

CSA0396-DATA STRUCTURES

3.WRITE A C PROGRAM TO FIND FACTORIAL OF A GIVEN NUMBER WITHOUT USING RECURSION.

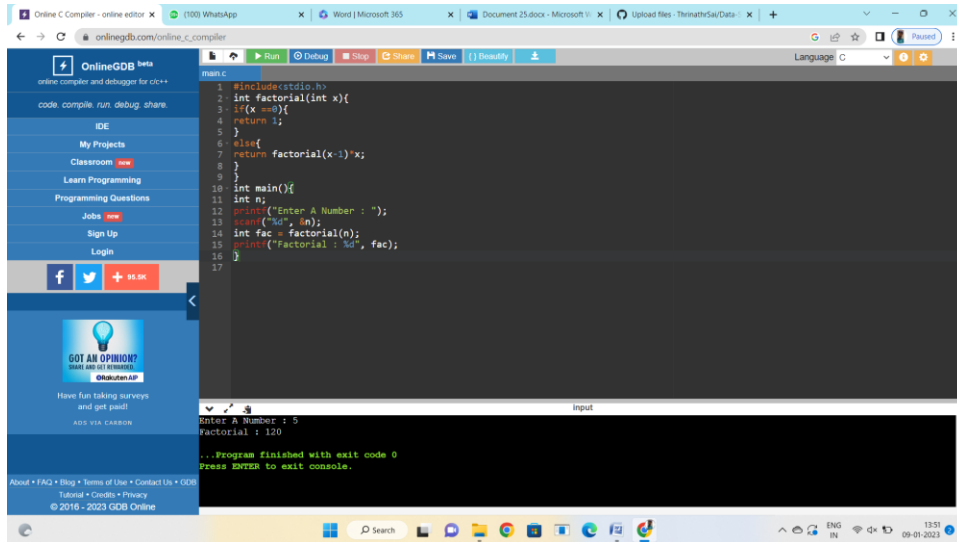
CODE:

```
#include<stdio.h>

int factorial(int x){
    if(x ==0){
        return 1;
    }
    else{
        return factorial(x-1)*x;
    }
}

int main(){
    int n;
    printf("Enter A Number : ");
    scanf("%d", &n);
    int fac = factorial(n);
    printf("Factorial : %d", fac);
}
```

OUTPUT:



The screenshot displays the OnlineGDB web interface. On the left is a navigation menu with links like 'My Projects', 'Classroom', and 'Learn Programming'. The main area shows a C program for calculating a factorial. The code is as follows:

```
1 #include<stdio.h>
2 int factorial(int x){
3     if(x==0){
4         return 1;
5     }
6     else{
7         return factorial(x-1)*x;
8     }
9 }
10 int main(){
11     int n;
12     printf("Enter A Number : ");
13     scanf("%d", &n);
14     int fac = factorial(n);
15     printf("Factorial : %d", fac);
16 }
17
```

Below the code editor, the 'Input' section shows the user entered '5'. The 'Output' section displays the result: 'Factorial : 120'. At the bottom, a message states: '...Program finished with exit code 0. Press ENTER to exit console.'