SNS COLLEGE OF TECHNOLOGY

Coimbatore-35
An Autonomous Institution

Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A++' Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

19ECT312 – EMBEDDED SYSTEM DESIGN

III YEAR/ VI SEMESTER

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UNIT 4 : **SYSTEM DESIGN TECHNIQUES AND REAL TIME CONCEPTS**

TOPIC 9 : ARDUINO

Arduino - Introduction

- Arduino boards function as embedded systems by leveraging microcontrollers to read inputs (like sensor data or button presses) and control outputs (like turning on LEDs or activating motors)

- These microcontrollers, typically Atmel AVR-based, act as the brains of the system, handling various tasks within a larger project

- Arduino's open-source nature and ease of use make it a popular choice for prototyping and developing embedded applications

APPLICATIONS

Servers and Data Centers: ARM-based server chips offer an energy-efficient alternative to traditional x86 servers, making them suitable for cloud computing, web hosting, and edge computing applications.

Aerospace and Defense: ARM processors are utilized in aerospace and defense applications for tasks such as avionics systems, unmanned aerial vehicles (UAVs), radar processing, and missile guidance systems.

Healthcare and Medical Devices: ARM architecture powers medical devices ranging from patient monitoring systems and diagnostic equipment to medical imaging devices, benefiting from its reliability and real-time processing capabilities.

Education and Research: ARM-based development boards and platforms are widely used in educational settings and research institutions for teaching and exploring computer architecture, embedded systems, and IoT concepts.

THANK YOU