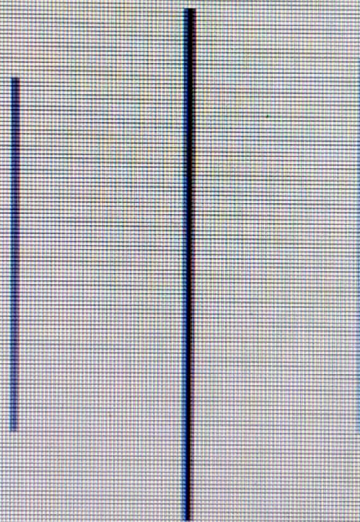


**INSTITUTE OF ENGINEERING
ADVANCED COLLEGE OF ENGINEERING
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KUPONDOLE, LATTIPUR
(AFFILIATED TO TRIBHUVAN UNIVERSITY)**



LAB REPORT

LAB NO.: 5

SUBJECT: C PROGRAMMING

SUBMITTED BY:

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DATE: 2078/03/**

SUBMITTED TO:

**DEPARTMENT OF
COMPUTER &
ELECTRONICS**

TITLE :- User Defined function & recursive function objective

Objective :- To learn about user defined function & recursive function.

Theory:-

(i) User defined function

A function is a block of code that perform on specific task & allows you to define function according to your need. These function are known as defined ~~a user~~ ~~for~~ user defined function. In order to make use of defined function, we need to these element related to function.

1. function definition
2. function call
3. function declaration.

1. function definition

It contains of block of code to perform a specific task. syntax of function definition return type function name (type 1 argument 1, type 2 argument 1...)

```
{
    body of function
}
```

When a function is called the contract of the program is translated to the function definition & the compiler starts executing the codes inside the body of a function.

2. function call.

→ A function can be called by simply using that function name. followed by the list of actual parameter & argument. IF any enclosed in parenthesis when the compiler encounters a function call, the control is transferred to the function. This function is then executed by line as described and a value is returned when a return statement is encountered.

Syntax of function call

function name (argument 1, argument 2, - -)

3. function proto type (define declaration).

→ A function prototype is simply the declaration of function that specifies function name, parameter & return type. It does not contain function body. A function prototype gives information to the compiler that the function may later be used in the program.

Syntax

function name (type 1, argument 1, type 2 argument 2 - -)

ii) Recursion function. (Recursive function).

It is the process of repeating item in a similar way. In programming language if a program allows you to call a function inside the same function, then it is called recursive call of the function.

While using recursive function, programmers need to be careful to define an exit condition from the function, otherwise it will go on infinite loop.