

## **TRAFFIC LIGHT CONTROLLER CODE**

THE CODE CONTAINS DEFINATION OF THE VARIABLE ARRAYS , EACH FOR ONE BOX FACING A PARTICULAR(UNIQUE OF THE FOUR) DIRECTION.

IN EVERY ARRAY THE FIRST ELEMENT (NOTE:Elements indicates the pin no. of arduino's digital pins), THAT IS THE ONE WITH THE INDEX NUMBER-0 INDICATES THE CONNECTION OF RED LED,THE ONES WITH INDEX NUMBER-1 INDICATES THE CONNECTION OF THE YELLOW LED AND THE LAST ELEMENTS INDICATES TO BE CONNECTED TO THE GREEN ONCE. THE OTHER END OF THE LED ARE TO BE GROUNDED ,AND IT CAN BE DONE WITH THE HELP OF BREADBOARD DUE TO SHORTAGE OF THE GND PINS.

### **FUNCTIONS AND THERE USES:**

THERE ARE TWO MEMBER FUNCTION IN THE CODE , NAMELY -loop(),setup()

**setup():** IT IS USED TWO DECLARE THE PINS OF THE ARDUINO AS INPUT OR OUTPUT USINF THE `pinMode()` FUNCTION.AND IN THIS CASE ALL THE PINS ARE SET TO OUTPUT.

ALSO INITIALIZATION OF ALL THE PINS ARE DONE AS LOW(OFF) TO SATISFY THE BELOW GIVEN CODE.

**loop():** THIS FUNCTION IS USED IN ORDER TO MAKE THE CODE WRITTEN INSIDE IT RUN AGAIN AND AGAIN. HERE SETTING WAS DONE TO SUPPLY POWER TO A PARTICULAR LED AND THEN AFTER A CERTAIN DELAY MOVE TO THE NEXT EDITTING TO THE EXISTING WORK OF THE TRAFFIC LIGHT.

**pinMode():** THIS FUNCTION IS USED TO DEFINE A PIN AS INPUT OR OUTPUT. AND IT IS USED TO ONCE FOR A PIN SO THEY ARE USED IN THE void setup() IT IS USED WITH A SYNTAX pinMode(pin).

**digitalWrite():** THIS IS USED TO GIVE OUTPUT TO A PARTICULAR PIN AND THE SYNTAX IS digitalWrite(pin,HIGH(5V)/LOW(0V)). IT CAN BE USED IN BOTH void loop() AND void setup().

**delay():** IT IS USED TO STOP THE FURTHER EXECUTION OF THE PROGRAM FOR A PARTICULAR TIME PROVIDED INSIDE THE PARENTHESIS IN MILLISECONDS THE SYNTAX IS delay(value) , value IN MILLISECONDS.

**EXPLANATION OF WORKING:**

INITIALLY ALL WERE SET TO OFF THE ONLY EACH ELEMENTS FROM EACH ARRAY IS TURNED ON FOR 9 SECONDS AND THEN THE INTERCHANGE OF GREEN AND RED IS MADE BETWEEN TWO CONSECUTIVE BOX WHICH IS DONE WITH GIVING POWER TO THE YELLOW OF THE BOXES FOR 3 SECONDS AND THEN IT MOVED FURTHER.

IN THIS WAY AFTER SHOWING GREEN ONES IN ALL THE DIRECTION IT IS ENDER AND THE LOOP WILL ITERATE AGAIN AND AGAIN AND THE ITERATION WORK WILL BE CONTINUED.

THANK YOU

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### **BIBLIOGRAPHY :**

THE PROVIDED PDF THAT THE ' ARDUINO NOTEBOOK'.