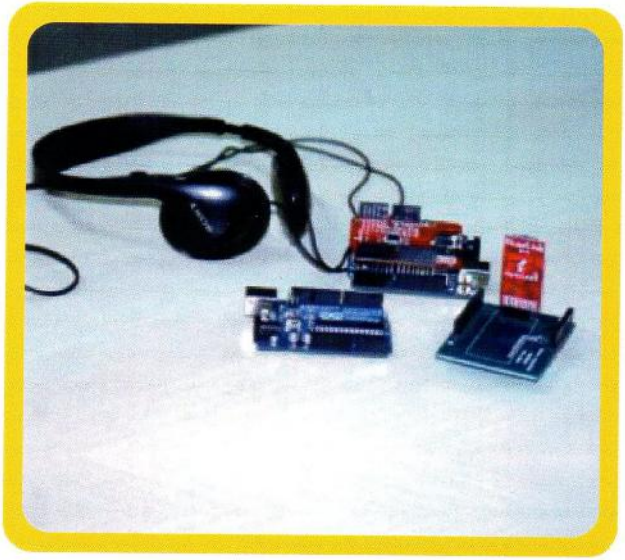
Arduino based MP3 player

Features

- Fully functional MP3 player based on the Arduino platform
- Audio-jack output for headphone/speaker connection
- MP3 file storage facility on SD card
- Track selection from PC/mobile (serial/Bluetooth interface)



Hardware

- Arduino UNO board based on the 8-bit ATmega328 microcontroller working at 16 MHZ
- MP3 player shield based on the VS1053B audio decoder IC to decode audio files
- VS1053B receives input bitstream through serial input bus
- After decoding, audio signal sent to 3.5mm stereo headphone jack

Firmware

- Based on the Arduino programming language
- Uses the SPI library and the SDFat library for SD card interface
- On data request from audio decoder IC, pulls data from SD card and sends it to audio decoder IC
- MP3ReadRegister and Mp3 WriteRegister implemented using audio decoder IC control signals
- Track number read from serial port