**Useful electronic project using 555 timer ic**

hi friends sometimes suppose you need a setup when you would like to turn the light or any other appliance on for particular period of time and then should go off automatically also most importantly the time should be adjustable suppose you need to expose something to light from a second to minutes so here it is i just designed perfect adjustable timer circuit that you can power up with 9 to 12 volt dc and here will be the output and work as a switch this triple 5 timer ic is main component and time threshold is controlled by this capacitor and this variable resistor to adjust on timing you can use this formula at 50 duty cycle to calculate the values of these two components as per your timing requirements and when push button is pressed the output pin 3 of ic turns on the transistor that passes the negative voltage to relay coil and turns on load at output for set period of time. now let's place all the components on the pcb according provided in case you would like to develop your pcb at home now let's solder all components on pcb now our soldering is complete and now it's time to trim excess leads of components also you can clean flux residue using isopropyl alcohol now our pcb looks nice and clean and also i have sold it the push button on pcb i will use this blubbers load to test the circuit as you can see one wire directly goes to ac and other will pass through this connector to ac and here these two wires need to connect to power up the circuit connect 9 to 12 volt dc supply on pressing the push button the light will turn on for a second as it is on lowest setting use screw driver to adjust variable resistor clockwise to increase on timing now let's increase the timing to maximum setting i will use stopwatch to check on time as you can see it remained on for about a minute using 470 uf capacitor you can also increase timing limit using higher value capacitor.