EXPERIMENT : 01

Display Basic Text Messages

AIM : Write a C program to print simple strings like "**hello world**" and "**welcome to C programming**"

LEARNING OBJECTIVE :

- To develop the ability to write and execute a simple C program using basic syntax and structure.
- To demonstrate understanding of the main() function and its role in program execution.
- To practice displaying output using standard C library functions such as printf().
- To identify and include appropriate header files (stdio.h, conio.h) for input/output operations.
- To gain familiarity with the process of writing, saving, compiling, and running a C program in a compiler.

TOOLS :

Sr. No.	Name Of Resources	Specification	Quantity	Remarks
1.	Hardware	Computer (I3-I5) Ram (Min 2gb)	1	For All Practical
2.	Software	Turbo C/C++	1	For All Practical

THEORY :

In the C programming language, input and output operations are handled using specific library functions provided in the header file <stdio.h> (Standard Input/Output).

A. Output Functions (printf())

The printf() function is used to display text or variable values on the screen.

It allows formatted output using format specifiers such as %d, %f, %c, %s, etc.

Syntax:

printf("format string", variables);

Example:

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```
#include <stdio.h>
int main() {
    printf("Hello, World!\n");
    printf("Welcome to C Programming.\n");
return 0;
}
```

B. Input Functions (scanf())

The scanf() function is used to read formatted input from the user through the keyboard.

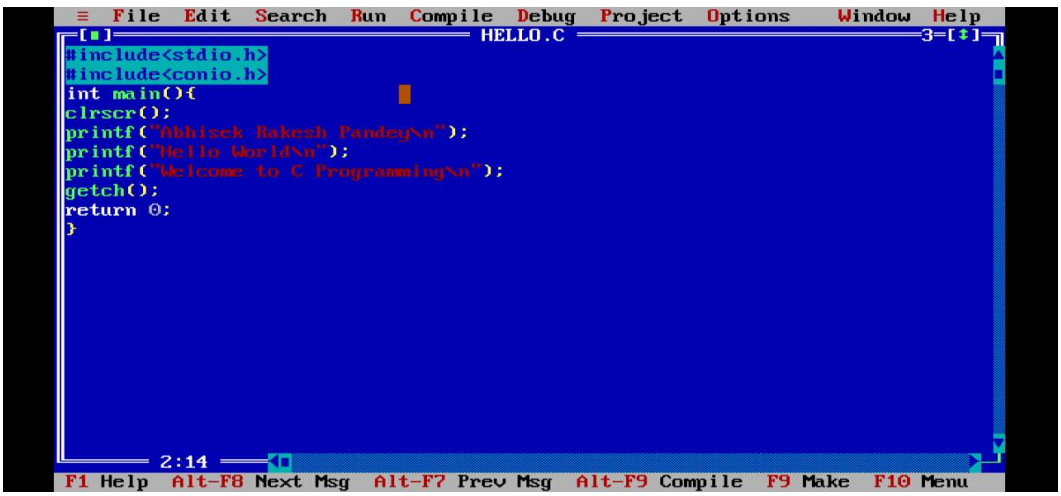
It requires the use of the address operator & before variable names to store input values.
Syntax:
scanf("format string", &variables);
Example:

```
#include <stdio.h>
int main() {
    int num;
    printf("Enter a number: ");
    scanf("%d", &num);
    printf("You entered: %d\n", num);
    return 0;
}
```

ALGORITHM:

Step 1: start.
Step 2: use printf() function to print ”Hello World, Welcome to c programing”.
Step 3: use printf() to display
Step 4: stop

Source Code:



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Output:

Result and Discussion:

The program was compiled and executed without errors, and the expected message was displayed on the screen. This verified that the structure and syntax of the C program were correct. Minor mistakes, such as missing semicolons or brackets, were corrected during the coding process. Running and troubleshooting the code improved understanding of how a basic C program works and built confidence in simple debugging techniques.

Learning Outcomes:

- Understood the basic structure and components of a C program.
- Practiced using the printf statement to display output.
- Identified and corrected common syntax errors during coding.
- Gained confidence in compiling, running, and debugging simple C programs.

Course Outcomes:

- Understand the basic structure and execution process of a C program.
- Gain ability to use input and output functions to handle simple tasks.
- Learn the purpose of key program elements like header files, variables, and return statements.
- Build confidence in writing, compiling, and running basic C programs independently.

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CONCLUSION :

- In this experiment, the program was successfully compiled and executed, displaying the intended output message.
- The lab helped in understanding the basic structure of a C program and the role of main() function and header files.
- It demonstrated how to use the printf() function for output.
- The exercise provided a foundation for writing and executing simple C programs accurately.

VIVA QUESTIONS :

1. **What is the purpose of the printf() function in C?**
   - To display output on the screen.
2. **What is the difference between printf() and scanf()?**
   - printf() outputs data; scanf() inputs data.
3. **Why is the main() function important?**
   - It is the starting point of program execution.
4. **Can multiple lines be printed using one printf()?**
   - Yes, by including newline characters (\n).
5. **What is the use of a semicolon in C?**
   - It marks the end of a statement.

FOR FACULTY USE ONLY :

Correction Parameters	Formative Assessment [40%]	Timely completion of practical [40%]	Attendance/ Learning Attitude [20%]	
Marks Obtained				