

# Switchboard simulation

## OOPs Programming exercise

The purpose of this exercise is to develop a software switchboard which mimics switchboards deployed in homes.

A switch board has a set of buttons which are used to control the state of appliances and switch them `on` or `off`.

Design a switch board simulation that is used to control electric appliances in a room. The supported appliances are

1. Fan
2. AC
3. Bulb

This should be console application with the following behavior

- On startup asks user for
  1. Number of fans
  2. Number of ACs
  3. Number of bulbs.
- Setups a menu with state of each appliance
  1. Fan 1 is "Off"
  2. Fan 2 is "Off"
  3. AC 1 is "Off"
- Allows user to select the device by entering the device number.
- On selecting the device shows the menu
  1. Switch Fan 1 On (or Off based on current state)
  2. Back
- On selecting one of the option changes the state of the device and returns back to the main menu.
- The main menu now reflects the new state of the device such as
  1. Fan 1 is "On"
  2. Fan 2 is "Off"
  3. AC 1 is "Off"