

# The Command Center

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## Description

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The Command Center is a project that works on the principle of Internet of Things. It uses network programming i.e sockets in java & c++ at micro-controller end. TCC is having 3 essentials entities - BoardSim (Board Simulator) , IOTController (Command Center) & IOTServer (The Server End). Board Simulator can be used to register boards with corresponding electronic units , IOTController - the command center can be used to display all the available boards which were registered earlier by the user , through CC a user can feed a list of commands mentioned in documentation & can perform several operations related to on/off for respective electronic units on boards. IOT Server is giving a server environment which is working as a central authority to take care of operations & boards registered by user. On the other end , the Micro-Controller i.e Arudino Nano is having a pull-based mechanism where on each cycle the controller asks for commands to the server & takes the necessary actions.

## Features

- Customised Commands
- Boards Listing Feature
- Turn on / Turn off electronic equipments
- Register n number of boards
- Wireless enviroment

## Commands

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- BR (Board Register) - To be given from board simulator

```
java BoardSIM BLUE FAN COOLER AC
```

Here , BLUE is the Board ID & the space separated strings are electronic units

- BC (Board Commands) - Board is asking for commands (To be given from micro-controller end to server)
- LS (Lists Available Bords) - To be feeded by user

```
java IOTController  
iot-controller> ls (Enter)
```

- Turn on / Turn off - To be feeded by user

```
iot-controller> Turn on Fan connected to echo (Enter)  
iot-controller> Turn off Fan connected to echo (Enter)
```

Here , Fan is the electronic unit ID & echo is the Board ID

- Turn on all / Turn off all - To be feeded by user

```
iot-controller> Turn on all connected to echo (Enter)  
iot-controller> Turn off all connected to echo (Enter)
```

Here , echo is the board ID