Finger Piano

Sensors used: Potentiometer, Flex

I wanted to create a fun instrument of my own. I also wanted to try something out of the flex sensor, so I combined both my ideas and created a piano that works based on bending.

Ideally, the user would have to attach the flex sensor to one of his fingers and use his other hand to rotate the dial of the potentiometer.

The above project is thus an instrument that is mountable onto a finger. The bending of the finger is utilized to compute the pitch of the instrument. Moreover, a potentiometer is used as a means to control the volume of the instrument.

The flex sensor changes the pitch of the buzzer to the next note every 12 deg ranging from 0 degrees to 96 degrees. Moreover, a voltage divider equation is utilised to compute resistance of the flex sensor and hence the angle, using a map function.

The potentiometer is not programmed, the wiper pin of the potentiometer is directly connected to the buzzer, changing the knob of the potentiometer changes wiper value and hence the loudness of the buzzer, this way the note's volume is controlled.