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:**

2.4 Ghz

Command Receiver

*Microcontroller (main controller device)*

*Controller APP / Controlling Software*

*Light, Fan*

*AC, Refrigeration*

*Relay Module*

2.4 Ghz

Fig: Block Diagram of the System

* **Microcontroller Selection:**

1. Raspberry Pi
2. Cost: Medium
3. Wireless Communication: In-build
4. Controlling: Easy
5. Runtime: Good
6. Processor: HIGH
7. Arduino
8. Cost: Lost
9. Wireless Communication: Need Wifi shield
10. Controlling: Easy
11. Runtime: Good
12. Processor: Low
13. Beagle Bone
14. Cost: High
15. Wireless Communication: In-build
16. Controlling: Medium
17. Runtime: Good
18. Processor: HIGH

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