Home Security System

Abstract:

- The objective of this project is to design and implement a home security system using a combination of light-dependent resistors (LDR), laser modules, buzzers, microcontrollers, and embedded C programming.

- The system is engineered to provide protection against unauthorized access to homes and offices by triggering an alarm upon detection of intruders.

- The security system operates based on the principle of detecting interruptions in a laser beam using LDR sensors strategically placed around entry points.

- When an intruder crosses the path of the laser beam, causing a decrease in light intensity reaching the LDR, the microcontroller (programmed with embedded C) detects this change and activates the alarm system.

- The alarm, configured with a buzzer, immediately alerts occupants and nearby individuals to the unauthorized entry.