To Develop a Device Driver for UART using LPC1768

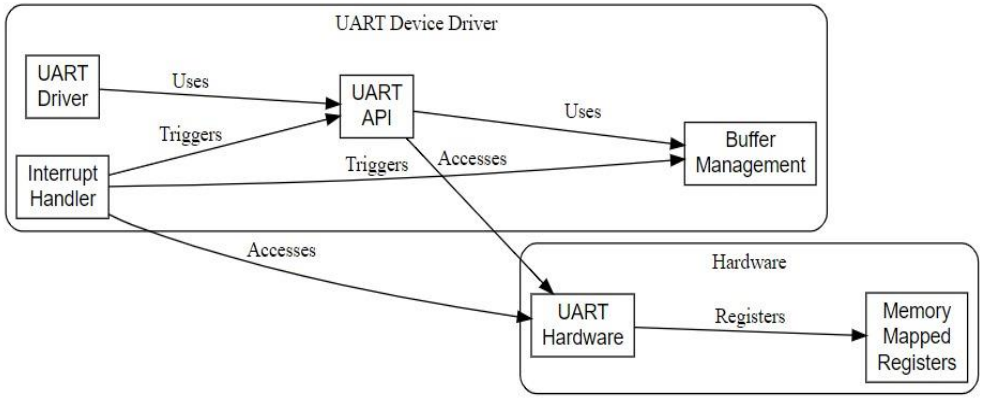
Guide name: Prof. Ashwini Desai

KLE Technological University | Creating Value, Leveraging Knowledge
Dr. M. S. Sheshgiri Campus, Belagavi

Problem Statement : Design and implement a robust and efficient UART device driver for the LPC1768 microcontroller. This driver must enable seamless and reliable serial communication with external devices, supporting various configurations and operational modes.

Introduction: Developing a device driver for the UART peripheral on the LPC1768 microcontroller will enable efficient and reliable serial communication with external devices. This driver aims to support various configurations and modes of operation, enhancing the microcontroller's versatility in embedded applications.

Block Diagram:



Specification Table:

Sl. No.	Requirements	Objective	Specification				
			Hardware	Software	Sensors	Actuators	Communication Protocol
1.	LPC1768	The LPC1768 microcontroller aims to deliver a high-performance, cost-effective solution with extensive peripherals and memory for versatile embedded applications..	Baud rates, Data bits, Stop bits, and Parity, GPIO	Keil uVision4			
2.	UART	UART enables simple, asynchronous serial communication with configurable parameters for data integrity and low hardware requirements, making it cost-effective and versatile for various devices.		Keil uVision4			

Results: Developing a UART device driver for LPC1768 involves configuring UART registers for baud rate, parity, and interrupts, and implementing functions for initializing, transmitting, and receiving data, ensuring compatibility with the LPC1768's hardware specifications and communication protocols.