**Problem Statement:**

A calculator's goal is to do accurate and efficient computations. It is obvious that, to the greatest extent feasible, a calculator should relieve the user of the need to do mental operations and rely on paper. It permits us to dedicate more time to studying the problem by breaking it down into simpler tasks. Moreover, they are liberated from tedious computations and the same tedious everyday practice.

**Specifications of proposed System:**

It is specified to perform basic arithmetic operations such as add, subtract, multiply and divide. It is designed to digitalize the basic operators used in everyday life in order to make our work efficient and accurate. It has paced up the daily calculations.

**Constraints:**

**Project Deadlines:**

|  |  |
| --- | --- |
| **TASK** | **DEADLINE** |
| Project Proposal | 5/10/2022 |
| Project | 5/31/2022 |

**Project Budget:**

|  |  |
| --- | --- |
| **Components** | **Price in Rupees** |
| Pic16f877 Microcontroller | 950 |
| 16×2 lcd | 349 |
| 4×4 keypad | 140 |
| Crystal 20 MHz | 75 |
| Potentiometer/variable resistor | 120 |
| Bread board or PCB for Circuit Designing | 60 |
| Battery | 180 |

**Number of People:**

A group of three people collaborated in doing this task, the members are as follow:

Aqsa Ayaz (2019-CE-07)

Amna Jamshaid (2019-CE-09)

Esha Sajid (2019-CE-19)

**Technical Knowledge:**

A calculator is a device that performs numerical arithmetic operations. The calculators can perform addition, subtraction, multiplication, and division. Exponential operations, roots, logarithms, trigonometric functions, and hyperbolic functions can all be handled by more advanced calculators. This technology enables us to address complex issues fast and efficiently. Furthermore, it can simplify the situation and allow us to dedicate more time to comprehending the problem. Second, they are liberated from tedious computations and the same tedious everyday practice.

**Software Tools:**

The following software tools are utilized in programing PIC16F877A:

* PIC C Compiler
* MPLAB
* C++ Language