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Question No :3

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(A): DESCRIPTION:

The PC parallel port is a powerful platform though inexpensive for implementing projects dealing with the control of real world accessories. The hardware circuit developed can be used to control up to 255 electrical appliances using only 8 data output lines from parallel port. Besides the software program allows the users to know the current status of the devices.

USER REQUIREMENTS:

1. User want a system for controlling electrical device such as led .
2. User wants to control led through software to give input of 0 or 1 to make led on or off.
3. User also want a full control on printer port to print anything with in user control.
4. They required to switch any devices whenever connected with computer.

SYSTEM REQUIREMENTS;

System requirements for this system is of two types:

Hardware Requirements

1. Processor : Pentium 1, 2,3, 4
2. Memory : 32 MB Ram (Minimum)
3. Resolution 800 x 600 pixels
4. Diode, Transistors , Relays

Software Requirements

Platform : Any Operating System

Language: C or C++ or VC++

(B) DESCRIPTION :

The command for hardware functioning are given through the keyboard. The commands after being scanned by the software program result into appreciate voltage generation for hardware. Diode and transistors are connected with the help of light as an interconnection medium. The transistor connected

with the output acts as amplifier in circuit and current is passed to the relay. The relay and AC power supply in turn switch the device ON or OFF.

FUNCTIONAL REQUIREMENTS:

1. It can be used for controlling electrical device through software.
2. It can be used to switch a device ON or OFF.
3. User have control on printer port to make print function 0 or 1 means enabled or disabled .
4. It can also have a wireless functionality.

NON-FUNCTIONAL REQUIREMENTS:

1. User Friendly: Project has simple and efficient interface so that a person having elementary knowledge about computers and about the system can use it.
2. Easy Handling: Once developed and put to work properly than no further maintenance is required.
3. Machine Independent: The project is totally machine independent not any packages is required.
4. It can be used for domestic purposes (offices, hotels etc).