Nagar Yuwak Shikshan Sanstha's
Yeshwantrao Chavan College of Engineering
(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)
Hingna Road, Wanadongri, Nagpur - 441 110
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Department of Computer Technology B. Tech in Computer Science and Engineering (IOT)

Vision of the Department
To be a well-known centre for pursuing computer education through innovative pedagogy, value-based education and industry collaboration.

Mission of the Department
To establish learning ambience for ushering in computer engineering professionals in core and multidisciplinary area by developing Problem-solving skills through emerging technologies.

Session 2025-2026

Vision: Dream of where you want.	**Mission:** Means to achieve Vision

Program Educational Objectives of the program (PEO): (broad statements that describe the professional and career accomplishments)

PEO1	**Preparation**	**P: Preparation**	**Pep-CL abbreviation pronounce as Pep-si-lL easy to recall**
PEO2	**Core Competence**	**E: Environment (Learning Environment)**	
PEO3	**Breadth**	**P: Professionalism**	
PEO4	**Professionalism**	**C: Core Competence**	
PEO5	**Learning Environment**	**L: Breadth (Learning in diverse areas)**	

Program Outcomes (PO): (statements that describe what a student should be able to do and know by the end of a program)

Keywords of POs:
Engineering knowledge, Problem analysis, Design/development of solutions, Conduct Investigations of Complex Problems, Engineering Tool Usage, The Engineer and The World, Ethics, Individual and Collaborative Team work, Communication, Project Management and Finance, Life-Long Learning

PSO Keywords: Cutting edge technologies, Research

"I am an engineer, and I know how to apply engineering knowledge to investigate, analyse and design solutions to complex problems using tools for entire world following all ethics in a collaborative way with proper management skills throughout my life." *to contribute to the development of cutting-edge technologies and Research*.

Integrity: I will adhere to the Laboratory Code of Conduct and ethics in its entirety.

Ayush Uttam Bagde
04/09/2025

Session	2024-25 (ODD)	Course Name	Computer Workshop Lab
Semester	3	Course Code	23IOT1306
Roll No	A-51	Name of Student	Ayush Uttam Bagde

Practical Number	
Course Outcome	1. Understand the fundamentals of computer hardware and working of Linux operating system 2. Use Linux commands to manage files and file systems 3. Execute Scripts 4. Debug Programs on various IDEs
Aim	DebugginginTurboCandDEVC++
Problem Definition	Write a program to check if two numbers are Equal or Not.
Theory (100 words)	Debugging refers to the detection and correction of errors or bugs in a C program. Turbo C offers a set of debugging utilities that assist the programmer in finding logical, runtime, and syntax errors when the program is executed. The debugger can execute the program step by step, which helps in setting breakpoints and the values of the variables being watched. The features like Trace Into, Step Over, and Run to Cursor allow tight control over the flow. The Watch window and Registers window will update the data changes in real time, allowing the user to pinpoint the incorrect logic. By doing so, the program will perform with correctness; it increases reliability and makes the final output accurate and error-free.
Procedure and Execution (100 Words)	Steps for implementation ☑ **S**teps for Debugging in Turbo C++ 1. Compile the program Press Alt + F9 to compile. Errors will be shown at the bottom. Fix them before debugging.

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2. Set Breakpoints

Place the cursor on a line and press Ctrl + F8 to set/remove a breakpoint.

The program will pause at this line when run.

3. Run in Debug Mode

Press Ctrl + F9 to run.

The program stops at the first breakpoint.

4. Watch Variables

Use Alt + F5 or open the Watch window to see variable values as the program runs.

Add variables (a, b, etc.) to watch changes.

5. Step Through Code

F7 → Step Into (line by line, even inside functions).

F8 → Step Over (line by line, but skips inside functions).

6. Check Output & Fix

Watch how variables change and identify logical/typing mistakes.

Modify, recompile, and rerun until correct.

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 Steps for Debugging in Dev-C++

1. Compile the Program

Click Execute → Compile & Run or press F11.

Ensure no syntax errors.
2. Enable Debugging

Go to Tools → Compiler Options → Settings → Linker, check "Generate debugging information".

3. Set Breakpoints

Click in the gray margin left of the code line → a red dot (breakpoint) appears.

4. Run with Debugger

Go to Debug → Start/Continue or press F5.

Program runs and stops at breakpoint.

5. Watch/Inspect Variables

Open Debug → Add Watch to monitor variables.

Hover mouse over variables to see current values.

6. Step Execution

Code:

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Output:

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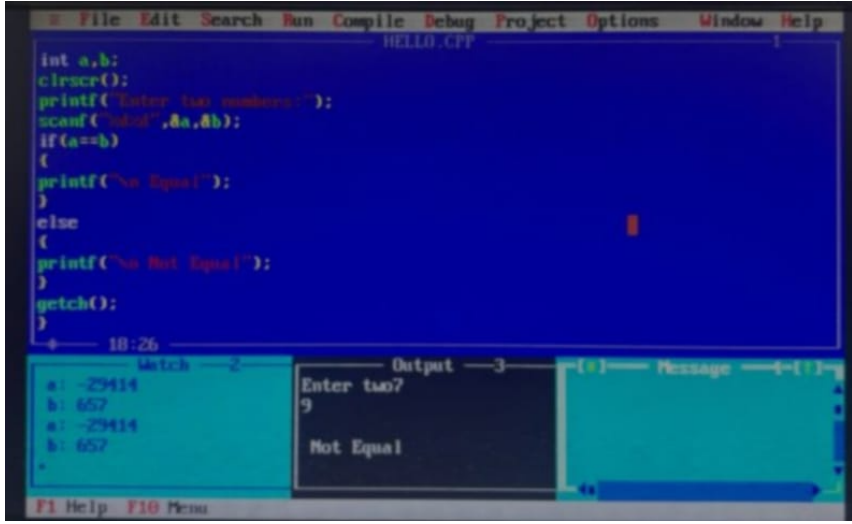Department of Computer Technology B. Tech in Computer Science and Engineering (IOT)

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Link of student Github profile where lab assignment has been uploaded	https://github.com/Ayush14-2/CWS-Practical-06-A-51
Conclusion	Debugging in Turbo C and Dev-C++ helps find and fix errors for correct results. The program to check if two numbers are equal worked successfully.
Plag Report (Similarity index < 12%)	
Date	**04/09/2025**