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## Assignment 2

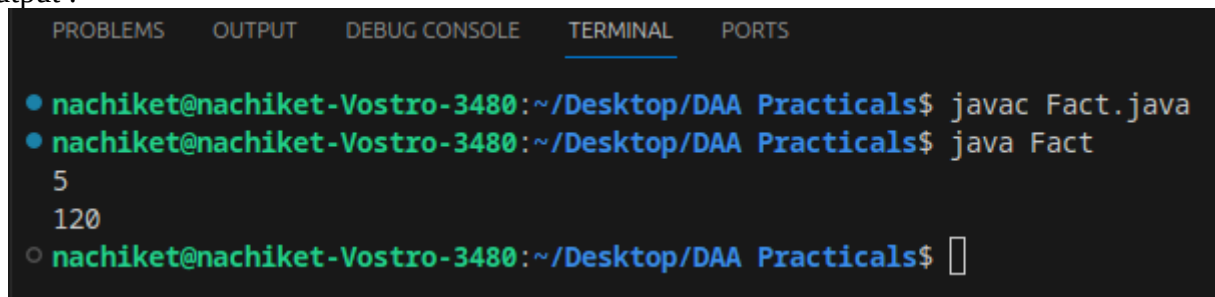
### Analysis of Algorithms and Complexity Theory

c. Analysis of iterative and recursive algorithm

Java Code for calculating factorial using recursion:

```
import java.util.*;
public class Fact{
    public static void main(String args[]){
        Scanner sc = new Scanner(System.in);
        int number = sc.nextInt();
        int ans = fact(number);
        System.out.println(ans);
    }
    static int fact(int n )
    {
        if(n<=1){
            return 1;
        }
        else{
            return n*fact(n-1);
        }
    }
}
```

Output :



```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS
● nachiket@nachiket-Vostro-3480:~/Desktop/DAA Practicals$ javac Fact.java
● nachiket@nachiket-Vostro-3480:~/Desktop/DAA Practicals$ java Fact
5
120
○ nachiket@nachiket-Vostro-3480:~/Desktop/DAA Practicals$
```