  
    printf("Factorial = %d", fact(n));  
    return 0;  
}
```

OUTPUT:

main.c	   Share	Run	Output
<pre>1 #include <stdio.h> 2 int fact(int n) { 3 if(n==0 n==1) return 1; 4 else return n * fact(n-1); 5 } 6 int main() { 7 int n; 8 printf("Enter a number: "); 9 scanf("%d",&n); 10 printf("Factorial of %d = %d\n", n, fact(n)); 11 return 0; 12 } 13</pre>			<p>Enter a number: 10 Factorial of 10 = 3628800</p> <p>=== Code Execution Successful ===</p>