



# **Unit Converter Program in C**

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## **Introduction**

The aim of this project is to create an efficient unit converter program in the C programming language. The motivation behind selection of this project is to provide a tool that allows the users to counter complexity and easily convert between various units in different measurement categories.

## **Motivation**

The need for a unit converter arises due to the diversity of measurement units. In the modern world, unit conversion is a common requirement in many fields, from engineering and physics to everyday tasks. Especially, students find tackling with various units a hard task. Manually converting between units can be time-consuming and error-prone, especially when dealing with complex conversions. This project was selected to address the need for a flexible and user-friendly unit converter.

## **Project Specification**

The project involves the development of a console-based unit converter program in C. The program supports conversion across multiple categories, including length, mass, time, temperature, area, volume, speed, acceleration, force, angle, and frequency.

## **Target Audience**

The audience for its use is widely stretched from the students and teachers in schools to the workers/engineers working in any developmental/engineering department.

## **Problem Analysis**

## **Solution Design**

- **Project Detail**

The project consists of a modular design with separate functions for each unit category. The user interacts with the program by selecting a category, then choosing the unit user wants to convert and then entering the values to be converted.

## **Functionality and Features**

- Menu-based user interface for selecting unit categories.
- Specific functions for each unit category with input validation.
- Seamless navigation between different unit conversions.
- User-friendly prompts and outputs for enhanced usability.