

ME 135 SPRING 2008

ASSIGNMENT 3: COMPACT DISC PLAYER FRONT PANEL

Due: Thursday, February 28

Background

The marketing group has requested a demonstration of the front panel GUI for the new 12" CD product. The marketing group would like to have all of the features of any high-end CD player in the market today. However, due to the limited time before the scheduled demo next Tuesday, February 26, the marketing group would like to see at minimum the following features:

Power button with LED

Functionality: Play, Stop, Pause, Fast Forward, Rewind, Next Track, Previous Track

Play Mode: All/Single/Random, Repeat (for all three modes)

Display: track number, song title, time elapsed or time remaining in current track

Task

- 1) Design a VI application for the marketing group to implement all the features listed above. Since the actual 12" CD's do not exist, the marketing group (George and Tim) will include a test VI that outputs the relevant data in a cluster.
- 2) Scale the time such that 50 ms of software time is equivalent to 1 second of playtime; that is, make the interface run at 20 times the normal speed.
- 3) Treat all the button functionality as you would for a real CD player. Take into account the fact that all buttons can be pressed multiple times and at any time, and have the interface respond accordingly.
- 4) Random mode is non-repeating. That is, all of the songs on the CD must play once before any of them can play again.
- 5) Prior to diving into code writing, plan out your design by defining the various tasks that the software needs to perform.

Deliverables

A report summarizing the various tasks that must be performed by the software.

A single VI or collection of VI's demonstrating the features listed above. This is a marketing demo, so make it look good.