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# Educational Objective

In this lab, you will learn how to…

1. Use the SDRAM, which is external to the FPGA chip.
2. Write your own DMA controller to transfer audio to (from) the CODEC from (to) the SDRAM.
3. Employ design and documentation skills to develop your own solution, within the constraints of what the system must do (see next section).

# Technical Objective

Your design must perform the following functions

1. When button is pressed enter record mode, and send one channel (left or right) to the SDRAM, either until SDRAM is full, or play back mode is entered.
2. When a second button is pressed enter playback mode. In playback mode you will play back whatever you recorded either directly, or filtered by the filter you designed in lab 5 (depending on the state of one of the toggle switches.

# Deliverables

* Report, with block diagrams, state diagrams, etc., and well written explanation of how your design works.
* In class demo of working project.
* All the code you wrote submitted to MyCourses drop-box.