Digital Electronics and Computer Architecture Laboratory

Class Group:	22	Section:	A	Project Group (PG):	PG-6

Project Abstract

Project Title: Laser Safety Alarm System

Project Category:

Microcontroller Based	
Non-Microcontroller Based	
Only Software Based	
Others	

Abstract:

Introduction : Laser Security alarm is a device used for security purposes. It has wide applications in fields of security and defence starting from the security of simple house hold material to a very high valued material of an organization.

Principle : There is a laser diode that generates the laser beam which continuously strikes over the light dependent resister sensors. When any person crosses the path, it obstructs laser to reach LDR and the sensor generate a low which is read by controller to power on the buzzer.

Working : The working of the circuit is simply based on a voltage divider circuit. As the light intensity on LDR increases its resistance decreases, so when laser light is falling on LDR, its resistance goes very low hence the 9volt supply gets connected to the ground with the help of a 10K resistor, and in this way base of the transistor receives low value or in other words transistor is OFF. Now as soon as light intensity decreases or it laser gets interrupted by someone, LDR resistance increases which in turn gives a high value to the base of the transistor, and hence transistor turns on, and finally, the buzzer sounds up. In this way, our project is working and providing us with a security system using a laser.

Application Area(s) of Project:

- Around house fence to detect any unusual activity.
- In bank lockers , for protection of valuable things.

Technology Stack:

- LDR
- Resistor
- Small Buzzer
- Capacitor
- Push Button
- Laser Pointer
- Battery
- Wires

Batch Details:

Name of Students	Roll No.	Project Guide (Name and Signature)	Approved By (Signature with Date)
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