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Name of the Course: 168584 Embedded Systems Hardware Design
Course Number: ECE-40292
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Date: 02/05/2023

Assignment4 (Week 4)

1. Use LibreOffice's Writer for your report. Select a dedicated SPI interface from IoT board to the external FRAM Module MB85RS64V, 8kB, Serial SPI, from Adafruit. Justify your selection.

2. Design and describe in a table all connections between the STM IoT Board (connector #, pin #) and FRAM Module (pin names of the connector). It can be done in a form of a table in LibreOffice's Writer and converting the report (File -> Export AS→ PDF). FRAM Module (not the chip) must be connected by jumper wires to a connector of IoT board going to the uC. Disable /WP by connecting that pin to 3.3V; do not connect pin HOLD – it has its pull-up resistor to 3.3V.

   In order to enable the SPI communication between the IoT board and the FRAM module, we need to have SPI clock, MOSI, MISO and chip select pins, as well as 5v, GND and 3.3v for WP pin on FRAM. After looking into the UM1253 and STM32L475xx data sheet, I find out the pin muxing and also the available external pin connection on the board, which I choose to use Arduino's connector CN1, CN2 and CN3 as described in the below table.

IoT board	FRAM Module MB85RS64V
CN1 - PA5 - SPI1_SCK (D13 on the board)	SCK
CN1-PA6 - SPI1_MISO (D12 on the board)	MISO
CN1 - PA7 - SPI1_MOSI (D11 on the board)	MOSI
CN3 - PA4 - SPI1_NSS (D7 on the board)	CS
CN2 – 5V	VCC
CN2 - GND	GND
CN2 - 3.3V	WP