**Lab 1**

**Advanced Programming**

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**133127**

**BSCS-5A**

**Submitted to**

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**Introduction**

In this lab we were given the task of building a Matrix Computer that could carry out the some matrix operations by taking an equation from the user. The operations required were;

i. Matrix Sum

ii. Matrix Difference

iii. Matrix Multiplication

iv. Scalar Multiplication

v. Matrix Transpose

vi. Matrix Inverse

**Approach and Design**

I took the pure Object Oriented approach to solve the problem at hand using the following classes;

1. **Matrix.java**To contain all the attributes and behaviors of the Matrix Object.
2. **MainScreen.java**For making a user interface and instantiation and application of Matrix objects.

**Execution**

The program can be executed by the execution of MainScreen.java class in any IDE.

**Analysis**

Due to loss of time in the Lab due to continuous power outage I was unable to debug and successfully execute the functionality of my task due to unable to catch a wrong flow of execution.   
  
I have although completed some very important functionalities:

* All Operations ( Addition, Multiplication etc.)
* Tokenization
* User Involvement

I will also add unit tests to prove my point regarding the functionality of Operations that were the FUNCTIONAL REQUIREMENTS of this current Lab Task on the GitHub repository through the weekend.

I have also uploaded the Lab on GitHub on the Link: https://github.com/hamza7292/Matrix\_Computer1

**Thank You!**