

DATA STRUCTURES-CSA0396

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

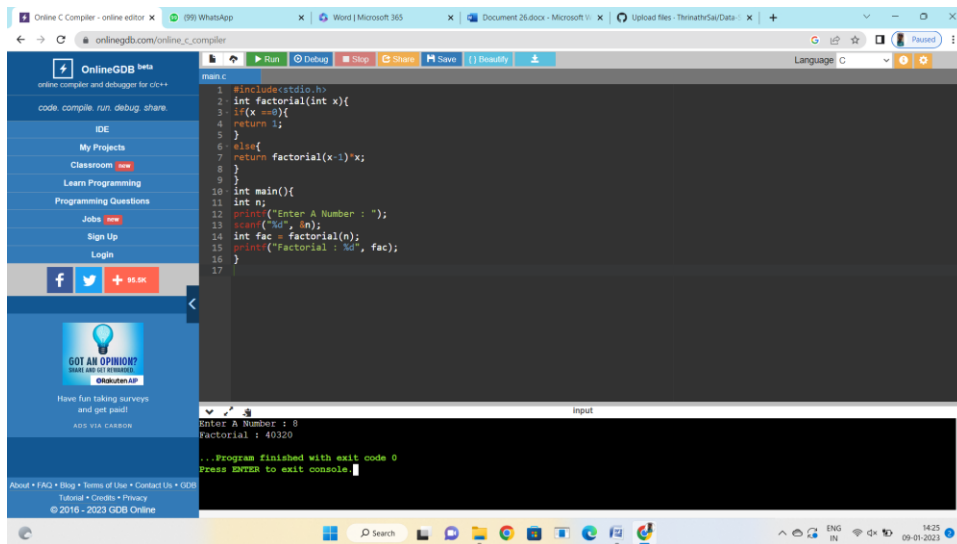
CODING:

```
#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. The left sidebar contains navigation links: OnlineGDB beta, online compiler and debugger for c/c++, code, compile, run, debug, share, IDE, My Projects, Classroom, Learn Programming, Programming Questions, Jobs, Sign Up, and Login. Below these are social media icons for Facebook, Twitter, and a button for '+85,000'. A section titled 'GOT AN OPINION?' with a lightbulb icon asks 'WHAT DO YOU THINK?' and includes a 'Share your idea' button. At the bottom of the sidebar are links for About, FAQ, Blog, Terms of Use, Contact Us, and GDB, along with a copyright notice '© 2016 - 2023 GDB Online'.

The main editor area shows a C program named 'main.c' with the following code:

```
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
11 int main(){
12     int n;
13     printf("Enter A Number : ");
14     scanf("%d", &n);
15     int fac = factorial(n);
16     printf("Factorial : %d", fac);
17 }
```

Below the code editor is an 'Input' section with the text 'Enter A Number : 8' and 'Factorial : 40320'. The output section shows the message '...Program finished with exit code 0' and 'Press ENTER to exit console'.