**Experiment No. : 10**

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**AIM**:The objective of this experiment is to establish a serial communication between STM32 Microcontroller board and Arduino Uno. The communication established here is using UART (Universal Asynchronous Receiver Transmitter) protocol, which is an internal module within all available microcontrollers. It’s a serial communication with full-duplex mode, by this data can be shared between two microcontrollers. In this experiment we considered the STM32F303RE board as transmitter and Arduino Uno as receiver. The received data can be observed on the serial monitor of the Arduino IDE and also we are controlling the LED of an Arduino via UART.

# OBSERVATIONS –

# CIRCUIT CONNECTION BETWEEN ARDUINO UNO AND STM32:

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# ARDUINO IDE SERIAL MONITOR OUTPUT:

# Baud Rate: 1200 bps

# 

# Baud Rate: 9600 bps

# 

# Baud Rate: 19200 bps

# 

# 

# Baud Rate: 74880 bps

# 

# Baud Rate: 500000 bps

# 

# 

# 

# GLOWING LED:

# 

# 

# RESULTS:

# Successful UART communication was established between the Arduino UNO and the STM32 Boards, although the communication was only possible within a certain range of Baud Rates (1200 bps to 500,000 bps) as the Arduino UNO board does not support Baud Rates below 1200, and the STM32 IDE cannot support Baud Rates above 500,000.