**RING TURN PAGE**

**PROJECT II**

**DESIGN IMPLEMENTATION DOCUMENT**

**COMPONENTS**

1. Battery- Li Ion 300mAh
2. Microcontroller- ESP32-DOWD-V3
3. Battery level checker circuit
4. A charging port- USB type B\_MICRO
5. A button- Normally open
6. Buck convertor- LD1117S12TR\_SOT223
7. Battery Charging Circuit
8. UART interface
9. Resonator

**OPERATION**

Power is taken in the system using the USB charging port. The battery is charged with the help of BQ24075RGT and an output of 3.7V from the Li Ion battery. The Buck Convertor (LD1117S12TR\_SOT223) converts the 3.7V DC to 3.3V DC necessary to run the ESP32 MCU. The MCU has the Bluetooth module enabled. When power gets to the MCU it runs the Bluetooth module and advertises its availability to link with another device. The button is connected with the microcontroller and has three functions; to turn ON and OFF the whole device (long press 5-6 seconds), to move to the next page (press once) and to move to the previous page (press twice)

**FLOW DIAGAM**

BICOLOURED LED

OUTPUT POWER SENSOR CIRCUIT

BATTERY CHARGING

LI ION

300mAH

CHARGING PORT

TYPE B\_MICRO

ADC INPUT

BUCK CONVERTOR

3.7V TO 3.3V

MICROCONTROLLER

ESP32

BUTTON CONTROLS THE DEVICE PAIRED

1. Turn the device ON or OFF( long press 5-6 seconds)
2. To move to the next page (press once) and
3. To move to the previous page (press twice)
4. ADVERTISE BLUETOOTH READY TO PAIR
5. SCAN THE DEVICE AVAILABLE TO PAIR
6. CONNECT