



Lokmanya Tilak Jankalyan Shikshan Sanstha's
PRIYADARSHINI BHAGWATI COLLEGE OF ENGINEERING
Harpur Nagar, Umred Road (Near Bada Tajbagh), Nagpur-24
(Approved by AICTE, New Delhi, Govt. of Maharashtra
and affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)
Email: principalpbcoe@gmail.com, Website: www.pbcoe.edu.in
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Department of Electronics & Communication Engineering

(Session 2023-24)

Name of Course: - Computer Architecture

Course code : BEEETC-604PE

Innovation in Teaching Learning Process

Title: Pedagogical Activity on Hardware Demonstration And Performance Study Of Computer Architecture Components

1. Event Title : **Hardware Demonstration And Performance Study Of Computer Architecture Components.**
2. Event Date : 02/02/2024
3. Event conduction duration : 1 Day
4. Event venue : Second Floor , EC Class Room
5. Sem/Branch : 3th Semester
6. Event resource person : Mr.S.A.Bagal, Assitant Proffesor KDK College of Engineering Nagpur.
7. Name of Event Coordinator : Dr. D.M. Kate Associate Prof. EC Department, PBCOE Nagpur

1. Introduction

Computer Architecture is a fundamental subject that deals with processor organization, memory hierarchy, input-output interfacing, and system performance. To strengthen practical understanding beyond regular classroom teaching, a hardware demonstration and performance study of computer architecture components was conducted in the laboratory. This beyond-syllabus pedagogical initiative helped students understand the working of processor-related hardware components, memory organization, bus structure, and performance factors through observation, demonstration, discussion, and analysis. The activity supported attainment of

2. Objectives of the Initiative

1. To understand the structure and working of computer architecture hardware components.
2. To study processor, memory, and I/O organization through hardware demonstration.
3. To analyze system performance and architectural design aspects.
4. To create awareness about professional, ethical, and environmental issues in computing.

5. To enhance teamwork, communication, and planning skills.
6. To promote lifelong learning in modern computing technologies.

3. Overview of the Activity

Activity Conducted:

Hardware Demonstration and Performance Study

Areas Covered:

- CPU organization
- Memory hierarchy
- Cache and main memory
- Bus structure
- Input-output organization
- Performance parameters

Methodology:

- Demonstration of hardware components
- Observation and analysis by students
- Group discussion and comparison
- Report preparation

OUTCOMES OF THE ACTIVITY

- 1) Understand computer architecture components and their working.
- 2) Analyze system performance and architectural design.
- 3) Apply hardware knowledge to real-world computing systems.
- 4) Recognize societal, environmental, and ethical issues.
- 5) Develop teamwork, communication, and lifelong learning skills.

