Project Name: Automated Room Controlling

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❖ **Hardware components:**
1. Microcontroller – One piece
2. Jumper Wire (Female – Male, Male – Male) – Some pieces
3. Relay Module – Five piece
4. Electrical Wire – Necessary measurement size
5. Power Switch
6. LED – 4 to 7 pieces
7. AC to DC convertor adaptor – One piece
8. Wireless module – One piece

❖ **Software components:**
1. Arduino compiler
2. Custom make android app
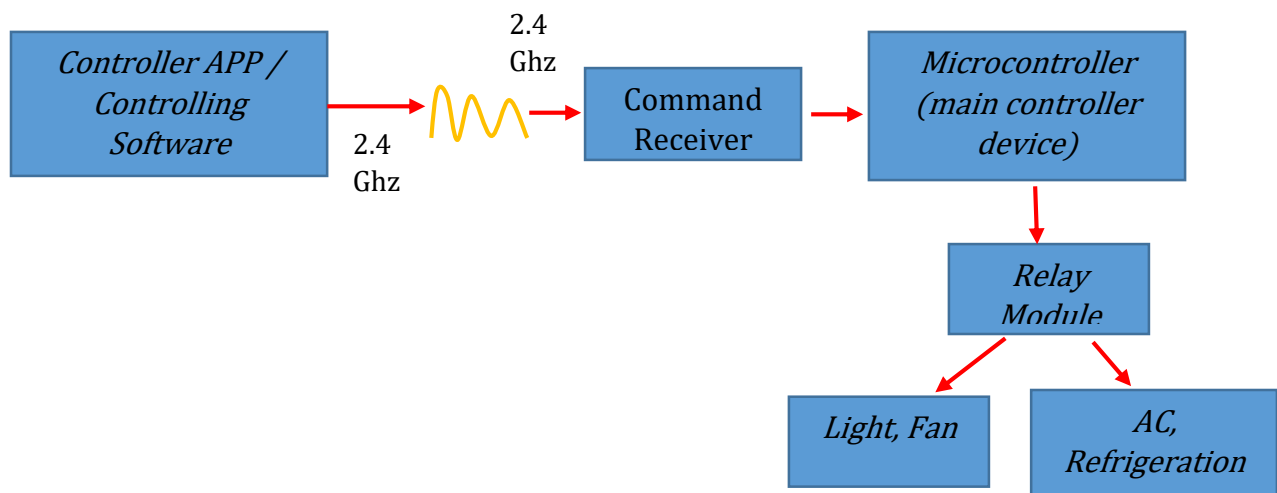3. Python Editor

❖ **System Diagram:**

Fig: Block Diagram of the System

❖ **Microcontroller Selection:**

1. Raspberry Pi
   - I. Cost: Medium
   - II. Wireless Communication: In-build
   - III. Controlling: Easy
   - IV. Runtime: Good
   - V. Processor: HIGH
2. Arduino
   - I. Cost: Lost
   - II. Wireless Communication: Need Wifi shield
   - III. Controlling: Easy
   - IV. Runtime: Good
   - V. Processor: Low

3. Beagle Bone
   - I. Cost: High
   - II. Wireless Communication: In-build
   - III. Controlling: Medium
   - IV. Runtime: Good
   - V. Processor: HIGH

N. B.: costing are calculated according to the local market price.