

**Computer Organization and Assembly Language Project Proposal**

**Project Title:** Stander Calculator

**Group Members:**

Amir Hamza Khan P19-0059

Muhammad Istafa Malik P19-0033

Rana Rehan Qaisar P19-0077

**Section:** BS (CS) 3A

**Project Summary:**

The code that we have written, performs almost all the functionalities of a simple calculator. As a calculator is a user-driven machine, so is this code.

Due to the reason that Assembly Code doesn’t allow the user to assign values to the variables in run-time, we had to hard code the values to the variables but this doesn’t mean that assigning values to variables is complicated in-fact it is incredibly easy as we will demonstrate in our presentation.

An essential part of the code is the **codeDriver.** The value of this variable determines which mathematical operation will be performed. The code automatically checks the value of **codeDriver** by using the concept of If-Else-If conditions and whenever it meets its desired condition, it immediately calls the appropriate subroutine.

We also made a variable total, after any mathematical operation the result will always be stored in total.

**Functionalities of Project:**

As the value of the **codeDriver** determines which mathematical operation needs to be performed, the user needs to assign a value to the codeDriver before running the code on DosBox.

* For Sum, set codeDriver to 0.
* For Subtraction, set codeDriver to 1.
* For Product, set codeDriver to 2.
* For Modulus, set codeDriver to 3.
* For Power, set codeDriver to 4.
* For Average, set codeDriver to 5.
* For Percentage out of 100, set codeDriver to 6.
* For Quick multiplication by 2, set codeDriver to 7.