

Robotics Camp-2024

Assignment -4: 10 Project Ideas with code and diagram.

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01: Advanced Climate Control System

```
if(Temperature_Sensor == 1){  
    Fan = High;  
    Buzzer = High;  
}else{  
    Fan = Low;  
    Buzzer = Low;  
}
```

02: Emergency Fire Response System

```
if(Fire_Sensor == 1){  
    Buzzer = High;  
    Pump = High;  
}else{  
    Buzzer = Low;  
    Pump = Low;  
}
```

03: Smart Lighting System

```
if(Light_Sensor == 0 && Motion_Sensor == 1){  
    Lamp = High;  
}else{  
    Lamp = Low;  
}
```

04: Automated Watering System for Plants

```
if(Water_Sensor == 0){  
    Pump = High;  
    DC_Motor = High;  
}else{  
    Pump = Low;  
    DC_Motor = Low;  
}
```

05: Autonomous Robot Navigation

```
if(Obstacle_Sensor == 1){  
    DC_Motor = Low;  
    Buzzer = High;  
}else{  
    DC_Motor = High;  
    Buzzer = Low;  
}
```

06: Home Security System

```
if(Motion_Sensor == 1){  
    Lamp = High;  
    Buzzer = High;  
}else{  
    Lamp = Low;  
    Buzzer = Low;  
}
```

07: Smart Environmental Control

```
if(Temperature_Sensor == 1 && Light_Sensor == 0){  
    Fan = High;  
}else{  
    Fan = Low;  
}
```

08: Fire Prevention and Control System

```
if(Fire_Sensor == 1 || Temperature_Sensor == 1){  
    Pump = High;  
}else{  
    Pump = Low;  
}
```

09: Automated Fan and Lighting System

```
if(Light_Sensor == 0){  
    Fan = High;  
    Lamp = High;  
}else{  
    Fan = Low;  
    Lamp = Low;  
}
```

10: Flood Detection and Response System

```
if(Water_Sensor == 1){  
    DC_Motor = High;  
    Buzzer = High;  
}else{  
    DC_Motor = Low;  
    Buzzer = Low;  
}
```