**LAB 1**

**Nauman Liaqat**

**BSCS5C**

**REG # 132045**

**Advanced Programming**

**Introduction:**

This lab is about the complexity comparison between the two methods of square matrix multiplication i.e.

🡺Iterative method.

🡺Strassen’s method.

**Matrix Population:**

Matrix population is the constantly declared variable which can be changed by changing only the value of that variable size.

**Approach:**

We have used C++ language for the implementation of both the methods.

**Iterative method:**

In iterative method we have randomly generated values for two matrices and then multiplied both the matrices using loops and then its complexity is found from loops as there are three loops in multiplication so its complexity is O(n^3).

**Strassen’s method:**

In this method there are seven predefined formulas in the algorithm which calculates the matrix multiplication with the complexity of O(n^2.8).

**Repository Link:** https://github.com/NaumanLiaqat/lab01