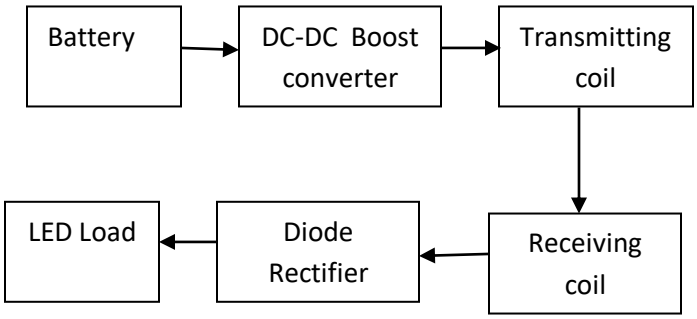
Wireless Electricity Transmission

This project is about witricity which means transmission of electrical energy from one circuit to the another without use of wires by magnetic induction principle.

Mainly this project consists of two circuits:

1. Trasmitting circuit
2. Receiving circuit

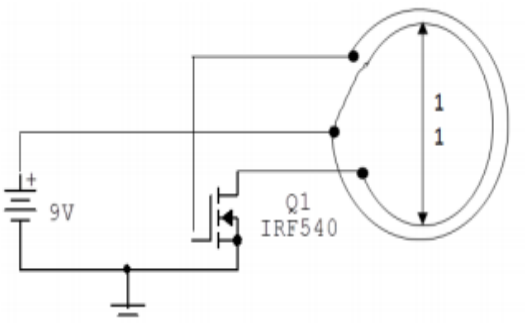
Block Diagram :



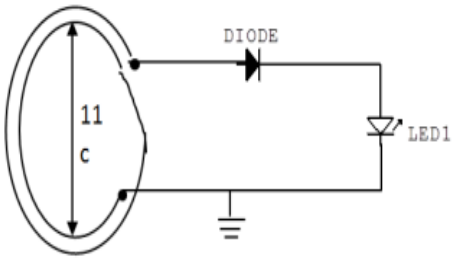
Components used :

1. 9 Volts battery
2. For DC-DC Boost circuit : Transistor (Q1, IRF540)
3. Transmitting coil
4. Receiving coil
5. Diode rectifier circuit contains diode IN4001
6. Load as LED

Circuit diagram



Transmitting circuit



Receiving circuit

Designing and Implementing project :

I used copper wire with guage 18 and turns 12 for both transimitting coil and receiving coil and with dimensions of 8.5 cm radius. When this trasmitting circuit is excited with dc battery of 9 Volts then due to Faradays second law of electromagnetic induction principle , an emf is induced in receiver coil due to mutual induction process. When voltage induced in receiving circuit, current flows through LED which causes glowing of LED.

Experiment Results:

I conducted experiment with placing coils at different distances and by using multimeter. I took the readings of the voltage by increasing distance from 0 cm to 10 cm.

Distance (cm)	Input voltage (V)	Output voltage (v)	Efficiency (%)
0	9	7.12	79.11
1	9	6.25	69.44
2	9	6.01	66.77
3	9	5.79	64.33
4	9	5.38	59.77
5	9	5.04	56.00
6	9	4.52	50.22
7	9	3.85	42.77
8	9	3.49	38.77
9	9	3.19	35.44
10	9	3.12	34.66