**DOCUMENTATION**

**Scientific Calculator**

**105110**

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# INTRODUCTION

A scientific calculator is a type of electronic calculator, usually but not always handheld, designed to calculate problems in science, engineering, and mathematics. They have completely replaced slide rules in traditional applications, and are widely used in both education and professional settings.

Scientific calculators are used widely in situations that require quick access to certain mathematical functions, especially those that were once looked up in mathematical tables, such as trigonometric functions or logarithms. They are also used for calculations of very large or very small numbers, as in some aspects of astronomy, physics, and chemistry.

They are very often required for math classes from the junior high school level through college, and are generally either permitted or required on many standardized tests covering math and science subjects; as a result, many are sold into educational markets to cover this demand, and some high-end models include features making it easier to translate a problem on a textbook page into calculator input, e.g. by providing a method to enter an entire problem in as it is written on the page using simple formatting tools.

The HP-35, introduced on February 1, 1972, was Hewlett-Packard's first pocket calculator and the world's first handheld scientific calculator

# BASIC FUNCTIONS

Addition:

The addition (sum function) is used by clicking on the “+” button or using the keyboard. Function results in a+b.

Subtraction:

The subtraction (minus function) is used by clicking on the “-” button or using the keyboard. Function results in a-b.

Multiplication:

The multiplication (times function) is used by clicking on the “\*” button or using the keyboard. Function results in a\*b.

## Division:

The division (divide function) is used by clicking on the “/” button or using the keyboard. Function results in a/b.

Sign:

The sign key (negative key) is used by clicking on the “(-)” button or using the keyboard. Function results in -1\*x.

## Square:

The square function is used by clicking on the “x^2” button or using the keyboard. Function results in x\*x.

## Square root:

The square root function is used by clicking on the “x” button or type “sqrt()” using the keyboard. Function results in x^0.5.

## Raise to the power:

The raise to the power (y raise to the power x function) is used by clicking on the “y^x” button or type “^”.

## Natural Exponent:

The natural exponent (e raised to x) is used by clicking on the “e^x” button or type “exp()”. Function results in e (2.71828….) raised to x.

## Logarithm:

The logarithm (LOG function) is used by clicking on the “LOG” button or type “LOG()”.

## Natural Logarithm:

The Natural Logarithm (LN function) is used by clicking on the “LN” button or type “LN()”.

## Inverse:

The multiplicative inverse (reciprocal function) is used by clicking on the “1/x” button or typing inv().

## Factorial:

The Factorial function is used by clicking on the “!” button or type “!”.

\*\*More functions will be added in the future.

# PROPOSED SYSTEM

## Problem Statement:

To design a module:

* Which is user friendly.
* Which will help user in viewing data and privileges.
* Which will help administrator to handle all the changes.

## Functions to be provided:

The system will be user friendly and menu driven so that user shall have no problem is using all the options.

* The system will be efficient and fast in response.
* The system will be customized according to the needs.

## System Requirements:

* Operating System: Windows 7 or above.
* Language: C Language.