Sarvajanik College of Engineering and Technology

Department of Computer Engineering

Report
Project of
"Projector Controller"
(Under IOT Club)

Organized By

Department of Computer Engineering
Sarvajanik College of Engineering and Technology

Coordinated by

Prof. Vandana Joshi
Dr. Pariza Kamboj

Head of the Department

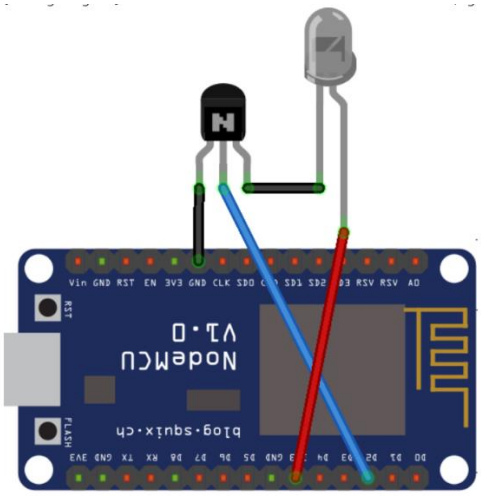
Dr. Pariza Kamboj
Computer Engineering Department

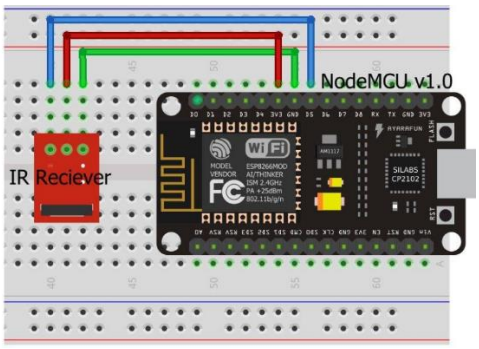
About the Project

In our class there is so much trouble regarding ON/OFF projector. because for that one need to stand up and press the button on projector. Many times, it happens students directly off the projector via switch board that's not proper way to off the projector. It damages projectors life. So, lamp of projector damages by this way.

The solution is that, we developed a circuit that's operates projector for ON/OFF function. We make this with NodeMCU ESP8266. We used IR diode for emitting IR signal. For that we used these components.

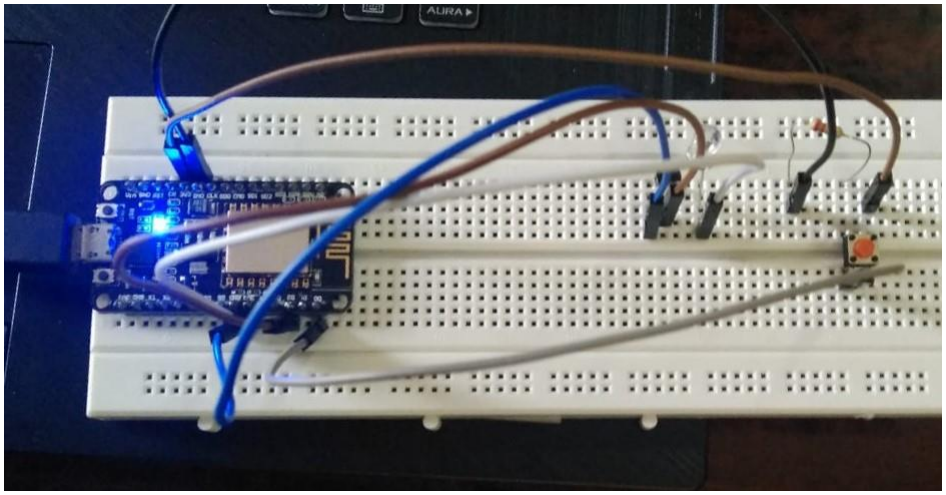
- Node MCU ESP8266
- NPN Transistor
- IR Diode
- Jumping Wire
- TSOP
- Circuit Board
- Push Button





1) 2)

Both circuits used to make projector's control circuit. Second circuit used to fetch raw data of projector's remote. And first circuit was first prototype of our circuit. We also implemented a push button for ON/OFF function.



This was final prototype. After successful work We implemented this in C204 with PCB. We tested it for some days. It worked fine and many faculties praised us. Then we decided to implement on more class so we think compact solution of this. So, we take ATmega 328P at NodeMCU ESP8266. Because it is more compact and cheaper than NodeMCU. After we started work on it. After some days due to COVID 19 Government announced Vacation And after Lock down.

We worked for this project nearly 4-5 months. In between Exams come so we have to pause our work. Nearly 3-4 weeks we take for research. After some weeks for incomplete component. After all we did it. We made circuit and implemented.

Members involved

- Shahil Mangroliya
- Ajay Gajera
- Chirag Gujarati
- Dhavan Maiyani
- Sanket Naliyadra
- Yash Thummar
- Manali Ladhani

Future Scope for project

- We can use this at where IR signals works. (like TV, AC….)
- It can be used to communicate between two circuit.
- It can be used to detect objects. (Like we can make one room where we place many IR sender and receiver circuits sot that we can detect location of object in that room so we can Automate other electrical items (like fan, light etc.) so, we can save electricity.)