

# Homework #7



Some operations like intense data I/O require high bandwidth and communication protocols like I2C and UART cannot offer that. For these set of operation, the best option is either using parallel communication or using a faster protocol such as SPI.

In this experiment you will interface two Arduino boards for data store and retrieval. One board acts as SPI master and the other as slave and the slave stores and retrieves data on its own EEPROM. User enters an address on master board using a keypad (considering that EEPROMs size is 512 bytes you should handle cases where the address is out of range), and if he/she presses “#” the master should retrieve a byte from the slave’s EEPROM and display it on the alphanumeric LCD for as long as the user presses another key. If the user presses “\*” after entering the address the master should read a byte from the keypad (0-255) and store it on the given location on the slave’s EEPROM. Note that all transactions between slave and master must be carried out on SPI protocol. You should also implement the necessary functions and classes as separate modules from your main code for further reuse.

Components used in proteus:

SIMULINO UNO X 2, KEYPAD-PHONE, LM016L

Good Luck

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