

"Touch to Sing"

Children generally tend to get attracted to bright colors and unique sounds and this has a lot of advantages. Primarily, it will keep them busy for a long time, since children tend to focus more than adults on activities that interest them, moreover they also learn how to use a particular object and most importantly it helps the parents focus on other things than just the child.

Keeping these things in mind we thought of designing a crawler that sings rhymes when a child touches it.

Abstract: An on-off button is used as a switch. Once the toy is switched on, it starts moving until it encounters an obstacle. On encountering an obstacle, it blinks its LED's vibrantly so the child is attracted towards it. On the LED's a rugged touch screen is mounted and once the child touches it, the Processor reads an audio file written on the SD Card and plays a rhyme. The length of the rhyme would have been measured previously and entered as a delay in the Processor (using a Counter) and once the count becomes zero, the toy rotates itself and keeps moving until it encounters another obstacle.

Components in Use :

1. MSP 430 Launchpad
2. Bumper Bug - Crawler
3. H-Bridge
4. Servo motor
5. SR04 Ultra Distance sensor
6. Capacitive Touch Booster Pack (430BOOST-SENSE1)
7. Batteries
8. Jumper Wires
9. SD Card.