**TRINITY INTERNATIONAL SS & COLLEGE**

**Dillibazar Height, Kathmandu, Nepal**

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**LAB WORK # 1: C-Programming**

**(COMPUTER SCIENCE)**

**SUBMITTED BY: SUBMITTED TO:**

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**GRADE: XI (MC1)**

**DATE : [2079/10/06] PRAVEEN KOIRALA**

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**2. Objective**

The main objectives of the lab work are as follows:

1. To understand the anatomy of a C program.
2. To design a program with algorithms and flowchart.
3. To understand preprocessor directive and header files.
4. To get familiar with different data types.
5. To understand the compilation process.
6. To apply arithmetic and logical operators.

**3. Theoretical Background**

Background of C: C is a general-purpose computer programming language. It was created in the 1970s by Dennis Ritchie, and remains very widely used and influential. By design, C's features cleanly reflect the capabilities of the targeted CPUs.

Algorithm: A process or set of rules to be followed in calculations or other problem-solving operations, especially by a computer.

Flowchart: A graphical representation of a computer program in relation to its sequence of functions.

Preprocessor directives of C: Preprocessor directives are lines of the source file where the first non-whitespace character is #, which distinguishes them from other lines of text.

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Header files in C: A header file is a file with extension . h which contains C function declarations and macro definitions to be shared between several source files.

Datatypes: A data type, in programming, is a classification that specifies which type of value a variable has and what type of mathematical, relational or logical operations can be applied to it without causing an error. For e.g. char, int, float, double, etc.

Compilation process in C: Compilation process in C involves four steps: pre-processing, compiling, assembling, and linking.

Operators in C: An operator is a character that represents a specific mathematical or logical action or process. For e.g. Arithmetic Operators (+, -, =), Logical Operators (==, !=, <=, >=), etc.

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| --- | --- |
| Algorithm | Flowchart |
| Source Code | |